



JRC TECHNICAL REPORT

Export Control Handbook for Chemicals (2023 edition)

*Dual-use, military list,
hazardous chemicals,
explosives and drugs
precursors, sanctions
and anti-torture*

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2023



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JRC132689

EUR 31604 EN

Print ISBN 978-92-68-05693-6 ISSN 1018-5593 doi:10.2760/901636 KJ-NA-31-604-EN-C

PDF ISBN 978-92-68-05692-9 ISSN 1831-9424 doi:10.2760/470395 KJ-NA-31-604-EN-N

Luxembourg: Publications Office of the European Union, 2023

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How to cite this report: Arnés-Novau, X. and Sevini, F., *Export Control Handbook for Chemicals (2023 edition)*, Publications Office of the European Union, Luxembourg, 2023, doi:10.2760/470395, JRC132689.

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Abstract

The Export Control Handbook for Chemicals (2023 edition) contains a detailed mapping of chemicals, around 2000, subject to export controls (restrictions, or prohibitions under sanctions) because of their inclusion in various EU regulations, or the Chemical Weapons Convention treaty. Each chemical is correlated with other data of interest, besides its chemical name: CAS number, control reference codes, EU legislation of reference and the 8-digits-code Combined Nomenclature code (CN code) used for declaration purposes at Customs.

All together, the handbook helps the users to improve their export compliance by limiting the risk of mistakes and penalties by orienting themselves within the following collection of export regulations in force:

- Dual-use regulation, (EU) No 2021/821
- The Chemical Weapons Convention (International treaty)
- Chemicals with military applications, 2008/944/CFSP
- Hazardous chemicals, (EU) No 649/2012
- Chemicals included in the anti-torture regulation, (EU) No 2019/125
- Chemicals subject to sanctions for certain countries (Russia, Syria, DPRK and Iran)
- Chemical precursors of explosives, (EU) No 2019/1148
- Chemical precursors of psychotropic and narcotic substances, (EC) No 111/2005

Another important application of the handbook include facilitating authorities to identify sensitive transactions.

The handbook's online version includes links to the correlation tables where users can download files in Excel format from the JRC Data Catalogue: <https://data.jrc.ec.europa.eu/collection/id-00344>

Acknowledgements

This third revision was produced following the remarkable success of the first two editions of the handbook, also with a view to make it even more useful by updating the information and adding more regulations foreseeing different forms of export controls on chemicals.

Although this handbook contains around 2000 chemicals, the fact that a chemical is not present in this handbook does not imply that is not under the scope of any export regulations. The handbook is meant to be a helpful guide, but its users are always due to consult the primary legislation and follow its requirements.

The tables are produced with the best possible expertise, but of course feedback, comments and corrections are welcome. Contact email: jrc-strike@ec.europa.eu

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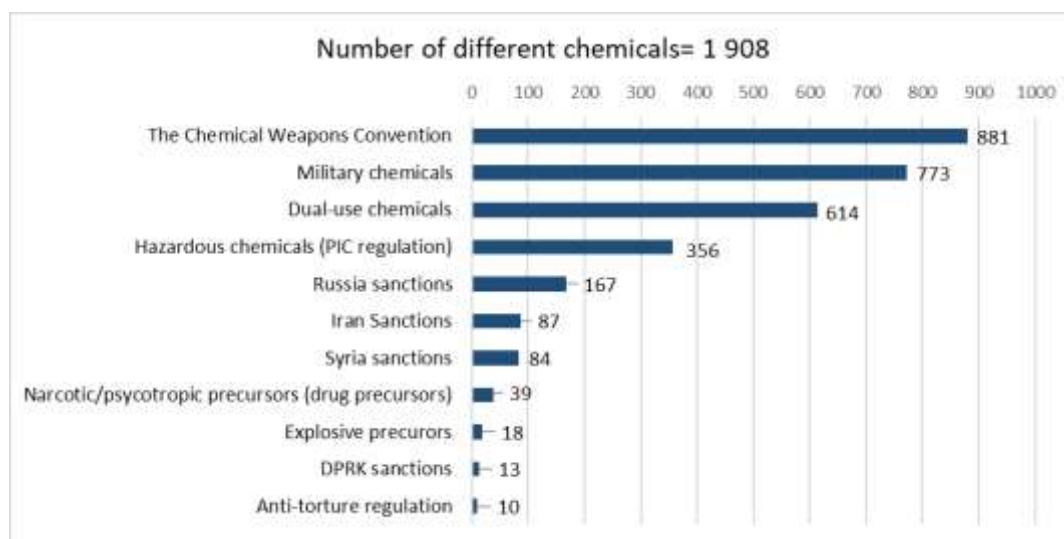
1 Introduction

Chemicals play a key role in our lives but if mishandled may also pose threats to health and security of the citizens. Many chemicals of daily industrial or personal use are also precursors of chemical weapons, or explosives.

The Handbook (2023 edition) is a revision of the two previous ones (2019 and 2021) that incorporates more chemicals and references linked the restrictive measures against Russia, plus some dual-use chemicals not expressly mentioned in the control list, and changes on the Combined Nomenclature due to the entry into force of the 2022 Harmonized System.

This handbook contains a list of around 2000 chemicals subject to export controls (restrictions, or prohibitions under sanctions) because of their inclusion in various EU regulations or the Chemical Weapons Convention treaty. Each chemical is correlated with other data of interest, besides its chemical name: CAS number, reference codes, EU legislation of reference and the 8-digits-code used for Customs declaration purposes, 376 different CN codes in total.

Figure 1. Chemicals included in this handbook



*Note that there are overlaps of same chemicals within regulations/treaties

The online version includes links to the tables where users can download files in Excel format from the JRC Data Catalogue: <https://data.jrc.ec.europa.eu/collection/id-00344>

1.1 Why this handbook?

All together, the handbook allows its users to orient themselves among the collection of export regulations in force, limiting the risk of mistakes and penalties.

The beneficiaries of this handbook are mainly two communities:

- A) Economic Operators (exporters) in the chemical sector, including researchers, for whom the handbook is a tool helpful to identify those chemical subject to export controls, supporting compliance with the EU regulations.
- B) Member States customs officers for control/investigation/enforcement purposes: the handbook is a very useful tool to know which chemicals require an authorisation for export purposes and therefore it allows the detection of possible violations of the EU export regulations by targeted trade analysis.

The exporters of dual-use goods (including chemical precursors, propellants, etc.) are industrial manufacturers and suppliers, as well as research institutes and academia. The latter may in particular export “knowledge”, such as technical information, data and know-how of processes, in addition to actual goods such as chemicals and their compounds.

Compliance with this complex framework is called for by the guidelines of the international export control regimes, as well as the EU Recommendation on internal compliance programmes for dual-use trade controls in 2019 ⁽²⁾ which was followed in 2021 by the EU guidelines for export compliance of dual-use research ⁽³⁾.

Compliance with the regulations can be supported also by tools and databases like this handbook, which identifies all those chemicals subject to export controls (from different regulations and from different DGs) and works as a single control reference integrated list that allows having the whole picture of export controls on chemicals.

The handbook is therefore a valuable tool for helping exporters to follow the necessary procedures, protecting citizens from unauthorised exports, while at the same time safeguarding EU competitiveness, preventing reputational losses and financial penalties to the economic operators, or worse consequences.

With this handbook, the authorities may benefit of the collection of information and easy to navigate summary of codes to swiftly search through the chemicals and verify what kind of authorisations they might require, that will be described in the following sections:

- 2.1 EU Dual-use regulation
- 2.2 The Chemical Weapons Convention (International treaty)
- 2.3 Chemicals with military applications
- 2.4 Hazardous chemicals (PIC regulation)
- 2.5 Chemicals included in the anti-torture regulation
- 2.6 Chemicals subject to sanctions for certain countries (Russia, Syria, DPRK and Iran)
- 2.7 Chemical precursors of explosives
- 2.8 Chemical precursors of psychotropic and narcotic substances

Different authorities in each Member State are in charge of the various areas of export authorisation, but a significant portion may be pertinent to the same authorities in charge of dual-use, military exports, as well as the new Foreign Direct Investment screening (FDI)⁴. The latter is the object of a recent EU regulation with an associated risk analysis and decision process. Also for this, the authorisation to the acquisition of an EU industrial asset by a third country could be informed by the quick identification of the dual-use sensitive nature of the chemical production and associated patents.

⁽²⁾ Commission Recommendation (EU) 2019/1318 of 30 July 2019 on internal compliance programmes for dual-use trade controls under Council Regulation (EC) No 428/2009. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019H1318>

⁽³⁾ Commission Recommendation (EU) 2021/1700 of 15 September 2021 on internal compliance programmes for controls of research involving dual-use items under Regulation (EU) 2021/821 of the European Parliament and of the Council setting up a Union regime for the control of exports, brokering, technical assistance, transit and transfer of dual-use items <https://eur-lex.europa.eu/eli/reco/2021/1700/oj>

⁽⁴⁾ REGULATION (EU) 2019/452 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 March 2019 establishing a framework for the screening of foreign direct investments into the Union, fully operational as of 11 October 2020 <https://eur-lex.europa.eu/eli/reg/2019/452/oj>

1.2 Structure of the handbook

The chemicals contained in the handbook are collected on the basis of the applicable EU regulations controlling them, as well as the Chemical Weapons Convention's schedules.

Each listed chemical is identified by its chemical name (which may not be scientifically unique and of course varies in the different languages) and two other relevant data, very useful to the actors involved in export controls:

- The CAS number, a unique numerical identifier for chemicals, and
- The Combined Nomenclature's 8-digit-code (CN) used for Customs declaration purposes.

For each listed chemical, its triple identification set (chemical name; CAS number; Combined Nomenclature code) is then put in correspondence with the reference control code of each regulation considered, as we will see in chapter 2.

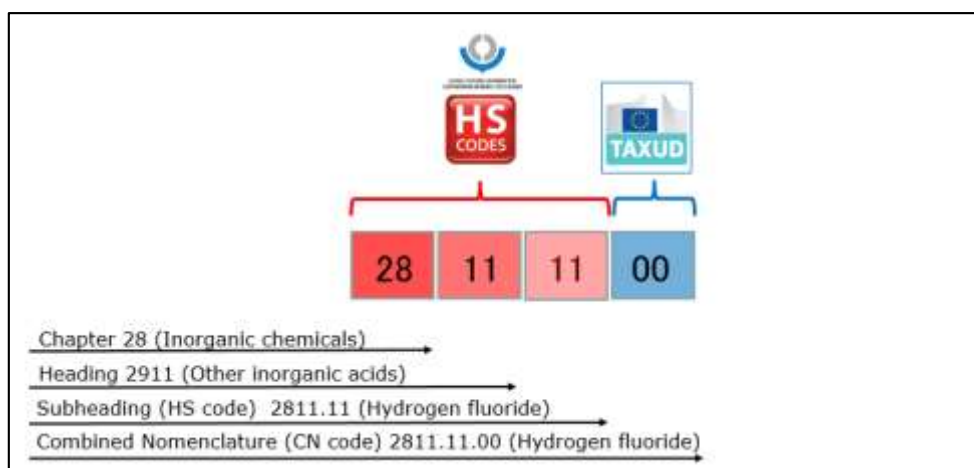
1.3 The Combined Nomenclature

The Combined Nomenclature (CN) is an annually amended customs system established on the basis of the Harmonized System. Each traded commodity, including chemicals, is identified by an 8 digit-CN code used in the Single Administrative Document (SAD) for Customs declaration purposes

The eight digits of CN codes are defined as follows:

- (a) the first six digits shall be the code numbers relating to the headings and subheadings of the Harmonized System (HS) nomenclature;
- (b) the seventh and eighth digits shall identify the CN subheadings.

Figure 2. Combined Nomenclature (example on hydrogen fluoride)



The assignment of the CN codes to each commodity has been decided taking into account the rules of classification included in the Common Customs Tariff⁽⁵⁾ and using the CN codes of the latest version of the Combined nomenclature, 2023, as a reference⁽⁶⁾.

⁽⁵⁾ Commission Implementing Regulation (EU) 2022/1998 of 20 September 2022 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff
http://data.europa.eu/eli/reg_impl/2022/1998/oj

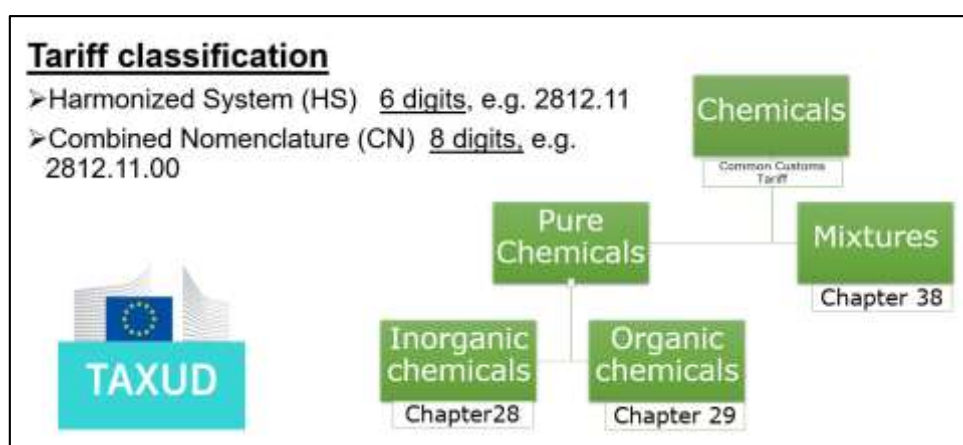
⁽⁶⁾ Commission Implementing Regulation (EU) no 2020/1369 of 29 September 2020 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff.
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32020R1369>

Chemicals and chemical products are listed in the Section VI of the Harmonized System (Products of the Chemical or Allied Industries). There are 11 chapters related to chemicals and chemical products (from chapters 28 to 38). However, chemicals included in this handbook are usually of concern due to their high purity and, therefore the chapters of interest are mainly Chapter 28 for inorganic chemicals and Chapter 29 for organic chemicals (see figure 3).

Other chemicals included in this handbook concern some mixtures of chemicals, named as Miscellaneous chemical products (Chapter 38), as well as a minor amount of metals in powder form (e.g. chapters 57 or 81), not included in the figure 3 below.

The European Commission, DG TAXUD, has published a very useful tool called ECICS (European Customs Inventory of Chemical Substances), which allows to obtain the CN code of either organic or inorganic chemicals, from their CAS number. ECICS (7) lists chemical names in a number of EU languages (currently mainly eleven) along with their tariff classification in the European Community's Combined Nomenclature (eight-digit CN codes).

Figure 3. Classification of chemical goods in the Common Customs Tariff



1.4 Chemical Abstracts Service (CAS)

The CAS registry number (8), or CAS number, is a unique numerical identifier assigned by the Chemical Abstracts Service (CAS) to every chemical substance described in the open scientific literature, including organic and inorganic compounds, minerals, isotopes and alloys.

The CAS number contains up to 10 digits, divided by hyphens into three parts, with the right most one being a check digit (see figure 4). Regardless how a chemical is named in any language, the CAS number remains always the same and therefore it is very useful for an unequivocal identification.

Figure 4. CAS number structure (example arsenic trichloride)



(7) European Customs Inventory of Chemical Substances (ECICS); https://ec.europa.eu/taxation_customs/dds2/ecics/chemicalsubstance_consultation.jsp?Lang=en

(8) Chemical Abstract Service; <https://www.cas.org/>

2 Export control regulations in force in the EU

The EU controls the exports of strategic goods by Regulation (EU) No 2021/821 ⁽⁹⁾ and amendments, including the EU dual-use control list (Annex I) updated annually as European Commission Delegated Act. The regulation, implemented by the Member States and monitored by the European Commission as part of the EU common commercial policy, stems from EU and MS legal and political international commitments, like UNSCR 1540, the Nuclear Non-Proliferation Treaty ⁽¹⁰⁾, the Chemical Weapons Convention ⁽¹¹⁾ – an international treaty with control schedules – and the international export control regimes ⁽¹²⁾, which all include chemical items, in particular the Australia Group ⁽¹³⁾.

Sanctions measures targeting specific countries also control or prohibit dual-use and other strategic goods, including chemicals. Similarly, the EU Common Military Control List ⁽¹⁴⁾ includes large sets of goods and in particular chemicals.

The export of chemicals and the technology for their production are included also in other regulations targeting anti-torture, explosives and drugs precursors.

In addition, hazardous chemicals that entail high risk due to its toxicity for human beings, animals, plants or the environment are also subject to export controls under the so called PIC (Prior Informed Consent) regulation.

The resulting collection of references included in the handbook is the following:

- Dual-use regulation, (EU) No 2021/821 ⁽⁸⁾
- The Chemical Weapons Convention ⁽¹⁰⁾
- Chemicals with military applications, 2008/944/CFSP ⁽¹³⁾
- Hazardous chemicals, (EU) No 649/2012 ⁽¹⁵⁾
- Chemicals included in the anti-torture regulation, (EU) No 2019/125 ⁽¹⁶⁾
- Chemicals subject to sanctions for certain countries (Syria, DPRK and Iran)
- Chemical precursors of explosives, (EU) No 2019/1148 ⁽¹⁷⁾
- Chemical precursors of psychotropic and narcotic substances (EC) No 1111/2005 ⁽¹⁸⁾

⁽⁹⁾ Regulation (EU) 2021/821 of the European Parliament and of the Council of 20 May 2021 setting up a Union regime for the control of exports, brokering, technical assistance, transit and transfer of dual-use items (recast); <https://eur-lex.europa.eu/eli/reg/2021/821/oj>

⁽¹⁰⁾ Treaty on the Non-Proliferation of Nuclear Weapons (NPT); <https://www.un.org/disarmament/wmd/nuclear/npt/>

⁽¹¹⁾ The Chemical Weapons Convention Treaty; <https://www.opcw.org/chemical-weapons-convention/download-convention>

⁽¹²⁾ Nuclear Suppliers Group; Missile Technology Control Regime; Wassenaar Arrangement; Australia Group

⁽¹³⁾ The Australia Group. <https://www.dfat.gov.au/publications/minisite/theaustraliagroupnet/site/en/index.html>

⁽¹⁴⁾ Common Military List of the European Union ST/5470/2020/INIT; [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020XG0313\(07\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020XG0313(07))

⁽¹⁵⁾ Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02012R0649-20200901>

⁽¹⁶⁾ Regulation (EU) No 2019/125 of the European Parliament and of the Council of 16 January 2019 concerning trade in certain goods which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02019R0125-20200527&qid=1610983638632>

⁽¹⁷⁾ Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019R1148>

⁽¹⁸⁾ Council Regulation (EC) No 1111/2005 of 22 December 2004 laying down rules for the monitoring of trade between the Union and third countries in drug precursors; <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02005R0111-20210113&qid=1610958098123>

2.1 Dual-use goods

Regulation (EU) No 2021/821 controls the export of dual-use items which can assist the production of Weapons of Mass Destruction (WMD), including certain chemicals which may be used as precursors for toxic chemical agents, included in Annex I of the regulation, also known as the EU dual-use control list. Annex I is amended annually by a Commission Delegated Regulation on the basis of the international export control regimes' decisions and its latest version was published in January 2023: (EU) No 2023/66 ⁽¹⁹⁾.

Strategic, or "dual-use" goods have both civil and military applications, including systems, equipment, components, materials, software and technologies for manufacturing, aerospace, electronics, chemical, biological and medical, nuclear, telecommunications, cyber-security, marine, navigation, avionics, laser applications, energy production and many other applications. They include dual-use materials, systems, equipment, technologies and software play in the proliferation of nuclear, chemical, biological weapons, of missiles and means of delivery, of related materials and technologies, including cyber-threats.

Effective trade controls depend to a great extent on the awareness of exporters and their active efforts to comply with trade restrictions. To this end, companies usually put in place a set of internal policies and procedures, also known as an Internal Compliance Programme (ICP). The EU published a guidance, (EU) No 2019/1318 ⁽²⁰⁾ that provides a framework to help exporters identify, manage and mitigate risks associated with dual-use trade controls and to ensure compliance with the relevant EU and national laws and regulations.

The codification system used for the identification of dual-use items in general, including chemicals, was established as an alpha-numeric code called Export Control Number (ECN) made of 5 characters. The first character is a 0-9 digit corresponding to the category (10 in total), the second is a letter (A to E) which refers to the subcategory, while the third character (0-4) identifies the Multilateral Export Control Regime (see table 1).

⁽¹⁹⁾ Commission Delegated Regulation (EU) 2023/66 of 21 October 2022 amending Regulation (EU) 2021/821 of the European Parliament and of the Council as regards the list of dual-use items.
http://data.europa.eu/eli/reg_del/2023/66/oj

⁽²⁰⁾ Commission Recommendation (EU) 2019/1318 of 30 July 2019 on internal compliance programmes for dual-use trade controls under Council Regulation (EC) No 428/2009
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019H1318>

Table 1. Dual-use codification system

Category	Subcategory	Export Control Regime	Codification
0=Nuclear materials	A=Systems, equipment and components B=test, inspection and production equipment C=materials D=software E=technology	0=Wassenaar arrangement (WA)	two more digits to identify each item. Sub-bullets, letters and numbers could follow for further subdivision
1=Special materials		1=Missile Technology Control Regime (MTCR)	
2=Materials processing		2=Nuclear Suppliers Group	
3=Electronics		3=Australia Group	
4=Computers		4=Chemical Weapons Convention (CWC)	
5=telecommunications and information security			
6=Sensors and lasers			
7=Navigation and avionics			
8=Marine			
9=Aerospace and population			

For what concerns the 10 categories into which the EU dual-use control list is divided, most of the chemicals are classified into Category 1 (Special materials), and in less common occurrence into Category 0 for nuclear fuel cycle-related materials, or Category 6 for certain chemicals with good optical properties.

The sub-categories, indicated by the A-E letters in second position, correspond to the type of item (for example, C corresponds to materials, which is the type of item listed in our handbook).

The third digit identifies the Multilateral Export Control Regime pursuant to which the item is controlled, as explained in table 1 and illustrated in figure 5:

- Number 0 refers to the Wassenaar Arrangement (WA) which for instance controls certain chemicals used as lubricating materials (1C006).
- Number 1 is associated to the Missile Technology Control Regime (MTCR) which includes for example propellants (1C111);
- Number 2 relates to the Nuclear Suppliers Group (NSG) which controls, for example, Tritium (1C235).
- Number 3 points at the Australia Group, the regime that looks into the chemical precursors to toxic chemicals used as chemical weapons (1C350).
- Number 4 corresponds to those chemicals already under the scope of the Chemical Weapons Convention (1C450).

Figure 5. Description of Export Control Number (ECN) codes

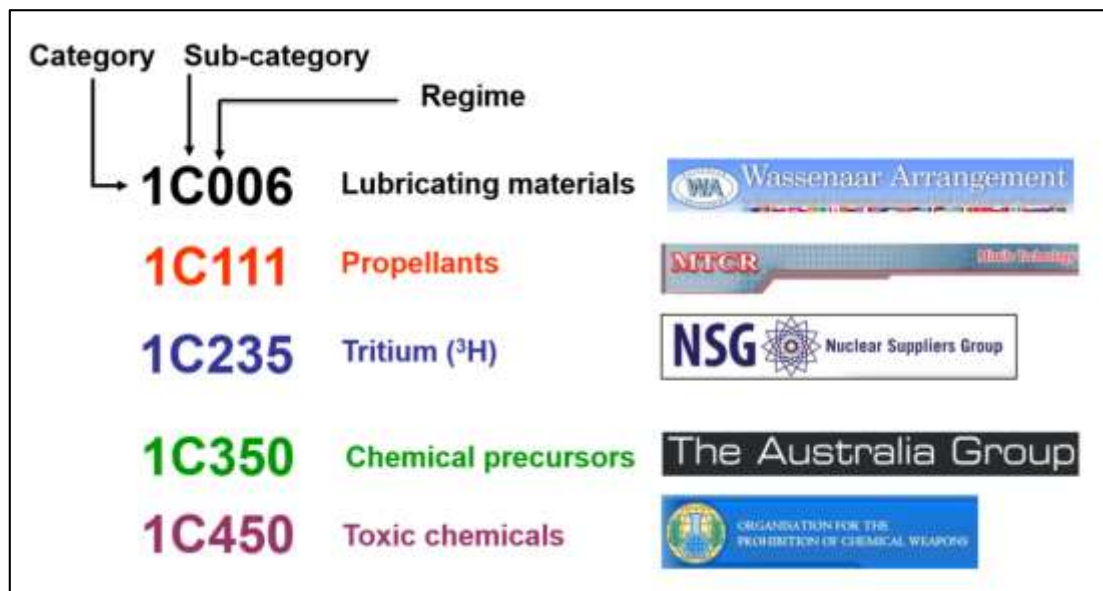


Table 2. Chemicals subject to the dual-use regulation (EU) No 2021/821

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
OC001	Diammonium heptaoxodiuranate; (NH ₄) ₂ U ₂ O ₇	7783-22-4	2844 (heading)
OC001	Disodium heptaoxodiuranate; Na ₂ U ₂ O ₇ ·H ₂ O	13721-34-1	2844.30.91
OC001	Thorium acetate	13075-28-0	2844.30.91
OC001	Thorium benzoate	N/A	2844.30.91
OC001	Thorium bromide; ThBr ₄	13453-49-1	2844.30.91
OC001	Thorium carbide; ThC ₂	12012-16-7	2844.30.91
OC001	Thorium chloride; ThCl ₄	10026-08-1	2844.30.91
OC001	Thorium fluoride; ThF ₄	13709-59-6	2844.30.91
OC001	Thorium formiate	N/A	2844.30.91
OC001	Thorium hydroxide; Th(OH) ₄	N/A	2844.30.91
OC001	Thorium nitrate tetrahydrate; Th(NO ₃) ₄ ·4H ₂ O	13470-07-0	2844.30.91
OC001	Thorium nitrate; Th(NO ₃) ₄	13823-29-5	2844.30.91
OC001	Thorium nitride; ThN	12033-65-7	2844.30.91

OC001	Thorium oxide; ThO ₂	1314-20-1	2844.30.91
OC001	Thorium perchlorate; Th(ClO ₄) ₄	16045-17-3	2844.30.91
OC001	Thorium sulphate monohydrate; Th(SO ₄) ₂ ·9H ₂ O	10381-37-0	2844.30.91
OC001	Thorium sulphide; ThS ₂	12138-07-7	2844.30.91
OC001	Thorium tartrate	N/A	2844.30.91
OC001	Triuranium octoxide; U ₃ O ₈	1344-59-8	2844 (heading)
OC001	Uranium carbide; UC	12070-09-6	2844 (heading)
OC001	Uranium dicarbide; UC ₂	12071-33-9	2844 (heading)
OC001	Uranium dioxide; UO ₂	1344-57-6	2844 (heading)
OC001	Uranium hexafluoride; UF ₆	7783-81-5	2844 (heading)
OC001	Uranium nitride; UN	25658-43-9	2844 (heading)
OC001	Uranium tetrachloride; UCl ₄	10026-10-5	2844 (heading)
OC001	Uranium tetrafluoride; UF ₄	10049-14-6	2844 (heading)
OC001	Uranium trifluoride; UF ₃	13775-06-9	2844 (heading)
OC001	Uranium trioxide; UO ₃	1344-58-7	2844 (heading)
OC001	Uranium-233; ²³³ U	13968-55-3	2844.43.10
OC001	Uranyl nitrate hexahydrate; UO ₂ (NO ₃) ₂ ·6H ₂ O	13520-83-7	2844 (heading)
OC001	Uranyl sulphate; UO ₂ SO ₄ ·3H ₂ O	20910-28-5	2844 (heading)
OC002	Diammonium heptaoxodiuranate; (NH ₄) ₂ U ₂ O ₇	7783-22-4	2844 (heading)
OC002	Diplutonium tricarbide; Pu ₂ C ₃	N/A	2844.20.99
OC002	Disodium heptaoxodiuranate; Na ₂ U ₂ O ₇ ·H ₂ O	13721-34-1	2844 (heading)
OC002	Plutonium carbide; PuC	N/A	2844.20.99
OC002	Plutonium dioxide; PuO ₂	12059-95-9	2844.20.99
OC002	Plutonium hexafluoride; PuF ₆	13693-06-6	2844.20.99
OC002	Plutonium nitrate; Pu(NO ₃) ₄	13823-27-3	2844.20.99
OC002	Plutonium nitride; PuN	12033-54-4	2844.20.99
OC002	Plutonium tetrafluoride; PuF ₄	13709-56-3	2844.20.99
OC002	Plutonyl nitrate	N/A	2844.20.99
OC002	Triuranium octoxide; U ₃ O ₈	1344-59-8	2844 (heading)
OC002	Uranium carbide; UC	12070-09-6	2844 (heading)

0C002	Uranium dicarbide; UC_2	12071-33-9	2844 (heading)
0C002	Uranium dioxide; UO_2	1344-57-6	2844 (heading)
0C002	Uranium hexafluoride; UF_6	7783-81-5	2844 (heading)
0C002	Uranium nitride; UN	25658-43-9	2844 (heading)
0C002	Uranium tetrachloride; UCl_4	10026-10-5	2844 (heading)
0C002	Uranium tetrafluoride; UF_4	10049-14-6	2844 (heading)
0C002	Uranium trifluoride; UF_3	13775-06-9	2844 (heading)
0C002	Uranium trioxide; UO_3	1344-58-7	2844 (heading)
0C002	Uranyl nitrate hexahydrate; $UO_2(NO_3)_2 \cdot 6H_2O$	13520-83-7	2844 (heading)
0C002	Uranyl sulphate; $UO_2SO_4 \cdot 3H_2O$	20910-28-5	2844 (heading)
0C003	Deuterium	7782-39-0	2845.90.10
0C003	Heavy water; D_2O	7789-20-0	2845.10.00
0C004	Graphite	7782-42-5	3801.10.00
0C005	Nickel powder	7440-02-0	7504.00.00
1C006.c	1,1-dibromotetrafluoroethane; Halon 2402	27336-23-8	2903.76.90
1C006.c	1,2-dibromotetrafluoroethane; Halon 2402	124-73-2	2903.76.90
1C006.c	Dibromotetrafluoroethane; Halon 2402	25497-30-7	2903.76.90
1C006.d	1-(Trifluoromethoxy)-1,1,2,2-tetrafluoroethane; E 227	2356-61-8	2909.19.90
1C006.d	1,1,1,2,3,3-Hexafluoro-2,3-bis(trifluoromethoxy)propane	95842-02-7	2909.19.90
1C006.d	1,1,2,2,3,3,3-heptafluoro-N,N-bis(1,1,2,2,2-pentafluoroethyl)propan-1-amine	338-81-8	2921.19.99
1C006.d	1,1,2,2,3,3-Hexafluoro-1-(trifluoromethoxy)propane	67490-36-2	2909.19.90
1C006.d	1,1,2,3,4,4-Hexafluoro-1,2,3,4-tetrakis(heptafluoropropoxy)butane	54208-66-1	2909.19.90
1C006.d	2,4,7,9-Tetraoxadecane, 1,1,1,5,5,6,6,10,10,10-decafluoro-3,3,8,8-tetrakis(trifluoromethyl)	95841-80-8	2909.19.90
1C006.d	2H-Perfluoro-5,8,11,14,17-Pentamethyl-3,6,9,12,15,18-Hexaoxaheneicosane	55154-18-2	2909.19.90
1C006.d	2H-Perfluoro-5,8,11,14-Tetramethyl-3,6,9,12,15-Pentaoxaoctadecane	37486-69-4	2909.19.90
1C006.d	2H-Perfluoro-5,8,11-Trimethyl-3,6,9,12-Tetraoxapentadecane	26738-51-2	2909.19.90

1C006.d	2H-Perfluoro-5,8-Dimethyl-3,6,9-Trioxadodecane	3330-16-3	2909.19.90
1C006.d	2H-Perfluoro-5-Methyl-3,6-Dioxanonane	3330-14-1	2909.19.90
1C006.d	Butane, 1,1,2,3,4,4-hexafluoro-1,2,3,4-tetrakis(heptafluoropropoxy)-, (R*,S*)	54572-17-7	2909.19.90
1C006.d	Ether, 2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethyl trifluoromethyl	681-08-3	2909.19.90
1C006.d	Heptafluoropropyl 1,2,2,2-tetrafluoroethyl ether	3330-15-2	2909.19.90
1C006.d	Heptafluoropropyl pentafluoroethyl ether	66840-50-4	2909.19.90
1C006.d	Heptane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7-pentadecafluoro-7-(trifluoromethoxy)-	133881-46-6	2909.19.90
1C006.d	Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-6-(1,1,2,2,2-pentafluoroethoxy)-	133080-89-4	2909.19.90
1C006.d	Methane, tetrakis(trifluoromethoxy)-	92639-87-7	2909.19.90
1C006.d	Pentane, 1,1,1,2,2,3,3,4,5,5,5-undecafluoro-4-(pentafluoroethoxy)	92978-07-9	2909.19.90
1C006.d	perfluoro(di-n-butyl-ethylamine)	103811-99-0	2921.19.99
1C006.d	Perfluoro(methylcyclohexane)	355-02-2	2903.89.80
1C006.d	Perfluoro(tert-butylcyclohexane)	84808-64-0	2903.89.80
1C006.d	Perfluoro-1,2-dimethylcyclobutane	2994-71-0	2903.89.80
1C006.d	Perfluoro-1,2-dimethylcyclohexane	306-98-9	2903.89.80
1C006.d	Perfluoro-1,3,5-trimethylcyclohexane	374-76-5	2903.89.80
1C006.d	Perfluoro-1,3-dimethylcyclohexane	335-27-3	2903.89.80
1C006.d	Perfluoro-1,4-diisopropoxybutane	23228-90-2	2909.19.90
1C006.d	Perfluoro-1,4-dimethylcyclohexane	374-77-6	2903.89.80
1C006.d	Perfluoro-2,3-dimethylbutane	354-96-1	2903.49.30
1C006.d	Perfluoro-2,3-dimethylpentane	335-14-8	2903.49.30
1C006.d	Perfluoro-2,7-dimethyloctane	3021-63-4	2903.49.30
1C006.d	Perfluoro-2-butyltetrahydrofuran	335-36-4	2909.19.90
1C006.d	Perfluoro-2-methyl-3-ethylpentane	354-97-2	2903.49.30
1C006.d	Perfluoro-2-methylbutane	594-91-2	2903.49.30
1C006.d	Perfluoro-2-trifluoromethyl-4-oxanonane	169477-62-7	2909.19.90
1C006.d	Perfluoro-3-ethyl-2,3-dimethylpentane	50285-19-3	2903.49.30

1C006.d	Perfluoro-3-isopropyl-2-methylpentane	50285-18-2	2903.49.30
1C006.d	Perfluoro-3-methylpentane	865-71-4	2903.49.30
1C006.d	Perfluoro-5,6-dimethyl-4,7-dioxadecane	2501-01-1	2909.19.90
1C006.d	Perfluoro-butylcyclohexane	374-60-7	2903.89.80
1C006.d	Perfluorodecalin	306-94-5	2903.89.80
1C006.d	Perfluorodiethyl ether	358-21-4	2909.19.90
1C006.d	Perfluoroheptane	335-57-9	2903.49.30
1C006.d	Perfluorohexane	355-42-0	2903.49.30
1C006.d	Perfluoromethylcyclopentane	1805-22-7	2903.89.80
1C006.d	Perfluoro-n-dibutyl ether	308-48-5	2909.19.90
1C006.d	Perfluorononane	375-96-2	2903.49.30
1C006.d	Perfluoro-n-propylcyclohexane	374-59-4	2903.89.80
1C006.d	Perfluorooctane	307-34-6	2903.49.30
1C006.d	Perfluoropentane	678-26-2	2903.49.30
1C006.d	Perfluoropentylamine	134380-80-6	2921.19.99
1C006.d	Perfluorotetraglyme	64028-06-4	2909.19.90
1C006.d	Perfluoro-triethylamine	359-70-6	2921.19.99
1C006.d	Perfluorotriglyme	64028-04-2	2909.19.90
1C006.d	Perfluoro-tri-n-butylamine	311-89-7	2921.19.99
1C006.d	Perfluoro-tri-n-butylamine	86508-42-1	2921.19.99
1C006.d	Perfluoro-tri-n-propylamine	338-83-0	2921.19.99
1C006.d	Perfluorotripentylamine	143356-32-5	2921.19.99
1C006.d	Propane, 1,1,1,2,3,3-hexafluoro-2,3-bis(1,1,2,2,2-pentafluoroethoxy)-	95842-03-8	2909.19.90
1C006.d	Tris(perfluoropentyl)amine	338-84-1	2921.19.99
1C006.d	Tris(tridecafluorohexyl)amine	432-08-6	2921.19.99
1C011.a	Magnesium powder	7439-95-4	8104.30.00
1C011.a	Zirconium powder	7440-67-7	8109.29.00
1C011.b	Boron carbide powder: B ₄ C	12069-32-8	2849.90.10
1C011.b	Boron powder	7440-42-8	2804.50.10

1C011.c	Guanidine nitrate	506-93-4	2925.29.00
1C011.d	Nitroguanidine	556-88-7	2929.90.00
1C012	Diplutonium tricarbide; Pu ₂ C ₃	N/A	2844.20.99
1C012	Plutonium carbide; PuC	N/A	2844.20.99
1C012	Plutonium hexafluoride; PuF ₆	13693-06-6	2844.20.99
1C012	Plutonium nitrate; Pu(NO ₃) ₄	13823-27-3	2844.20.99
1C012	Plutonium nitride; PuN	12033-54-4	2844.20.99
1C012	Plutonium tetrafluoride; PuF ₄	13709-56-3	2844.20.99
1C012	Plutonyl nitrate	N/A	2844.20.99
1C107	Graphite	7782-42-5	3801.10.00
1C111.a.1	Aluminium powder	7429-90-5	7603.10.00
1C111.a.2.a.1	Zirconium powder	7440-67-7	8109.29.00
1C111.a.2.a.2	Beryllium powder	7440-41-7	8112.12.00
1C111.a.2.a.3	Magnesium powder	7439-95-4	8104.30.00
1C111.a.2.b	Boron powder	7440-42-8	2804.50.10
1C111.a.3.a	Dinitrogen trioxide; N ₂ O ₃	10544-73-7	2811.29.30
1C111.a.3.b	Dinitrogen tetroxide; N ₂ O ₄	10544-72-6	2811.29.30
1C111.a.3.b	Nitrogen dioxide; NO ₂	10102-44-0	2811.29.30
1C111.a.3.c	Dinitrogen pentoxide; N ₂ O ₅	10102-03-1	2811.29.30
1C111.a.3.d	Mixed oxydes of nitrigen; MON _x	N/A	3824.99.96
1C111.a.3.e	Inhibited red fuming nitric acid; IRFNA	8007-58-7	2808.00.00
1C111.a.3.f	Nitrogen trifluoride; NF ₃	7783-54-2	2812.90.00
1C111.a.3.f	Perchloryl trifluoride; ClO ₃ F	7616-94-6	2812.90.00
1C111.a.4.a	Trimethylhydrazine	1741-01-1	2928.00.90
1C111.a.4.b	Tetramethylhydrazine	6415-12-9	2928.00.90
1C111.a.4.c	N,N-Diallylhydrazine	5164-11-4	2928.00.90
1C111.a.4.d	Allylhydrazine	7422-78-8	2928.00.90
1C111.a.4.e	Ethylene dihydrazine	N/A	2928.00.90
1C111.a.4.f	Monomethylhydrazine dinitrate	N/A	2928.00.90
1C111.a.4.g	Unsymmetrical dimethylhydrazine nitrate	N/A	2928.00.90

1C111.a.4.h	Hydrazinium azide	14546-44-2	2825.10.00
1C111.a.4.i	1,1-Dimethylhydrazinium azide	227955-52-4	2928.00.90
1C111.a.4.i	1,2-Dimethylhydrazinium azide	299177-50-7	2928.00.90
1C111.a.4.j	Hydrazinium dinitrate	13464-98-7	2825.10.00
1C111.a.4.k	Diimido oxalic acid dihydrazine	3457-37-2	2928.00.90
1C111.a.4.l	2-hydroxyethylhydrazine nitrate; HEHN	N/A	2928.00.90
1C111.a.4.m	Hydrazinium perchlorate	27978-54-7	2825.10.00
1C111.a.4.n	Hydrazinium diperchlorate	13812-39-0	2825.10.00
1C111.a.4.o	Methylhydrazine nitrate	29674-96-2	2928.00.90
1C111.a.4.p	1,1-Diethylhydrazine nitrate; DEHN	N/A	2928.00.90
1C111.a.4.p	1,2-Diethylhydrazine nitrate; DEHN	36453-17-2	2928.00.90
1C111.a.4.q	3,6-Dihydrazino tetrazine nitrate; DHTN	N/A	2933.99.80
1C111.a.5.b	1,2-dimethyladamantane	702-79-4	2902.19.00
1C111.a.5.b	Cubane	277-10-1	2902.19.00
1C111.a.5.b	Dihydrobenzvalene	287-12-7	2902.19.00
1C111.a.5.b	exo-tetrahydro-dicyclopentadiene	2825-82-3	2902.19.00
1C111.a.5.b	Perhydro-dinorbornadiene	66289-74-5	2902.19.00
1C111.a.5.b	Quadricyclane	278-06-8	2902.19.00
1C111.a.5.b	Tricyclo[2.2.1.0(2,6)]heptane	279-19-6	2902.19.00
1C111.a.6.a	1,2-Dimethylaminoethylazide; DMAZ	86147-04-8	2928.00.90
1C111.b.1	Carboxy-terminated polybutadiene; CTPB	N/A	4002.20.00
1C111.b.2	Hydroxyl terminated polybutadiene; HTPB	69102-90-5	4002.20.00
1C111.b.3	Polybutadiene-acrylic acid; PBAA	N/A	4002.99.90
1C111.b.4	Polybutadiene-acrylic acid-acrylonitrile; PBAN	N/A	4002.99.90
1C111.b.5	Polytetrahydrofuran polyethylene glycol; TPEG	N/A	3907.29.20
1C111.b.6	Polyglycidyl nitrate; Poly-GLYN or PGN	27814-48-8	3907.29.11
1C111.c.1	Carboranes	N/A	2934.99.90
1C111.c.1	Decaborane; B ₁₀ H ₄	17702-41-9	2850.00.20
1C111.c.1	Pentaborane-9; B ₅ H ₉	19624-22-7	2850.00.20
1C111.c.1	Pentaborane-11; B ₅ H ₁₁	18433-84-6	2850.00.20

1C111.c.2	Triethylene glycol dinitrate; TEGDN	111-22-8	2920.90.70
1C111.c.3	2-Nitrodiphenylamine	119-75-5	2921.44.00
1C111.c.4.a	Trimethylolethane trinitrate; TMETN	3032-55-1	2920.90.70
1C111.c.4.m	1,1'-Ferrocenedicarboxylic acid	1293-87-4	2931.90.00
1C111.c.5	Diethylene glycol dinitrate; DEGDN	693-21-0	2920.90.70
1C111.c.6.a	Catocene	37206-42-1	2931.90.00
1C111.c.6.b	Ethyl ferrocene	1273-89-8	2931.90.00
1C111.c.6.c	iso-propyl ferrocene	12126-81-7	2931.90.00
1C111.c.6.c	n-Propyl ferrocene	1273-92-3	2931.90.00
1C111.c.6.d	n-Butyl ferrocene	31904-29-7	2931.90.00
1C111.c.6.e	Pentyl ferrocene	1274-00-6	2931.90.00
1C111.c.6.f	Dicyclopentyl ferrocene	125861-17-8	2931.90.00
1C111.c.6.g	Dicyclohexyl ferrocene	N/A	2931.90.00
1C111.c.6.h	Diethyl ferrocene	1273-97-8	2931.90.00
1C111.c.6.i	Dipropyl ferrocene	N/A	2931.90.00
1C111.c.6.j	Dibutyl ferrocene	1274-08-4	2931.90.00
1C111.c.6.k	Dihexyl ferrocene	93894-59-8	2931.90.00
1C111.c.6.l	1,1'-Diacetyl ferrocene	1273-94-5	2931.90.00
1C111.c.6.l	Acetyl ferrocene	1271-55-2	2931.90.00
1C111.c.6.m	Ferrocene carboxylic acid	1271-42-7	2931.90.00
1C111.c.6.n	Butacene	125856-62-4	4002.20.00
1C111.c.7	4,5-diazidomethyl-2-methyl-1,2,3-triazole; iso-DAMTR	N/A	2933.99.80
1C117.a	Tungsten powder	7440-33-7	8101.10.00
1C117.b	Molybdenum powder	7439-98-7	8102.10.00
1C225	Boron-10; ¹⁰ B	14798-12-0	2845.20.00
1C227	Calcium	7440-70-2	2805.12.00
1C228	Magnesium >99.8%	7439-95-4	8104.11.00
1C229	Bismuth >99.99%	7440-69-9	8106.10 (subheading)
1C230	Beryllium carbonate; BeCO ₃	13106-47-3	2836.99.17

1C230	Beryllium chloride; BeCl ₂	7787-47-5	2827.39.85
1C230	Beryllium fluoride; BeF ₂	7787-49-7	2826.19.90
1C230	Beryllium hydroxide; Be(OH) ₂	13327-32-7	2825.90.20
1C230	Beryllium nitrate; Be(NO ₃) ₂	13597-99-4	2834.29.20
1C230	Beryllium oxide; BeO	1304-56-9	2825.90.20
1C230	Beryllium phosphate; Be ₃ (PO ₄) ₂	13598-15-7	2835.29.90
1C230	Beryllium powder	7440-41-7	8112.12.00
1C230	Beryllium sulphate anhydrous; BeSO ₄	13510-49-1	2833.29.80
1C230	Beryllium sulphate tetrahydrate; BeSO ₄ ·4H ₂ O	7787-56-6	2833.29.80
1C231	Hafnium tetrafluoride; HfF ₄	13709-52-9	2826.19.90
1C231	Hafnium boride; HfB ₂	12007-23-7	2850.00.90
1C231	Hafnium carbide; HfC ₄	12069-85-1	2849.90.90
1C231	Hafnium dioxide; HfO ₂	12055-23-1	2825.90.85
1C231	Hafnium nitride; HfN	25817-87-2	2850.00.20
1C231	Hafnium oxychloride; HfOCl ₂	13759-17-6	2827.49.90
1C231	Hafnium powder	7440-58-6	8112.31.00
1C231	Hafnium silicate; HfSiO ₄	13870-13-8	2839.90.00
1C231	Hafnium sulphide; HfS ₂	18855-94-2	2830.90.85
1C232	Helium-3; ³ He	14762-55-1	2845.40.00
1C233	Lithium-6; ⁶ Li	14258-72-1	2845.30.00
1C234	Zirconium (nuclear grade)	7440-67-7	8109.21.00 8109.31.00 8109.91.00
1C235	Tritium; ³ H	10028-17-8	2844.41 (subheading)
1C236	Actinium-225; ²²⁵ Ac	14265-85-1	2844.42 (subheading)
1C236	Actinium-227; ²²⁷ Ac	14952-40-0	2844.42 (subheading)
1C236	Californium-253; ²⁵³ Cf	15720-29-3	2844.42 (subheading)
1C236	Curium-240; ²⁴⁰ Cm	15411-90-2	2844.42 (subheading)

1C236	Curium-241; ²⁴¹ Cm	15411-91-3	2844.42 (subheading)
1C236	Curium-242; ²⁴² Cm	15510-73-3	2844.42 (subheading)
1C236	Curium-243; ²⁴³ Cm	15757-87-6	2844.42 (subheading)
1C236	Curium-244; ²⁴⁴ Cm	13981-15-2	2844.42 (subheading)
1C236	Einsteinium-253; ²⁵³ Es	15840-02-5	2844.42 (subheading)
1C236	Einsteinium-254; ²⁵⁴ Es	15840-03-6	2844.42 (subheading)
1C236	Gadolinium-148; ¹⁴⁸ Gd	14119-21-2	2844.42 (subheading)
1C236	Plutonium-236; ²³⁶ Pu	15411-92-4	2844.20.99
1C236	Plutonium-238; ²³⁸ Pu	13981-16-3	2844.20.99
1C236	Polonium-208; ²⁰⁸ Po	N/A	2844.42 (subheading)
1C236	Polonium-209; ²⁰⁹ Po	N/A	2844.42 (subheading)
1C236	Polonium-210; ²¹⁰ Po	13981-52-7	2844.42 (subheading)
1C236	Radium-223; ²²³ Ra	15623-45-7	2844.42 (subheading)
1C236	Thorium-227; ²²⁷ Th	15623-47-9	2844.30 (subheading)
1C236	Thorium-228; ²²⁸ Th	14274-82-9	2844.30 (subheading)
1C236	Uranium-230; ²³⁰ U	15743-51-8	2844.42 (subheading)
1C236	Uranium-232; ²³² U	14158-29-3	2844.42 (subheading)
1C237	Radium-226; ²²⁶ Ra	13982-63-3	2844.43.20
1C238	Chlorine trifluoride; ClF ₃	7790-91-2	2812.90.00
1C239	Dipotassium dinitraminobistetrazolate; K2DNABT	N/A	2933.99.80
1C239	Potassium 3,6-bis(4-nitramino-1,2,5-oxadiazol-3-yl)-1,2,4,5-dioxadiazine; K2BNOD	N/A	2934.99.90

1C239	Potassium 4,4'-Bis(dinitromethyl)-3,3'-Azofurazanate; K2BDTAF	N/A	2934.99.90
1C239	Potassium 6-Nitro-5-oxidopyrazolo [3,4-c][1,2,5] oxadiazol-4-ide; KNODP	N/A	2934.99.90
1C240	Nickel powder	7440-02-0	7504.00.00
1C350.1	Thiodiglycol	111-48-8	2930.70.00
1C350.2	Phosphorus oxychloride; POCl ₃	10025-87-3	2812.12.00
1C350.3	Dimethyl methylphosphonate	756-79-6	2931.41.00
1C350.4	Methylphosphonyl difluoride; DF	676-99-3	2931.59.10
1C350.5	Methylphosphonyl dichloride	676-97-1	2931.51.00
1C350.6	Dimethyl phosphite	868-85-9	2920.21.00
1C350.7	Phosphorus trichloride; PCl ₃	7719-12-2	2812.13.00
1C350.8	Trimethyl phosphite	121-45-9	2920.23.00
1C350.9	Thionyl chloride; SOCl ₂	7719-09-7	2812.17.00
1C350.10	3-Hydroxy-1-methylpiperidine	3554-74-3	2933.39.99
1C350.11	N,N-Diisopropyl-(beta)-aminoethyl chloride	96-79-7	2921.19.99
1C350.12	N,N-Diisopropyl-(beta)-aminoethane thiol	5842-07-9	2930.90.98
1C350.13	3-Quinuclidinol	1619-34-7	2933.35.00
1C350.13	R-(-)-3-Quinuclidinol	25333-42-0	2933.35.00
1C350.14	Potassium fluoride; KF	7789-23-3	2826.19.90
1C350.15	2-Chloroethanol	107-07-3	2905.59.98
1C350.16	Dimethylamine	124-40-3	2921.11.00
1C350.17	Diethyl ethylphosphonate	78-38-6	2931.43.00
1C350.18	Diethyl N,N-dimethylphosphoramidate	2404-03-7	2929.90.00
1C350.19	Diethyl phosphite	762-04-9	2920.22.00
1C350.20	Dimethylamine hydrochloride	506-59-2	2921.11.00
1C350.21	Ethylphosphinyl dichloride	1498-40-4	2931.59.90
1C350.22	Ethylphosphonyl dichloride	1066-50-8	2931.59.90
1C350.23	Ethylphosphonyl difluoride	753-98-0	2931.59.90
1C350.24	Hydrogen fluoride; HF	7664-39-3	2811.11.00
1C350.25	Methyl benzilate	76-89-1	2918.19.98

1C350.26	Methylphosphinyl dichloride	676-83-5	2931.59.90
1C350.27	N,N-Diisopropyl-(beta)-amino-ethanol	96-80-0	2922.18.00
1C350.28	Pinacolyl alcohol	464-07-3	2905.19.00
1C350.29	O-Ethyl O-2-diisopropylaminoethyl methylphosphonite; QL	57856-11-8	2931.49.90
1C350.30	Triethyl phosphite	122-52-1	2920.24.00
1C350.31	Arsenic trichloride; AsCl ₃	7784-34-1	2812.19.90
1C350.32	Benzilic acid	76-93-7	2918.17.00
1C350.33	Diethyl methylphosphonite	15715-41-0	2931.49.90
1C350.34	Dimethyl ethylphosphonate	6163-75-3	2931.49.90
1C350.35	Ethylphosphinyl difluoride	430-78-4	2931.59.90
1C350.36	Methylphosphinyl difluoride	753-59-3	2931.59.90
1C350.37	3-Quinuclidone	3731-38-2	2933.39.99
1C350.38	Phosphorus pentachloride; PCl ₅	10026-13-8	2812.14.00
1C350.39	Pinacolone	75-97-8	2914.19.90
1C350.40	Potassium cyanide; KCN	151-50-8	2837.19.00
1C350.41	Potassium bifluoride; KHF ₂	7789-29-9	2826.19.90
1C350.42	Ammonium hydrogen fluoride; (NH ₄)HF ₂	1341-49-7	2826.19.10
1C350.43	Sodium fluoride; NaF	7681-49-4	2826.19.10
1C350.44	Sodium bifluoride; NaHF ₂	1333-83-1	2826.19.10
1C350.45	Sodium cyanide; NaCN	143-33-9	2837.11.00
1C350.46	Triethanolamine	102-71-6	2922.15.00
1C350.47	Phosphorus pentasulphide	1314-80-3	2813.90.10
1C350.48	Diisopropylamine	108-18-9	2921.19.99
1C350.49	Diethylaminoethanol	100-37-8	2922.19.00
1C350.50	Sodium sulphide; Na ₂ S	1313-82-2	2830.10.00
1C350.51	Sulphur monochloride; S ₂ Cl ₂	10025-67-9	2812.15.00
1C350.52	Sulphur dichloride; SCl ₂	10545-99-0	2812.16.00
1C350.53	Triethanolamine hydrochloride	637-39-8	2922.19.00
1C350.54	N,N-Diisopropyl-2-aminoethyl chloride hydrochloride	4261-68-1	2921.14.00
1C350.55	Methylphosphonic acid	993-13-5	2931.44.00

1C350.56	Diethyl methylphosphonate	683-08-9	2931.49.90
1C350.57	N,N-Dimethylaminophosphoryl dichloride	677-43-0	2929.90.00
1C350.58	Triisopropyl phosphite	116-17-6	2920.29.00
1C350.59	Ethyl-diethanolamine	139-87-7	2922.17.00
1C350.60	O,O-Diethyl phosphorothioate	2465-65-8	2920.19.00
1C350.61	O,O-Diethyl phosphorodithioate	298-06-6	2920.19.00
1C350.62	Sodium hexafluorosilicate; Na ₂ SiF ₆	16893-85-9	2826.90.80
1C350.63	Methylphosphonothioic dichloride	676-98-2	2931.59.90
1C350.64	Diethylamine	109-89-7	2921.19.50
1C350.65	N,N-Diisopropylaminoethanethiol hydrochloride	41480-75-5	2930.90.98
1C350.66	Methyl dichlorophosphate	677-24-7	2920.90.70
1C350.67	Ethyl dichlorophosphate	1498-51-7	2920.90.70
1C350.68	Methyl difluorophosphate	22382-13-4	2920.90.70
1C350.69	Ethyl difluorophosphate	460-52-6	2920.90.70
1C350.70	Diethyl chlorophosphite	589-57-1	2920.29.00
1C350.71	Methyl chlorofluorophosphate	754-01-8	2920.90.70
1C350.72	Ethyl chlorofluorophosphate	762-77-6	2920.90.70
1C350.73	N,N-Dimethylformamide	44205-42-7	2925.29.00
1C350.74	N,N-Diethylformamide	90324-67-7	2925.29.00
1C350.75	N,N-Dipropylformamide	48044-20-8	2925.29.00
1C350.76	N,N-Diisopropylformamide	857522-08-8	2925.29.00
1C350.77	N,N-Dimethylacetamide	2909-14-0	2925.29.00
1C350.78	N,N-Diethylacetamide	14277-06-6	2925.29.00
1C350.79	N,N-Dipropylacetamide	1339586-99-0	2925.29.00
1C350.80	N,N-Dimethylpropanamide	56776-14-8	2925.29.00
1C350.81	N,N-Diethylpropanamide	84764-73-8	2925.29.00
1C350.82	N,N-Dipropylpropanamide	1341496-89-6	2925.29.00
1C350.83	N,N-Dimethylbutanamide	1340437-35-5	2925.29.00
1C350.84	N,N-Diethylbutanamide	53510-30-8	2925.29.00
1C350.85	N,N-Dipropylbutanamide	1342422-35-8	2925.29.00

1C350.86	N,N-Diisopropylbutanamide	1315467-17-4	2925.29.00
1C350.87	N,N-Dimethylisobutanamide	321881-25-8	2925.29.00
1C350.88	N,N-Diethylisobutanamide	1342789-47-2	2925.29.00
1C350.89	N,N-Dipropylisobutanamide	1342700-45-1	2925.29.00
1C351.d.1	ADP-ribosyltransferase C3	58319-92-9	3002.49.00
1C351.d.1	Botulinum Toxin A	93384-43-1	3002.49.00
1C351.d.1	Botulinum Toxin B	93384-44-2	3002.49.00
1C351.d.4	α -Conotoxin AulB	216299-21-7	3002.49.00
1C351.d.4	α -Conotoxin MII	175735-93-0	3002.49.00
1C351.d.4	α -Conotoxin PIA	669050-68-4	3002.49.00
1C351.d.4	α -Conotoxin PnIA	705300-84-1	3002.49.00
1C351.d.4	Ricin	9009-86-3	3002.49.00
1C351.d.4	Ricin A chain	96638-28-7	3002.49.00
1C351.d.4	ω -Conotoxin GVIA	106375-28-4	3002.49.00
1C351.d.4	ω -Conotoxin MVIC	147794-23-8	3002.49.00
1C351.d.5	Saxitoxin	35523-89-8	3002.49.00
1C351.d.5	Shigatoxin	75757-64-1	3002.49.00
1C351.d.7	α -Hemolysin	94716-94-6	3002.49.00
1C351.d.7	Staphylococcal enterotoxin B	11100-45-1	3002.49.00
1C351.d.8	Tetrodotoxin; TTX	4368-28-9	2939.80.00
1C351.d.10	Microcystin LA	96180-79-9	3002.49.00
1C351.d.10	Microcystin LR, from <i>Microcystis aeruginosa</i>	101043-37-2	3002.49.00
1C351.d.10	Microcystin-YR	101064-48-6	3002.49.00
1C351.d.11	Aflatoxin B1	1162-65-8	2932.20.90
1C351.d.11	Aflatoxin B2	7220-81-7	2932.20.90
1C351.d.11	Aflatoxin G1	1165-39-5	2932.20.90
1C351.d.11	Aflatoxin G2	7241-98-7	2932.20.90
1C351.d.11	Aflatoxin M1	6795-23-9	2932.20.90
1C351.d.11	Aflatoxin M2	6885-57-0	2932.20.90

1C351.d.11	Aflatoxin mix	1402-68-2	2932.20.90
1C351.d.12	L-Abrin	526-31-8	3002.49.00
1C351.d.13	Cholera Toxin B subunit (FITC conjugate)	131096-89-4	3002.49.00
1C351.d.13	Cholera Toxin Vibrio cholerae (Sigma C8052)	9012-63-9	3002.49.00
1C351.d.14	Diacetoxyscirpenol	2270-40-8	2932.99.00
1C351.d.15	T-2 toxin	21259-20-1	2932.99.00
1C351.d.16	HT-2 toxin	26934-87-2	2932.99.00
1C351.d.17	Modeccin	65988-88-7	3002.49.00
1C351.d.18	Volkensin	91933-11-8	3002.49.00
1C351.d.19	Viscumin	84929-55-5	3002.49.00
1C450.a.1	[2-(diethylthiophosphor-S-yl)ethyl]diethylammonium hydrogen oxalate; Amiton salt	3734-97-2	2930.90.98
1C450.a.1	2-[(diethoxyphosphoryl)sulfanyl]-N,N,N-triethylethanaminium; Amiton salt	20194-81-4	2930.90.98
1C450.a.1	O,O-diethyl S-[2-(diethylamino)ethyl] phosphorothioate; Amiton	78-53-5	2930.90.98
1C450.a.2	1,1,3,3,3-pentafluoro-2-(trifluoromethyl)prop-1-ene; PFIB	382-21-8	2903.59.00
1C450.a.3	3-Quinuclidinyl benzilate; BZ	6581-06-2	2933.39.99
1C450.a.4	Phosgene; COCl ₂	75-44-5	2812.11.00
1C450.a.5	Cyanogen chloride; CNCl	506-77-4	2853.10.00
1C450.a.6	Hydrogen cyanide; HCN	74-90-8	2811.12.00
1C450.a.7	Chloropicrin	76-06-2	2904.91.00
1C450.b.1	(5-Ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl methyl methylphosphonate	41203-81-0	2931.47.00
1C450.b.1	(E)-2-Butenyl methylphosphonofluoridoate	138780-00-4	2931.59.90
1C450.b.1	1,2,2-Trimethylpropyl ethylphosphonate	143663-83-6	2931.49.90
1C450.b.1	1,2,2-Trimethylpropyl isopropylphosphonate	249934-16-5	2931.49.90
1C450.b.1	1,2,2-Trimethylpropyl methylphosphonate	616-52-4	2931.49.90
1C450.b.1	1,2,2-Trimethylpropyl propylphosphonate	249934-12-1	2931.49.90
1C450.b.1	1-Methylbutyl methylphosphonate	198885-54-0	2931.49.90
1C450.b.1	1-Methylheptyl methylphosphonate	148456-51-3	2931.49.90

1C450.b.1	1-Methylpentyl methylphosphonate	944146-50-3	2931.49.90
1C450.b.1	1-Methylprop-2-yn-1-yl methylphosphonofluoridoate	30593-71-6	2931.59.90
1C450.b.1	2,4,6-Tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide	68957-94-8	2931.46.00
1C450.b.1	2-Ethylhexyl methylphosphonate	13688-82-9	2931.49.90
1C450.b.1	2-Methylpropyl methyl methylphosphonate	150799-85-2	2931.49.90
1C450.b.1	3,9-Dimethyl-2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane 3,9-dioxide	3001-98-7	2931.48.00
1C450.b.1	4-Methylpentyl methylphosphonate	944146-51-4	2931.49.90
1C450.b.1	Aluminium methyl methylphosphonate	35851-62-8	2931.49.90
1C450.b.1	Aluminium methyl propylphosphonate	114076-21-0	2931.49.90
1C450.b.1	Bis(1,2,2-trimethylpropyl) ethylphosphonate	169739-48-4	2931.49.90
1C450.b.1	Bis(1,2,2-trimethylpropyl) methylphosphonate	7040-58-6	2931.49.90
1C450.b.1	Bis(1,2,2-trimethylpropyl) propylphosphonate	192438-31-6	2931.49.90
1C450.b.1	Bis(1,3-dimethylbutyl) methylphosphonate	959028-09-2	2931.49.90
1C450.b.1	Bis(1-ethylpropyl) methylphosphonate	5828-67-1	2931.49.90
1C450.b.1	Bis(1-methylbutyl) methylphosphonate	460091-25-2	2931.49.90
1C450.b.1	Bis(1-methylethyl) methylphosphonate	1445-75-6	2931.49.90
1C450.b.1	Bis(1-methylheptyl) methylphosphonate	76341-63-4	2931.49.90
1C450.b.1	Bis(1-methylpentyl) methylphosphonate	1020119-28-1	2931.49.90
1C450.b.1	Bis(2-chloroethyl) methylphosphonate	2799-58-8	2931.59.90
1C450.b.1	Bis(2-ethylhexyl) methylphosphonate	60556-68-5	2931.49.90
1C450.b.1	Bis(2-methoxyethyl) ethylphosphonate	170275-34-0	2931.49.90
1C450.b.1	Bis(2-methoxyethyl) methylphosphonate	6069-09-6	2931.49.90
1C450.b.1	Bis(polyoxyethylene) methylphosphonate	363626-50-0	3907.21.00
1C450.b.1	Bis[(5-Ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl] methylphosphonate	42595-45-9	2931.49.20
1C450.b.1	Boranylidene methylphosphonium	14975-23-6	2931.49.90
1C450.b.1	Butyl methyl methylphosphonate	683-32-9	2931.49.90
1C450.b.1	Butyl methylphosphinate	6172-80-1	2931.49.90
1C450.b.1	Butyl methylphosphonate	1832-55-9	2931.49.90

1C450.b.1	Butyl methylphosphonochloridoate	23164-47-8	2931.59.90
1C450.b.1	Cyclohexyl ethylphosphonate	170424-87-0	2931.49.90
1C450.b.1	Cyclohexyl ethylphosphonochloridoate	57523-33-8	2931.59.90
1C450.b.1	Cyclohexyl methyl methylphosphonate	7040-52-0	2931.49.90
1C450.b.1	Cyclohexyl methylphosphonate	1932-60-1	2931.49.90
1C450.b.1	Cyclohexyl methylphosphonochloridoate	7040-92-8	2931.59.90
1C450.b.1	Dibutyl methylphosphonate	2404-73-1	2931.49.90
1C450.b.1	Dibutyl propylphosphonate	4628-12-0	2931.49.90
1C450.b.1	Dicyclohexyl methylphosphonate	7040-53-1	2931.49.90
1C450.b.1	Dicyclopentyl methylphosphonate	22583-27-3	2931.49.90
1C450.b.1	Diethyl ethylphosphonite	2651-85-6	2931.49.90
1C450.b.1	Diethyl isopropylphosphonate	1538-69-8	2931.49.90
1C450.b.1	Diethyl isopropylphosphonite	61820-31-3	2931.49.90
1C450.b.1	Diethyl propylphosphonate	18812-51-6	2931.49.90
1C450.b.1	Diheptyl methylphosphonate	77304-64-4	2931.49.90
1C450.b.1	Dihexyl isopropylphosphonate	148456-62-6	2931.49.90
1C450.b.1	Dihexyl methylphosphonate	77304-63-3	2931.49.90
1C450.b.1	Diisopropyl dimethyldiphosphonate	28616-51-5	2931.49.90
1C450.b.1	Diisopropyl ethylphosphonate	1067-69-2	2931.49.90
1C450.b.1	Diisopropyl isopropylphosphonate	3759-39-5	2931.49.90
1C450.b.1	Diisopropyl propylphosphonate	18812-55-0	2931.49.90
1C450.b.1	Dimethyl ethylphosphonite	15715-42-1	2931.49.90
1C450.b.1	Dimethyl isopropylphosphonate	54552-77-1	2931.49.90
1C450.b.1	Dimethyl propylphosphonate	18755-43-6	2931.42.00
1C450.b.1	Dinonyl methylphosphonate	95428-88-9	2931.49.90
1C450.b.1	Diocetyl ethylphosphonate	6156-13-4	2931.49.90
1C450.b.1	Diocetyl isopropylphosphonate	83218-22-8	2931.49.90
1C450.b.1	Diocetyl methylphosphonate	1832-68-4	2931.49.90
1C450.b.1	Diocetyl propylphosphonate	959044-15-6	2931.49.90

1C450.b.1	Diphenyl methylphosphonate	7526-26-3	2931.49.90
1C450.b.1	Dipinacolyl dimethyldiphosphonate	81397-56-0	2931.49.90
1C450.b.1	Dipropyl isopropylphosphonate	192698-90-1	2931.49.90
1C450.b.1	Dipropyldiphosphonic acid	71760-04-8	2931.49.90
1C450.b.1	Ethyl ethylphosphonate	7305-61-5	2931.49.90
1C450.b.1	Ethyl isopropylphosphonate	4546-11-7	2931.49.90
1C450.b.1	Ethyl methyl ethylisopropylphosphoramidate	906801-34-1	2929.90.00
1C450.b.1	Ethyl methyl methylphosphonate	18755-36-7	2931.49.90
1C450.b.1	Ethyl methylphosphinate	16391-07-4	2931.49.90
1C450.b.1	Ethyl methylphosphonate	1832-53-7	2931.49.90
1C450.b.1	Ethyl methylphosphonite	89034-24-2	2931.49.90
1C450.b.1	Ethyl methylphosphonochloridoate	5284-09-3	2931.59.90
1C450.b.1	Ethyl N,N-diethyl-P-methylphosphoramidate	2404-81-1	2931.49.90
1C450.b.1	Ethyl propylphosphonochloridoate	28830-00-4	2931.59.90
1C450.b.1	Ethyl S-dicyclohexylammonium methylphosphonothiolate	73790-51-9	2930.90.98
1C450.b.1	Ethylphosphonic acid	6779-09-5	2931.49.90
1C450.b.1	Ethylphosphonothioic dichloride	993-43-1	2931.59.90
1C450.b.1	Ethylphosphonothioic O,O-acid	13991-98-5	2930.90.98
1C450.b.1	Heptyl methylphosphonate	170275-32-8	2931.49.90
1C450.b.1	Hexyl methylphosphonate	148456-69-3	2931.49.90
1C450.b.1	Isobutyl isopropylphosphonochloridoate	170082-70-9	2931.59.90
1C450.b.1	Isobutyl methylphosphonate	1604-38-2	2931.49.90
1C450.b.1	Isobutyl methylphosphonochloridoate	18359-05-2	2931.59.90
1C450.b.1	Isobutyl propylphosphonochloridoate	13213-47-3	2931.59.90
1C450.b.1	Isopropyl 1,2,2-trimethylpropyl methylphosphonate	92411-67-1	2931.49.90
1C450.b.1	Isopropyl ethylphosphonate	170135-50-9	2931.49.90
1C450.b.1	Isopropyl ethylphosphonochloridoate	28829-95-0	2931.59.90
1C450.b.1	Isopropyl isopropylphosphonate	249934-15-4	2931.49.90
1C450.b.1	Isopropyl methyl isopropylphosphonate	331954-04-2	2931.49.90

1C450.b.1	Isopropyl methyl phosphonic acid	1832-54-8	2931.49.90
1C450.b.1	Isopropyl methyl propylphosphonate	211923-89-6	2931.49.90
1C450.b.1	Isopropyl propylphosphonate	53621-99-1	2931.49.90
1C450.b.1	Isopropylphosphonic dichloride	1498-46-0	2931.52.00
1C450.b.1	Isopropylphosphonothioic dichloride	1498-60-8	2930.90.98
1C450.b.1	Isopropylphosphonous dichloride	25235-15-8	2931.59.90
1C450.b.1	Methyl 1,2,2-trimethylpropyl methylphosphonate	7040-59-7	2931.49.90
1C450.b.1	Methyl 3-(trimethoxysilyl)propyl methylphosphonate	67812-17-3	2931.49.90
1C450.b.1	Methyl isopropylphosphonate	249934-13-2	2931.49.90
1C450.b.1	Methyl methylphosphonate	1066-53-1	2931.49.90
1C450.b.1	Methyl propyl isopropylphosphonate	741700-63-0	2931.49.90
1C450.b.1	Methyl propyl propylphosphonate	18755-44-7	2931.49.90
1C450.b.1	Methylphosphinic acid	4206-94-4	2931.49.90
1C450.b.1	Methylphosphonic acid compound with (aminoiminomethyl)urea (1:1)	84402-58-4	2931.45.00
1C450.b.1	Methylphosphonothioic O,O-acid	5994-73-0	2930.90.98
1C450.b.1	Methyltriphenoxyphosphonium iodide	17579-99-6	2931.49.90
1C450.b.1	Mixture of CAS RN 41203-81-0 and CAS RN 42595-45-9	170836-68-7	3824.91.00
1C450.b.1	Nonyl methylphosphonate	1832-60-6	2931.49.90
1C450.b.1	O-(3-chloropropyl) O-[4-nitro-3-(trifluoromethyl)phenyl] methylphosphonothionate	849-29-6	2931.53.00
1C450.b.1	O,O-Dibutyl methylphosphonothioate	18628-73-4	2930.90.98
1C450.b.1	O,O-Diethyl methylphosphonothioate	6996-81-2	2930.90.98
1C450.b.1	O,O-Dipentyl methylphosphonothioate	91964-75-9	2930.90.98
1C450.b.1	Octyl isopropylphosphonate	108506-63-4	2931.49.90
1C450.b.1	Octyl methylphosphonate	1832-58-2	2931.49.90
1C450.b.1	Octyl propylphosphonate	781566-65-2	2931.49.90
1C450.b.1	O-Cyclohexyl methylphosphonofluoridothioate	4241-34-3	2930.90.98
1C450.b.1	O-ethyl ethylchloridothiophosphonate	1497-68-3	2930.90.98
1C450.b.1	O-Ethyl methylphosphonochloridothioate	2524-16-5	2930.90.98

1C450.b.1	O-Ethyl S-hydrogen methylphosphonothioate	18005-40-8	2930.90.98
1C450.b.1	O-Isobutyl methylphosphonothioate	20626-99-7	2930.90.98
1C450.b.1	O-Methyl ethylphosphonochloridothioate	1497-69-4	2930.90.98
1C450.b.1	O-Methyl methylphosphonochloridothioate	2524-15-4	2930.90.98
1C450.b.1	O-Propyl methylphosphonothionochloridoate	18005-37-3	2930.90.98
1C450.b.1	Pentamethylphosphonic diamide	2511-17-3	2931.49.90
1C450.b.1	Phenyl ethylphosphonofluoridoate	959259-83-7	2931.59.90
1C450.b.1	Phenyl methylphosphonofluoridoate	133826-40-1	2931.59.90
1C450.b.1	Phosphonic acid, methyl-, polyglycol ester; Exolit OP 560	663176-00-9	3824.92.00
1C450.b.1	Phosphonic acid, methyl-, polyglycol ester; Exolit OP 560 TP	294675-51-7	3824.92.00
1C450.b.1	Phosphonothioic acid, P-methyl-, O,S-diethyl ester	2511-10-6	2930.90.98
1C450.b.1	Phosphorus oxide, polymer with dimethyl methylphosphonate and oxirane: Fyroltex HP or Fyrol 51	70715-06-9	3824.99.86
1C450.b.1	P-methylphosphonic diamide	4759-30-2	2931.49.90
1C450.b.1	Poly(1,3-phenylene methyl phosphonate)	63747-58-0	3911.20.00
1C450.b.1	Product from the reaction of Methylphosphonic acid and 1,2-Ethanediamine	99580-93-5	2931.49.90
1C450.b.1	Product from the reaction of Methylphosphonic acid and 1,3,5-Triazine-2,4,6-triamine 2,4,6-triamine	129788-86-9	2931.49.90
1C450.b.1	Propyl 1,2,2-trimethylpropyl methylphosphonate	90550-49-5	2931.49.90
1C450.b.1	Propyl isopropylphosphonate	741700-67-4	2931.49.90
1C450.b.1	Propyl methylphosphonate	4546-11-6	2931.49.90
1C450.b.1	Propyl methylphosphonochloridoate	15110-09-5	2931.59.90
1C450.b.1	Propyl propylphosphonate	21921-97-1	2931.49.90
1C450.b.1	Propylphosphonic acid	4672-38-2	2931.49.90
1C450.b.1	Propylphosphonothioic dichloride	2524-01-8	2930.90.98
1C450.b.1	Propylphosphonothioic O,O-acid	27797-35-9	2930.90.98
1C450.b.1	Propylphosphonyl dichloride	4708-04-7	2931.52.00
1C450.b.1	S,S-Diethyl methylphosphonodithioate	995-88-0	2930.90.98
1C450.b.1	S-2-Dipropylaminoethyl methylphosphonothionofluoridoate	28841-40-9	2930.90.98
1C450.b.1	sec-butyl isopropylphosphonochloridoate	170082-69-6	2931.49.90

1C450.b.1	Sec-butyl propylphosphonochloridoate	170082-71-0	2931.59.90
1C450.b.1	S-Methyl methylphosphonochloridothioate	13113-89-8	2930.90.98
1C450.b.1	S-Methyl methylphosphonothioate	73675-56-6	2930.90.98
1C450.b.1	Sodium 3-(trihydroxysilyl)propyl methylphosphonate	84962-98-1	2931.49.10
1C450.b.1	Sodium O-butyl methylphosphonothioate	51825-85-5	2930.90.98
1C450.b.1	Sodium O-ethyl ethylphosphonothioate	17390-16-8	2930.90.98
1C450.b.1	Sodium O-ethyl methylphosphonothioate	22307-81-9	2930.90.98
1C450.b.1	Sodium O-ethyl propylphosphonothioate	117122-90-4	2930.90.98
1C450.b.1	Sodium O-isobutyl methylphosphonothioate	74789-32-5	2930.90.98
1C450.b.1	Sodium O-isopropyl methylphosphonothioate	92475-33-7	2930.90.98
1C450.b.1	Sodium O-methyl methylphosphonothioate	74789-31-4	2930.90.98
1C450.b.1	Sodium O-propyl methylphosphonothioate	51825-84-4	2930.90.98
1C450.b.2	Diethylphosphoramidic bromide fluoride	758-71-4	2929.90.00
1C450.b.2	Diethylphosphoramidic chloride fluoride	650-72-6	2929.90.00
1C450.b.2	Diethylphosphoramidic dichloride	1498-54-0	2929.90.00
1C450.b.2	Diethylphosphoramidic difluoride	359-94-4	2929.90.00
1C450.b.2	Diisopropylphosphoramidic dichloride	23306-80-1	2929.90.00
1C450.b.2	Dimethylphosphoramidic chloride fluoride	36598-84-2	2929.90.00
1C450.b.2	Dimethylphosphoramidic difluoride	354-43-8	2929.90.00
1C450.b.2	Dipropylphosphoramidic dichloride	40881-98-9	2929.90.00
1C450.b.2	Dipropylphosphoramidic difluoride	40882-01-7	2929.90.00
1C450.b.2	Ethylisopropylphosphoramidic dichloride	777943-37-0	2929.90.00
1C450.b.2	Ethylmethylphosphoramidic dichloride	777943-34-7	2929.90.00
1C450.b.2	Ethylpropylphosphoramidic dichloride	777943-38-1	2929.90.00
1C450.b.2	Isopropylmethylphosphoramidic dichloride	777943-36-9	2929.90.00
1C450.b.2	Methylpropylphosphoramidic dichloride	777943-35-8	2929.90.00
1C450.b.3	Diethyl ethyl(methyl)phosphoramidate	53279-98-4	2929.90.00
1C450.b.3	Diethyl N,N-dimethylphosphoramidate	2404-03-7	2929.90.00
1C450.b.3	Diethyl N,N-dipropylphosphoramidate	91043-34-4	2929.90.00
1C450.b.3	Diisopropyl N,N-dimethylphosphoramidate	2404-04-8	2929.90.00

1C450.b.3	Dimethyl N,N-diethylphosphoramidate	65659-19-0	2929.90.00
1C450.b.3	Dimethyl N,N-diisopropylphosphoramidate	170275-46-4	2929.90.00
1C450.b.3	Dimethyl N,N-dimethylphosphoramidate	597-07-9	2929.90.00
1C450.b.3	Dipropyl N,N-diethylphosphoramidate	22250-42-6	2929.90.00
1C450.b.3	Dipropyl N,N-dimethylphosphoramidate	98543-28-3	2929.90.00
1C450.b.3	Dipropyl N,N-dipropylphosphoramidate	17123-10-3	2929.90.00
1C450.b.3	Ethyl methyl N,N-diisopropylphosphoramidate	848216-15-9	2929.90.00
1C450.b.3	Phosphoramidic acid, diethyl-, diethyl ester	3167-69-9	2929.90.00
1C450.b.4	2-(N,N-Dimethylamino)ethylchloride hydrochloride	4584-46-7	2921.12.00
1C450.b.4	2-chloroethyl(diethyl)ammonium sulphate	68391-41-3	2921.19.99
1C450.b.4	2-Chloroethyldimethylamine	107-99-3	2921.19.99
1C450.b.4	2-chloro-N-ethyl-N-methylethanamine	54153-16-1	2921.19.99
1C450.b.4	2-chloro-N-ethyl-N-methylethanamine hydrochloride	4535-88-0	2921.19.99
1C450.b.4	Ethanamine, 2-chloro-N,N-diethyl-, sulfate	67845-39-0	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-(isopropyl)propan-1-amine	688299-03-8	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-ethylpropan-1-amine hydrochloride	13105-93-6	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-ethylpropan-2-amine	92204-40-5	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-isopropylpropan-1-amine hydrochloride	4535-89-1	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-methylpropan-1-amine	763884-48-6	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-methylpropan-2-amine hydrochloride	15512-81-9	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-methylpropan-2-amine	408326-30-7	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-propylpropan-1-amine	36716-60-6	2921.19.99
1C450.b.4	N-(2-chloroethyl)-N-propylpropan-1-amine hydrochloride	4535-86-8	2921.19.99
1C450.b.4	N,N-Diethylaminoethyl-2-chloride	100-35-6	2921.19.99
1C450.b.4	N,N-Diethylaminoethyl-2-chloride hydrochloride	869-24-9	2921.13.00
1C450.b.5	(2-Hydroxyethyl)dipropan-1-ylammonium chloride	4535-76-6	2922.19.00
1C450.b.5	2-(diisopropylamino)ethanol hydrochloride	63051-68-3	2922.19.00
1C450.b.5	2-(Dipropylamino)ethanol	3238-75-3	2922.19.00
1C450.b.5	2-(Ethylisopropylamino)ethanol	2893-61-0	2922.19.00
1C450.b.5	2-(Ethylmethylamino)ethanol	2893-43-8	2922.19.00

1C450.b.5	2-(Ethylpropylamino)ethanol	2893-56-3	2922.19.00
1C450.b.5	2-(Methylpropylamino)ethanol	2893-45-0	2922.19.00
1C450.b.5	2-(N,N-Diisopropylamino)ethanol hydrogen sulfide salt	1373773-53-5	2922.19.00
1C450.b.5	2-[isopropyl(methyl)amino]ethanol	2893-49-4	2922.19.00
1C450.b.5	2-[isopropyl(propyl)amino]ethanol	4535-77-7	2922.19.00
1C450.b.6	2-(Diisopropylamino)ethanethiol	5842-07-9	2930.90.98
1C450.b.6	2-(Dipropylamino)ethanethiol	5842-06-8	2930.90.98
1C450.b.6	2-(Ethylisopropylamino)ethanethiol	36759-67-8	2930.90.98
1C450.b.6	2-(Ethylpropylamino)ethanethiol	1018124-39-4	2930.90.98
1C450.b.6	2-(N,N-Diethylamino)ethanethiol	100-38-9	2930.60.00
1C450.b.6	2-(N,N-diethylamino)ethanethiolate sodium	58607-68-4	2930.90.98
1C450.b.6	2-(N-Ethyl-N-isopropylamino)ethanethiol hydrochloride	1017861-37-8	2930.90.98
1C450.b.6	2-(N-Ethyl-N-methylamino)ethanethiol hydrochloride	1017861-21-0	2930.90.98
1C450.b.6	2-(N-Ethyl-N-propylamino)ethanethiol hydrochloride	1017861-34-5	2930.90.98
1C450.b.6	2-(N-Isopropyl-N-methylamino)ethanethiol hydrochloride	1017861-29-8	2930.90.98
1C450.b.6	2-(N-Isopropyl-N-propylamino)ethanethiol hydrochloride	1017861-45-8	2930.90.98
1C450.b.6	2-(N-Methyl-N-propylamino)ethanethiol	1018124-38-3	2930.90.98
1C450.b.6	2-(N-Methyl-N-propylamino)ethanethiol hydrochloride	1017861-26-5	2930.90.98
1C450.b.6	2-[ethyl(methyl)amino]ethanethiol	63210-55-9	2930.90.98
1C450.b.6	2-[isopropyl(methyl)amino]ethanethiol	36759-66-7	2930.90.98
1C450.b.6	2-[isopropyl(propyl)amino]ethanethiol	36759-68-9	2930.90.98
1C450.b.6	Diethyl-2-mercaptoethylammonium chloride	1942-52-5	2930.90.98
1C450.b.6	N,N-Dimethylaminoethane-2-thiol	108-02-1	2930.10.00
1C450.b.6	N,N-Dimethylaminoethane-2-thiol hydrochloride	13242-44-9	2930.90.98
1C450.b.7	Ethyldiethanolamine	139-87-7	2922.17.00
1C450.b.8	Methyldiethanolamine	105-59-9	2922.17.00
6C002.a	Tellurium	13494-80-9	2804.50.90
6C002.b.1	Cadmium Zinc telluride; CdZnTe	303114-50-3	2842.90.10
6C002.b.2	Cadmium telluride; CdTe	1306-25-8	2842.90.10
6C002.b.3	Mercury Cadmium telluride; HgCdTe	29870-72-2	2842.90.10

6C004.a	Zinc selenide; ZnSe	1315-09-9	2842.90.10
6C004.b	Gallium selenide; GaSe	12024-11-2	2842.90.10
6C004.b	Potassium tinanyl arsenate; KTA	59400-80-5	2842.90.80
6C004.b	Silver gallium selenide; AgGaSe ₂ (AGSE)	12002-67-4	2842.90.10
6C004.b	Thallium arsenic selenide; Tl ₃ AsSe ₃ (TAS)	16142-89-5	2842.90.10
6C004.b	Zinc germanium phosphide; ZnGeP ₂ (ZGP)	N/A	2853.90.90

**in bold new chemicals and new CN codes*

2.2 Chemical Weapons Convention

The Chemical Weapons Convention (CWC) is an arms control treaty of 1993, entered into force in 1997, that outlaws the production, stockpiling, and use of chemical weapons and their precursors and it is administered by the Organisation for the Prohibition of Chemical Weapons (OPCW).

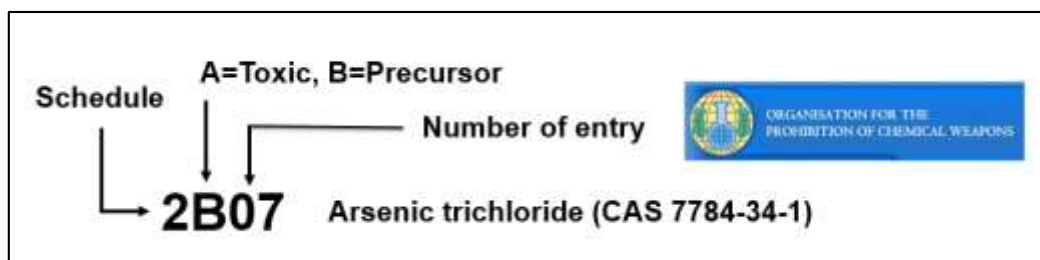
The chemicals of concern are organised to reflect the risk posed by the chemical to the objectives of the Convention, with decreasing risk across the schedules

- Schedule 1 covers chemicals that possess lethal or incapacitating toxicity and other properties that would enable it to be used as a chemical weapon (Schedule 1A), and their final stage precursors (Schedule 1B). They pose a high risk to the objectives of the Convention and have little or no commercial application ⁽²¹⁾.
- Schedule 2 covers chemicals which are potential chemical warfare agents (Schedule 2A), and other chemical weapons precursors (Schedule 2B). They pose a significant risk to the objectives of the Convention and have moderate level of commercial application ⁽²²⁾.
- Schedule 3 covers chemicals which had previously been produced, stockpiled or used as a chemical weapon. They pose a risk to the objectives of the Convention by virtue of its importance in the production of one or more chemicals listed in Schedule 1 or Schedule 2B. Schedule 3 chemicals have widespread commercial application ⁽²³⁾.

The Schedules of the CWC have only been modified once since the treaty entered in force in 1997. The modification was adopted in November 2019 with the inclusion of 4 new families of toxic chemicals to the Schedule 1, some of them related to the family of Novichok chemicals.

The CWC classifies chemicals by Schedules but also according to their role either as a toxic chemical (identified with an A) or a chemical precursor (identified with a B), see figure 6.

Figure 6. Codification of chemicals used by the CWC



The OPCW makes available a Declarations Handbook ⁽²⁴⁾ that serves as guidance for the preparation of declarations to be submitted by States Parties in accordance with the requirements of the Convention. The Declarations Handbook is a nonbinding document which provides practical support to States Parties on how to report the information on declarable facilities and activities, including exports, thereby ensuring that these are effectively brought under the purview of the Convention's verification regime.

⁽²¹⁾ Schedule 1 of the Chemical Weapons Convention.
<https://www.opcw.org/chemical-weapons-convention/annexes/annex-chemicals/schedule-1>

⁽²²⁾ Schedule 2 of the Chemical Weapons Convention.
<https://www.opcw.org/chemical-weapons-convention/annexes/annex-chemicals/schedule-2>

⁽²³⁾ Schedule 3 of the Chemical Weapons Convention.
<https://www.opcw.org/chemical-weapons-convention/annexes/annex-chemicals/schedule-3>

⁽²⁴⁾ DECLARATIONS HANDBOOK 2013: OPCW; Revised version 2: 1 January 2017.
<https://www.opcw.org/documents/2017/01/en-declarations-handbook-2013-revised-2017>

Table 3. Chemicals subject to the Chemical Weapons Convention treaty

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
1A01	Butyl ethylphosphonofluoridoate	18358-34-4	2931.59.90
1A01	Butyl isopropylphosphonofluoridoate	333416-30-1	2931.59.90
1A01	Butyl methylphosphonofluoridoate	352-63-6	2931.59.90
1A01	Butyl propylphosphonofluoridoate	333416-16-3	2931.59.90
1A01	Cyclobutyl ethylphosphonofluoridoate	345239-03-4	2931.59.90
1A01	Cyclobutyl isopropylphosphonofluoridoate	345239-04-5	2931.59.90
1A01	Cyclobutyl methylphosphonofluoridoate	14618-04-3	2931.59.90
1A01	Cyclobutyl propylphosphonofluoridoate	345239-05-6	2931.59.90
1A01	Cyclobutyl propylphosphonofluoridoate	345239-05-6	2931.59.90
1A01	Cycloheptyl ethylphosphonofluoridoate	345239-09-0	2931.59.90
1A01	Cycloheptyl isopropylphosphonofluoridoate	345239-10-3	2931.59.90
1A01	Cycloheptyl methylphosphonofluoridoate	7284-83-5	2931.59.90
1A01	Cycloheptyl propylphosphonofluoridoate	345239-11-4	2931.59.90
1A01	Cyclohexyl ethylphosphonofluoridoate	7284-84-6	2931.59.90
1A01	Cyclohexyl isopropylphosphonofluoridoate	333416-55-0	2931.59.90
1A01	Cyclohexyl methylphosphonofluoridoate	329-99-7	2931.59.90
1A01	Cyclohexyl propylphosphonofluoridoate	28364-21-8	2931.59.90
1A01	1-Cyclohexylethyl ethylphosphonofluoridoate	1353011-94-5	2931.59.90
1A01	2-Cyclohexylethyl ethylphosphonofluoridoate	959093-03-9	2931.59.90
1A01	1-Cyclohexylethyl methylphosphonofluoridoate	1280106-29-7	2931.59.90
1A01	2-Cyclohexylethyl methylphosphonofluoridoate	959040-72-3	2931.59.90
1A01	1-Cyclohexylethyl propylphosphonofluoridoate	1280106-32-2	2931.59.90
1A01	2-Cyclohexylethyl propylphosphonofluoridoate	959004-37-6	2931.59.90
1A01	Cyclohexylmethyl ethylphosphonofluoridoate	959093-05-1	2931.59.90
1A01	Cyclohexylmethyl isopropylphosphonofluoridoate	959004-34-3	2931.59.90
1A01	Cyclohexylmethyl methylphosphonofluoridoate	959019-47-7	2931.59.90

1A01	Cyclohexylmethyl propylphosphonofluoridoate	959025-93-5	2931.59.90
1A01	3-Cyclohexylpropyl ethylphosphonofluoridate	1353011-91-2	2931.59.90
1A01	3-Cyclohexylpropyl methylphosphonofluoridoate	211192-73-3	2931.59.90
1A01	3-Cyclohexylpropyl propylphosphonofluoridate	1280106-26-4	2931.59.90
1A01	Cyclooctyl ethylphosphonofluoridoate	345239-12-5	2931.59.90
1A01	Cyclooctyl isopropylphosphonofluoridoate	345239-13-6	2931.59.90
1A01	Cyclooctyl methylphosphonofluoridoate	14719-38-1	2931.59.90
1A01	Cyclooctyl propylphosphonofluoridoate	345239-14-7	2931.59.90
1A01	Cyclopentyl ethylphosphonofluoridoate	345239-06-7	2931.59.90
1A01	Cyclopentyl isopropylphosphonofluoridoate	345239-07-8	2931.59.90
1A01	Cyclopentyl methylphosphonofluoridoate	7284-82-4	2931.59.90
1A01	Cyclopentyl propylphosphonofluoridoate	345239-08-9	2931.59.90
1A01	Cyclopentylmethyl ethylphosphonofluoridate	1353011-72-9	2931.59.90
1A01	3-Cyclopentylpropyl ethylphosphonofluoridate	1353011-87-6	2931.59.90
1A01	Decyl ethylphosphonofluoridoate	333416-08-3	2931.59.90
1A01	Decyl isopropylphosphonofluoridoate	333416-36-7	2931.59.90
1A01	Decyl methylphosphonofluoridoate	193090-25-4	2931.59.90
1A01	Decyl propylphosphonofluoridoate	333416-22-1	2931.59.90
1A01	1,1-Diethyl-2,2-dimethylpropyl methylphosphonofluoridate	159395-78-5	2931.59.90
1A01	1,1-Diethylpropyl methylphosphonofluoridate	959257-62-6	2931.59.90
1A01	(2R)-3,3-dimethylbutan-2-yl (R)-methylphosphonofluoridate	22956-47-4	2931.59.90
1A01	(2R)-3,3-dimethylbutan-2-yl (S)-methylphosphonofluoridate	22956-48-5	2931.59.90
1A01	(2S)-3,3-dimethylbutan-2-yl (R)-methylphosphonofluoridate	24753-15-9	2931.59.90
1A01	(2S)-3,3-dimethylbutan-2-yl methylphosphonofluoridate	24753-16-0	2931.59.90
1A01	1,2-Dimethylbutyl ethylphosphonofluoridoate	1005258-27-4	2931.59.90
1A01	1,3-Dimethylbutyl ethylphosphonofluoridoate	345260-86-8	2931.59.90
1A01	1,2-Dimethylbutyl isopropylphosphonofluoridoate	1005249-16-0	2931.59.90
1A01	1,3-Dimethylbutyl isopropylphosphonofluoridoate	345260-87-9	2931.59.90
1A01	1,2-Dimethylbutyl methylphosphonofluoridoate	1005239-89-3	2931.59.90

1A01	1,3-Dimethylbutyl methylphosphonofluoridoate	352-53-4	2931.59.90
1A01	2,3-Dimethylbutyl methylphosphonofluoridoate	83563-66-0	2931.59.90
1A01	3,3-Dimethylbutyl methylphosphonofluoridoate	660-21-9	2931.59.90
1A01	1,3-Dimethylbutyl propylphosphonofluoridoate	345260-88-0	2931.59.90
1A01	3,3-Dimethylbutyl propylphosphonofluoridoate	959004-32-1	2931.59.90
1A01	3,5-Dimethylcyclohexyl ethylphosphonofluoridate	1353011-80-9	2931.59.90
1A01	2,6-Dimethylcyclohexyl methylphosphonofluoridoate	1005276-38-9	2931.59.90
1A01	3,5-Dimethylcyclohexyl methylphosphonofluoridoate	1005284-61-6	2931.59.90
1A01	2,3-Dimethylcyclohexyl propylphosphonofluoridate	1280106-35-5	2931.59.90
1A01	1,5-Dimethylhexyl methylphosphonofluoridoate	159395-76-3	2931.59.90
1A01	3,7-Dimethyloctyl ethylphosphonofluoridoate	345260-83-5	2931.59.90
1A01	3,7-Dimethyloctyl isopropylphosphonofluoridoate	345260-84-6	2931.59.90
1A01	3,7-Dimethyloctyl methylphosphonofluoridoate	345260-82-4	2931.59.90
1A01	3,7-Dimethyloctyl propylphosphonofluoridoate	345260-85-7	2931.59.90
1A01	1,1-Dimethylpentyl methylphosphonofluoridate	959014-89-2	2931.59.90
1A01	1,4-Dimethylpentyl methylphosphonofluoridoate	199850-62-9	2931.59.90
1A01	2,2-Dimethylpropyl ethylphosphonofluoridate	959234-06-1	2931.59.90
1A01	2,2-Dimethylpropyl isopropylphosphonofluoridoate	864463-26-3	2931.59.90
1A01	1,1-Dimethylpropyl methylphosphonofluoridoate	159395-77-4	2931.59.90
1A01	1,2-Dimethylpropyl methylphosphonofluoridoate	6154-51-4	2931.59.90
1A01	2,2-Dimethylpropyl methylphosphonofluoridoate	372-62-3	2931.59.90
1A01	2,2-Dimethylpropyl propylphosphonofluoridoate	959092-42-3	2931.59.90
1A01	1-Ethyl-2,2-dimethylpropyl ethylphosphonofluoridoate	345260-76-6	2931.59.90
1A01	1-Ethyl-2,2-dimethylpropyl isopropylphosphonofluoridoate	345260-77-7	2931.59.90
1A01	1-Ethyl-2,2-dimethylpropyl methylphosphonofluoridoate	345260-75-5	2931.59.90
1A01	1-Ethyl-2,2-dimethylpropyl propylphosphonofluoridoate	345260-78-8	2931.59.90
1A01	Ethyl ethylphosphonofluoridoate	650-20-4	2931.59.90
1A01	Ethyl isopropylphosphonofluoridoate	1426-08-0	2931.59.90
1A01	1-Ethyl-1-methylpentyl methylphosphonofluoridate	959098-88-5	2931.59.90

1A01	1-Ethyl-2-methylpentyl ethylphosphonofluoridate	1280106-33-3	2931.59.90
1A01	1-Ethyl-2-methylpentyl methylphosphonofluoridoate	1005240-09-4	2931.59.90
1A01	1-Ethyl-2-methylpentyl propylphosphonofluoridate	1280106-34-4	2931.59.90
1A01	Ethyl methylphosphonofluoridoate	673-97-2	2931.59.90
1A01	1-Ethyl-1-methylpropyl methylphosphonofluoridate	959083-58-0	2931.59.90
1A01	1-Ethyl-2-methylpropyl ethylphosphonofluoridoate	345260-67-5	2931.59.90
1A01	1-Ethyl-2-methylpropyl isopropylphosphonofluoridoate	345260-68-6	2931.59.90
1A01	1-Ethyl-2-methylpropyl methylphosphonofluoridoate	345260-66-4	2931.59.90
1A01	1-Ethyl-2-methylpropyl propylphosphonofluoridoate	345260-69-7	2931.59.90
1A01	Ethyl propylphosphonofluoridoate	333416-15-2	2931.59.90
1A01	1-Ethylbutyl methylphosphonofluoridate	959218-68-9	2931.59.90
1A01	2-Ethylbutyl methylphosphonofluoridoate	126204-48-6	2931.59.90
1A01	4-Ethylcyclohexyl ethylphosphonofluoridoate	333416-65-2	2931.59.90
1A01	4-Ethylcyclohexyl isopropylphosphonofluoridoate	333416-74-3	2931.59.90
1A01	2-Ethylcyclohexyl methylphosphonofluoridoate	1005257-56-6	2931.59.90
1A01	4-Ethylcyclohexyl methylphosphonofluoridoate	333416-60-7	2931.59.90
1A01	4-Ethylcyclohexyl propylphosphonofluoridoate	333416-70-9	2931.59.90
1A01	2-Ethylhexyl ethylphosphonofluoridoate	468711-97-9	2931.59.90
1A01	1-Ethylhexyl isopropylphosphonofluoridoate	959088-13-2	2931.59.90
1A01	2-Ethylhexyl isopropylphosphonofluoridoate	460091-27-4	2931.59.90
1A01	1-Ethylhexyl methylphosphonofluoridate	1228786-49-9	2931.59.90
1A01	2-Ethylhexyl methylphosphonofluoridoate	458-71-9	2931.59.90
1A01	1-Ethylhexyl propylphosphonofluoridoate	959088-14-3	2931.59.90
1A01	2-Ethylhexyl propylphosphonofluoridoate	952104-36-8	2931.59.90
1A01	1-Ethylpentyl methylphosphonofluoridoate	959098-89-6	2931.59.90
1A01	1-Ethylpropyl ethylphosphonofluoridoate	959086-48-7	2931.59.90
1A01	1-Ethylpropyl methylphosphonofluoridoate	66348-71-8	2931.59.90
1A01	1-Ethylpropyl propylphosphonofluoridoate	959088-15-4	2931.59.90
1A01	Heptyl ethylphosphonofluoridoate	162085-85-0	2931.59.90

1A01	Heptyl isopropylphosphonofluoridoate	333416-33-4	2931.59.90
1A01	Heptyl methylphosphonofluoridate	62085-82-7	2931.59.90
1A01	Heptyl methylphosphonofluoridoate	162085-82-7	2931.59.90
1A01	Heptyl propylphosphonofluoridoate	333416-19-6	2931.59.90
1A01	Hexyl ethylphosphonofluoridoate	135445-19-1	2931.59.90
1A01	Hexyl isopropylphosphonofluoridoate	333416-32-3	2931.59.90
1A01	Hexyl methylphosphonofluoridoate	113548-89-3	2931.59.90
1A01	Hexyl propylphosphonofluoridoate	333416-18-5	2931.59.90
1A01	Isobutyl ethylphosphonofluoridoate	2261-83-8	2931.59.90
1A01	Isobutyl isopropylphosphonofluoridoate	333416-40-3	2931.59.90
1A01	1-Isobutyl-3-methylbutyl ethylphosphonofluoridoate	959262-99-8	2931.59.90
1A01	1-Isobutyl-3-methylbutyl methylphosphonofluoridoate	193090-16-3	2931.59.90
1A01	Isobutyl methylphosphonofluoridoate	2053-81-8	2931.59.90
1A01	Isobutyl propylphosphonofluoridoate	333416-26-5	2931.59.90
1A01	Isopropyl ethylphosphonofluoridoate	1189-87-3	2931.59.90
1A01	Isopropyl isopropylphosphonofluoridoate	665-33-8	2931.59.90
1A01	2-Isopropyl-5-methylcyclohexyl ethylphosphonofluoridate	1353011-93-4	2931.59.90
1A01	2-Isopropyl-5-methylcyclohexyl isopropylphosphonofluoridate	1262583-00-5	2931.59.90
1A01	2-Isopropyl-5-methylcyclohexyl methylphosphonofluoridate	1262582-99-9	2931.59.90
1A01	O-Isopropyl methylphosphonofluoridate; Sarin (GB)	107-44-8	2931.59.90
1A01	1-Isopropyl-2-methylpropyl ethylphosphonofluoridoate	345260-79-9	2931.59.90
1A01	1-Isopropyl-2-methylpropyl isopropylphosphonofluoridoate	345260-80-2	2931.59.90
1A01	1-Isopropyl-2-methylpropyl methylphosphonofluoridoate	113548-85-9	2931.59.90
1A01	1-Isopropyl-2-methylpropyl propylphosphonofluoridoate	345260-81-3	2931.59.90
1A01	Isopropyl propylphosphonofluoridoate	18358-37-7	2931.59.90
1A01	1-Isopropylbutyl ethylphosphonofluoridoate	345260-71-1	2931.59.90
1A01	1-Isopropylbutyl isopropylphosphonofluoridoate	345260-72-2	2931.59.90
1A01	1-Isopropylbutyl methylphosphonofluoridoate	345260-70-0	2931.59.90
1A01	1-Isopropylbutyl propylphosphonofluoridate	345260-73-3	2931.59.90

1A01	Methyl ethylphosphonofluoridoate	665-03-2	2931.59.90
1A01	Methyl isopropylphosphonofluoridoate	648-59-9	2931.59.90
1A01	Methyl methylphosphonofluoridoate	353-88-8	2931.59.90
1A01	Methyl propylphosphonofluoridoate	333416-14-1	2931.59.90
1A01	1-Methylbutyl ethylphosphonofluoridoate	333416-09-4	2931.59.90
1A01	2-Methylbutyl ethylphosphonofluoridoate	468711-94-6	2931.59.90
1A01	3-Methylbutyl ethylphosphonofluoridoate	468711-95-7	2931.59.90
1A01	1-Methylbutyl isopropylphosphonofluoridoate	333416-37-8	2931.59.90
1A01	2-Methylbutyl isopropylphosphonofluoridoate	952104-39-1	2931.59.90
1A01	3-Methylbutyl isopropylphosphonofluoridoate	952104-40-4	2931.59.90
1A01	1-Methylbutyl methylphosphonofluoridoate	761-93-3	2931.59.90
1A01	2-Methylbutyl methylphosphonofluoridoate	468711-90-2	2931.59.90
1A01	3-Methylbutyl methylphosphonofluoridoate	22107-46-6	2931.59.90
1A01	1-Methylbutyl propylphosphonofluoridoate	333416-23-2	2931.59.90
1A01	2-Methylbutyl propylphosphonofluoridoate	468712-02-9	2931.59.90
1A01	3-Methylbutyl propylphosphonofluoridoate	468712-03-0	2931.59.90
1A01	2-Methylcyclohexyl ethylphosphonofluoridoate	1353011-76-3	2931.59.90
1A01	3-Methylcyclohexyl ethylphosphonofluoridoate	333416-64-1	2931.59.90
1A01	4-Methylcyclohexyl ethylphosphonofluoridoate	468711-96-8	2931.59.90
1A01	3-Methylcyclohexyl isopropylphosphonofluoridoate	333416-73-2	2931.59.90
1A01	4-Methylcyclohexyl isopropylphosphonofluoridoate	468712-08-5	2931.59.90
1A01	2-Methylcyclohexyl methylphosphonofluoridoate	85473-32-1	2931.59.90
1A01	3-Methylcyclohexyl methylphosphonofluoridoate	113548-86-0	2931.59.90
1A01	4-Methylcyclohexyl methylphosphonofluoridoate	113548-87-1	2931.59.90
1A01	3-Methylcyclohexyl propylphosphonofluoridoate	333416-69-6	2931.59.90
1A01	3-Methylcyclopentyl ethylphosphonofluoridoate	1280106-36-6	2931.59.90
1A01	2-Methylcyclopentyl ethylphosphonofluoridoate	1005164-70-4	2931.59.90
1A01	2-Methylcyclopentyl isopropylphosphonofluoridoate	1005176-59-9	2931.59.90
1A01	2-Methylcyclopentyl propylphosphonofluoridoate	1005176-60-2	2931.59.90

1A01	1-Methylheptyl ethylphosphonofluoridoate	468711-98-0	2931.59.90
1A01	1-Methylheptyl isopropylphosphonofluoridoate	468712-09-6	2931.59.90
1A01	(1R)-1-Methylheptyl methylphosphonofluoridoate	24753-12-6	2931.59.90
1A01	(1S)-1-Methylheptyl methylphosphonofluoridoate	22925-96-8	2931.59.90
1A01	1-Methylheptyl methylphosphonofluoridoate	22925-97-9	2931.59.90
1A01	1-Methylheptyl propylphosphonofluoridoate	468712-06-3	2931.59.90
1A01	1-Methylhexyl ethylphosphonofluoridoate	333416-10-7	2931.59.90
1A01	1-Methylhexyl isopropylphosphonofluoridoate	333416-38-9	2931.59.90
1A01	1-Methylhexyl methylphosphonofluoridoate	674-95-3	2931.59.90
1A01	1-Methylhexyl propylphosphonofluoridoate	333416-24-3	2931.59.90
1A01	1-Methylnonyl ethylphosphonofluoridoate	1254104-37-4	2931.59.90
1A01	1-Methylnonyl isopropylphosphonofluoridoate	1280106-25-3	2931.59.90
1A01	1-Methylnonyl methylphosphonofluoridoate	211192-71-1	2931.59.90
1A01	1-Methyloctyl ethylphosphonofluoridoate	333416-11-8	2931.59.90
1A01	1-Methyloctyl isopropylphosphonofluoridoate	333416-39-0	2931.59.90
1A01	2-Methyloctyl methylphosphonofluoridoate	1228786-50-2	2931.59.90
1A01	1-Methyloctyl methylphosphonofluoridoate	211192-72-2	2931.59.90
1A01	1-Methyloctyl propylphosphonofluoridoate	333416-25-4	2931.59.90
1A01	2-Methylpentyl ethylphosphonofluoridoate	333416-12-9	2931.59.90
1A01	3-Methylpentyl ethylphosphonofluoridoate	959263-01-5	2931.59.90
1A01	4-Methylpentyl ethylphosphonofluoridoate	959276-46-1	2931.59.90
1A01	2-Methylpentyl isopropylphosphonofluoridoate	333416-41-4	2931.59.90
1A01	1-Methylpentyl methylphosphonofluoridoate	13172-12-8	2931.59.90
1A01	2-Methylpentyl methylphosphonofluoridoate	333416-05-0	2931.59.90
1A01	3-Methylpentyl methylphosphonofluoridoate	199850-60-7	2931.59.90
1A01	4-Methylpentyl methylphosphonofluoridoate	959010-20-9	2931.59.90
1A01	2-Methylpentyl propylphosphonofluoridoate	333416-27-6	2931.59.90
1A01	Nonyl ethylphosphonofluoridoate	171741-07-4	2931.59.90
1A01	Nonyl isopropylphosphonofluoridoate	333416-35-6	2931.59.90

1A01	Nonyl methylphosphonofluoridoate	211192-74-4	2931.59.90
1A01	Nonyl propylphosphonofluoridoate	333416-21-0	2931.59.90
1A01	Octyl ethylphosphonofluoridoate	333416-07-2	2931.59.90
1A01	Octyl isopropylphosphonofluoridoate	333416-34-5	2931.59.90
1A01	Octyl methylphosphonofluoridoate	144313-52-0	2931.59.90
1A01	Octyl propylphosphonofluoridoate	333416-20-9	2931.59.90
1A01	Pentyl ethylphosphonofluoridoate	162085-84-9	2931.59.90
1A01	Pentyl isopropylphosphonofluoridoate	333416-31-2	2931.59.90
1A01	Pentyl methylphosphonofluoridoate	13454-59-6	2931.59.90
1A01	Pentyl propylphosphonofluoridoate	333416-17-4	2931.59.90
1A01	O-Pinacolyl methylphosphonofluoridate; Soman (GD)	96-64-0	2931.59.90
1A01	Propyl ethylphosphonofluoridoate	2992-95-2	2931.59.90
1A01	Propyl isopropylphosphonofluoridoate	333416-29-8	2931.59.90
1A01	Propyl methylphosphonofluoridoate	763-14-4	2931.59.90
1A01	Propyl propylphosphonofluoridoate	18358-36-6	2931.59.90
1A01	1-Propylheptyl ethylphosphonofluoridoate	959217-15-3	2931.59.90
1A01	1-Propylheptyl methylphosphonofluoridoate	959098-86-3	2931.59.90
1A01	2-Propylpentyl methylphosphonofluoridoate	959089-00-0	2931.59.90
1A01	sec-Butyl ethylphosphonofluoridoate	162085-83-8	2931.59.90
1A01	sec-Butyl isopropylphosphonofluoridoate	468712-07-4	2931.59.90
1A01	sec-Butyl methylphosphonofluoridoate	352-52-3	2931.59.90
1A01	sec-Butyl propylphosphonofluoridoate	468712-01-8	2931.59.90
1A01	tert-Butyl methylphosphonofluoridoate	13273-12-6	2931.59.90
1A01	2-tert-Butylcyclohexyl ethylphosphonofluoridoate	1005254-23-8	2931.59.90
1A01	2-tert-Butylcyclohexyl isopropylphosphonofluoridoate	1005145-75-4	2931.59.90
1A01	2-tert-Butylcyclohexyl methylphosphonofluoridoate	1005247-52-8	2931.59.90
1A01	2-tert-Butylcyclohexyl propylphosphonofluoridoate	1005176-90-8	2931.59.90
1A01	4-tert-Butylcyclohexyl ethylphosphonofluoridoate	959217-22-2	2931.59.90
1A01	4-tert-Butylcyclohexyl methylphosphonofluoridoate	959245-06-8	2931.59.90

1A01	4-tert-Butylcyclohexyl propylphosphonofluoridoate	959004-03-6	2931.59.90
1A01	3,3,5,5-Tetramethylcyclohexyl ethylphosphonofluoridoate	333416-68-5	2931.59.90
1A01	3,3,5,5-Tetramethylcyclohexyl isopropylphosphonofluoridoate	333416-76-5	2931.59.90
1A01	3,3,5,5-Tetramethylcyclohexyl methylphosphonofluoridoate	333416-63-0	2931.59.90
1A01	3,3,5,5-Tetramethylcyclohexyl propylphosphonofluoridoate	333416-72-1	2931.59.90
1A01	1,3,3-Trimethylbutyl methylphosphonofluoridoate	30593-65-8	2931.59.90
1A01	3,5,5-Trimethylhexyl ethylphosphonofluoridoate	959027-88-4	2931.59.90
1A01	3,5,5-Trimethylhexyl methylphosphonofluoridoate	959304-14-4	2931.59.90
1A01	2,4,4-Trimethylpentyl ethylphosphonofluoridoate	333416-13-0	2931.59.90
1A01	2,4,4-Trimethylpentyl isopropylphosphonofluoridoate	333416-43-6	2931.59.90
1A01	2,4,4-Trimethylpentyl methylphosphonofluoridoate	333416-06-1	2931.59.90
1A01	2,4,4-Trimethylpentyl propylphosphonofluoridoate	333416-28-7	2931.59.90
1A01	1,2,2-Trimethylpropyl ethylphosphonofluoridoate	97931-20-9	2931.59.90
1A01	1,2,2-Trimethylpropyl isopropylphosphonofluoridoate	952104-41-5	2931.59.90
1A01	(1R)-1,2,2-Trimethylpropyl methylphosphonofluoridoate	89254-46-6	2931.59.90
1A01	(1S)-1,2,2-Trimethylpropyl methylphosphonofluoridoate	89254-45-5	2931.59.90
1A01	1,2,2-Trimethylpropyl propylphosphonofluoridoate	952104-35-7	2931.59.90
1A02	Butyl diethylphosphoramidocyanidoate	870124-31-5	2931.49.90
1A02	Butyl N,N-diisopropylphosphoramidocyanidate	1253782-71-6	2931.49.90
1A02	Butyl dimethylphosphoramidocyanidoate	162085-87-2	2931.49.90
1A02	Butyl dipropylphosphoramidocyanidate	870124-35-9	2931.49.90
1A02	Butyl N-ethyl-N-isopropylphosphoramidocyanidate	1256571-96-6	2931.49.90
1A02	Butyl N-ethyl-N-propylphosphoramidocyanidate	1256571-97-7	2931.49.90
1A02	Butyl ethylmethylphosphoramidocyanidoate	870124-03-1	2931.49.90
1A02	Butyl isopropylmethylphosphoramidocyanidoate	870124-14-4	2931.49.90
1A02	Butyl isopropylpropylphosphoramidocyanidoate	870124-28-0	2931.49.90
1A02	Butyl N-methyl-N-propylphosphoramidocyanidate	1253782-74-9	2931.49.90
1A02	Cycloheptyl N,N-diethylphosphoramidocyanidate	1256634-78-2	2931.49.90
1A02	Cycloheptyl diisopropylphosphoramidocyanidoate	959299-72-0	2931.49.90

1A02	Cycloheptyl N,N-dimethylphosphoramidocyanidate	1256634-79-3	2931.49.90
1A02	Cycloheptyl dipropylphosphoramidocyanidoate	959220-92-9	2931.49.90
1A02	Cyclohexyl N,N-diethylphosphoramidocyanidate	1256572-11-8	2931.49.90
1A02	Cyclohexyl N,N-dimethylphosphoramidocyanidate	1256572-12-9	2931.49.90
1A02	Cyclohexyl N,N-dipropylphosphoramidocyanidate	1256572-13-0	2931.49.90
1A02	Cyclohexyl N-isopropyl-Npropylphosphoramidocyanidate	1253782-35-2	2931.49.90
1A02	1-Cyclohexylethyl N,N-diisopropylphosphoramidocyanidate	1256572-20-9	2931.49.90
1A02	2-Cyclohexylethyl diisopropylphosphoramidocyanidoate	959231-14-2	2931.49.90
1A02	2-Cyclohexylethyl dipropylphosphoramidocyanidoate	959304-98-4	2931.49.90
1A02	Cyclohexylmethyl dipropylphosphoramidocyanidoate	959285-51-9	2931.49.90
1A02	Cyclooctyl diisopropylphosphoramidocyanidoate	959299-70-8	2931.49.90
1A02	Cyclooctyl N,N-dimethylphosphoramidocyanidate	1256634-94-2	2931.49.90
1A02	Cyclooctyl dipropylphosphoramidocyanidoate	959220-91-8	2931.49.90
1A02	Cyclopentyl dipropylphosphoramidocyanidoate	959305-00-1	2931.49.90
1A02	Decyl N,N-diisopropylphosphoramidocyanidate	1256572-18-5	2931.49.90
1A02	Decyl N-isopropyl-N-propylphosphoramidocyanidate	1256572-19-6	2931.49.90
1A02	1,3-Dimethylbutyl N,N-diisopropylphosphoramidocyanidate	1256572-10-7	2931.49.90
1A02	2,6-Dimethylcyclohexyl N-isopropyl-N-propylphosphoramidocyanidate	1256634-82-8	2931.49.90
1A02	2,6-Dimethylcyclohexyl N,N-diethylphosphoramidocyanidate	1256634-80-6	2931.49.90
1A02	2,6-Dimethylcyclohexyl N,N-diisopropylphosphoramidocyanidate	1256634-81-7	2931.49.90
1A02	2,6-Dimethylcyclohexyl N,N-dimethylphosphoramidocyanidate	1256634-83-9	2931.49.90
1A02	2,6-Dimethylcyclohexyl N,Ndipropylphosphoramidocyanidate	1252610-38-0	2931.49.90
1A02	1,2-Dimethylpropyl N,N-diisopropylphosphoramidocyanidate	1256634-86-2	2931.49.90
1A02	2,2-Dimethylpropyl N-isopropyl-N-propylphosphoramidocyanidate	1253782-84-1	2931.49.90
1A02	2,2-Dimethylpropyl N,Ndiisopropylphosphoramidocyanidate	1253782-83-0	2931.49.90
1A02	Ethyl diethylphosphoramidocyanidoate	63815-60-1	2931.49.90
1A02	Ethyl diisopropylphosphoramidocyanidoate	870124-37-1	2931.49.90
1A02	Ethyl N,N-Dimethylphosphoramidocyanidate; Tabun (GA)	77-81-6	2931.49.90

1A02	Ethyl dipropylphosphoramidoate	870124-33-7	2931.49.90
1A02	Ethyl ethylisopropylphosphoramidoate	870124-22-4	2931.49.90
1A02	Ethyl ethylmethylphosphoramidoate	870124-00-8	2931.49.90
1A02	Ethyl ethylpropylphosphoramidoate	870124-17-7	2931.49.90
1A02	Ethyl N-isopropyl-N-propylphosphoramidoate	870124-26-8	2931.49.90
1A02	Ethyl isopropylmethylphosphoramidoate	870124-11-1	2931.49.90
1A02	Ethyl isopropylpropylphosphoramidoate	870124-26-8	2931.49.90
1A02	Ethyl methylpropylphosphoramidoate	870124-07-5	2931.49.90
1A02	1-Ethylbutyl N,N-diisopropylphosphoramidoate	1256634-91-9	2931.49.90
1A02	1-Ethylhexyl N,N-diethylphosphoramidoate	1256572-21-0	2931.49.90
1A02	1-Ethylhexyl N,N-diisopropylphosphoramidoate	1256572-22-1	2931.49.90
1A02	1-Ethylhexyl N,N-dimethylphosphoramidoate	1253782-49-8	2931.49.90
1A02	2-Ethylhexyl N,N-dimethylphosphoramidoate	1311200-06-2	2931.49.90
1A02	1-Ethylhexyl N,N-dipropylphosphoramidoate	1256572-24-3	2931.49.90
1A02	1-Ethylhexyl N-isopropyl-N-propylphosphoramidoate	1256572-23-2	2931.49.90
1A02	1-Ethylpentyl N,N-diisopropylphosphoramidoate	1256634-84-0	2931.49.90
1A02	Heptyl N,N-diethylphosphoramidoate	870124-32-6	2931.49.90
1A02	Heptyl diisopropylphosphoramidoate	959231-41-5	2931.49.90
1A02	Heptyl dimethylphosphoramidoate	162085-91-8	2931.49.90
1A02	Heptyl dipropylphosphoramidoate	959304-97-3	2931.49.90
1A02	Hexyl diisopropylphosphoramidoate	870124-39-3	2931.49.90
1A02	Hexyl dimethylphosphoramidoate	162085-90-7	2931.49.90
1A02	Hexyl N,N-dipropylphosphoramidoate	870124-36-0	2931.49.90
1A02	Hexyl N-ethyl-N-isopropylphosphoramidoate	870124-25-7	2931.49.90
1A02	Hexyl N-ethyl-N-methylphosphoramidoate	870124-06-4	2931.49.90
1A02	Hexyl N-ethyl-N-propylphosphoramidoate	870124-21-3	2931.49.90
1A02	Hexyl methylpropylphosphoramidoate	870124-10-0	2931.49.90
1A02	Isobutyl N,N-diethylphosphoramidoate	1253782-85-2	2931.49.90
1A02	Isobutyl diisopropylphosphoramidoate	870124-38-2	2931.49.90

1A02	Isobutyl dimethylphosphoramidocyanidoate	162085-88-3	2931.49.90
1A02	Isobutyl N,N-dipropylphosphoramidocyanidate	1281955-89-2	2931.49.90
1A02	Isobutyl ethylisopropylphosphoramidocyanidoate	870124-23-5	2931.49.90
1A02	Isobutyl ethylmethylphosphoramidocyanidoate	870124-04-2	2931.49.90
1A02	Isobutyl ethylpropylphosphoramidocyanidoate	870124-19-9	2931.49.90
1A02	Isobutyl N-isopropyl-N-methylphosphoramidocyanidate	1281955-87-0	2931.49.90
1A02	Isobutyl N-isopropyl-N-propylphosphoramidocyanidate	1281955-88-1	2931.49.90
1A02	Isobutyl N-methyl-N-propylphosphoramidocyanidate	1253782-86-3	2931.49.90
1A02	Isopropyl diethylphosphoramidocyanidoate	870124-30-4	2931.49.90
1A02	Isopropyl N,N-diisopropylphosphoramidocyanidate	1252610-37-9	2931.49.90
1A02	Isopropyl dimethylphosphoramidocyanidoate	63815-55-4	2931.49.90
1A02	Isopropyl N,N-dipropylphosphoramidocyanidate	1256634-93-1	2931.49.90
1A02	Isopropyl N-ethyl-N-isopropylphosphoramidocyanidate	1253782-69-2	2931.49.90
1A02	Isopropyl ethylmethylphosphoramidocyanidoate	870124-02-0	2931.49.90
1A02	Isopropyl ethylpropylphosphoramidocyanidoate	870124-18-8	2931.49.90
1A02	Isopropyl N-isopropyl-N-propylphosphoramidocyanidate	1256634-92-0	2931.49.90
1A02	Isopropyl isopropylmethylphosphoramidocyanidoate	870124-12-2	2931.49.90
1A02	1-Isopropyl-2-methylpentyl N-isopropyl-N-propylphosphoramidocyanidate	1311200-15-3	2931.49.90
1A02	1-Isopropyl-2-methylpropyl N,N-diethylphosphoramidocyanidate	1256634-87-3	2931.49.90
1A02	1-Isopropyl-2-methylpropyl N,N-diisopropylphosphoramidocyanidate	1256634-88-4	2931.49.90
1A02	1-Isopropyl-2-methylpropyl N,N-dimethylphosphoramidocyanidate	1256634-89-5	2931.49.90
1A02	1-Isopropyl-2-methylpropyl N,N-dipropylphosphoramidocyanidate	1256634-90-8	2931.49.90
1A02	1-Isopropyl-2-methylpropyl N-isopropyl-Npropylphosphoramidocyanidate	1252610-36-8	2931.49.90
1A02	Isopropyl methylpropylphosphoramidocyanidoate	870124-08-6	2931.49.90
1A02	Methyl diethylphosphoramidocyanidoate	870124-43-9	2931.49.90
1A02	Methyl diisopropylphosphoramidocyanidoate	870124-47-3	2931.49.90

1A02	Methyl dimethylphosphoramidocyanidoate	63815-56-5	2931.49.90
1A02	Methyl dipropylphosphoramidocyanidoate	870124-46-2	2931.49.90
1A02	Methyl N-ethyl-N-isopropylphosphoramidocyanidate	870124-44-0	2931.49.90
1A02	Methyl ethylmethylphosphoramidocyanidoate	870124-40-6	2931.49.90
1A02	Methyl ethylpropylphosphoramidocyanidoate	870124-45-1	2931.49.90
1A02	Methyl isopropylmethylphosphoramidocyanidoate	870124-42-8	2931.49.90
1A02	Methyl isopropylpropylphosphoramidocyanidoate	870124-48-4	2931.49.90
1A02	Methyl methylpropylphosphoramidocyanidoate	870124-41-7	2931.49.90
1A02	1-Methylbutyl N,N-diisopropylphosphoramidocyanidate	1311200-13-1	2931.49.90
1A02	2-Methylcyclohexyl N,N-diisopropylphosphoramidocyanidate	1256634-85-1	2931.49.90
1A02	1-Methylheptyl N,N-diisopropylphosphoramidocyanidate	1254103-95-1	2931.49.90
1A02	1-Methylhexyl N,N-dimethylphosphoramidocyanidate	1311200-08-4	2931.49.90
1A02	1-Methylhexyl N-methyl-N-propylphosphoramidocyanidate	1311200-11-9	2931.49.90
1A02	1-Methylnonyl N-methyl-N-propylphosphoramidocyanidate	1311200-10-8	2931.49.90
1A02	1-Methylpentyl N,N-diethylphosphoramidocyanidate	1252610-35-7	2931.49.90
1A02	1-Methylpentyl N,N-dimethylphosphoramidocyanidate	1311200-07-3	2931.49.90
1A02	2-Methylpentyl N-ethyl-N-methylphosphoramidocyanidate	1311200-09-5	2931.49.90
1A02	Nonyl N-isopropyl-N-methylphosphoramidocyanidate	1311200-12-0	2931.49.90
1A02	Octyl N,N-diethylphosphoramidocyanidate	1256572-14-1	2931.49.90
1A02	Octyl N,N-diisopropylphosphoramidocyanidate	1256572-15-2	2931.49.90
1A02	Octyl N,N-dimethylphosphoramidocyanidate	1253782-45-4	2931.49.90
1A02	Octyl N,N-dipropylphosphoramidocyanidate	1256572-17-4	2931.49.90
1A02	Octyl N-isopropyl-N-propylphosphoramidocyanidate	1256572-16-3	2931.49.90
1A02	Pentyl diisopropylphosphoramidocyanidate	959231-39-1	2931.49.90
1A02	Pentyl dimethylphosphoramidocyanidoate	148461-87-4	2931.49.90
1A02	Pentyl dipropylphosphoramidocyanidate	959014-75-6	2931.49.90
1A02	Pentyl N-ethyl-N-isopropylphosphoramidocyanidate	870124-24-6	2931.49.90
1A02	Pentyl N-ethyl-N-methylphosphoramidocyanidate	870124-05-3	2931.49.90
1A02	Pentyl N-ethyl-N-propylphosphoramidocyanidate	870124-20-2	2931.49.90

1A02	Pentyl N-isopropyl-N-methylphosphoramidocyanidate	870124-15-5	2931.49.90
1A02	Pinacolyl N,N-dipropylphosphoramidocyanidate	1311200-14-2	2931.49.90
1A02	Propyl N,N-diethylphosphoramidocyanidate	1256571-92-2	2931.49.90
1A02	Propyl diisopropylphosphoramidocyanidoate	959231-16-4	2931.49.90
1A02	Propyl dimethylphosphoramidocyanidoate	162085-86-1	2931.49.90
1A02	Propyl dipropylphosphoramidocyanidoate	870124-34-8	2931.49.90
1A02	Propyl N-ethyl-N-isopropylphosphoramidocyanidate	1256571-93-3	2931.49.90
1A02	Propyl N-ethyl-N-propylphosphoramidocyanidate	1256571-94-4	2931.49.90
1A02	Propyl ethylmethylphosphoramidocyanidoate	870124-01-9	2931.49.90
1A02	Propyl N-isopropyl-N-propylphosphoramidocyanidate	870124-27-9	2931.49.90
1A02	Propyl isopropylmethylphosphoramidocyanidoate	870124-13-3	2931.49.90
1A02	Propyl isopropylpropylphosphoramidocyanidoate	870124-27-9	2931.49.90
1A02	Propyl N-methyl-N-propylphosphoramidocyanidate	1256571-95-5	2931.49.90
1A02	sec-Butyl dimethylphosphoramidocyanidoate	162085-89-4	2931.49.90
1A02	sec-Butyl methylpropylphosphoramidocyanidoate	870124-09-7	2931.49.90
1A02	sec-Butyl N,N-diethylphosphoramidocyanidate	1281955-92-7	2931.49.90
1A02	sec-Butyl N,N-diisopropylphosphoramidocyanidate	1281955-95-0	2931.49.90
1A02	sec-Butyl N,N-dipropylphosphoramidocyanidate	1281955-98-3	2931.49.90
1A02	sec-Butyl N-ethyl-N-isopropylphosphoramidocyanidate	1281955-93-8	2931.49.90
1A02	sec-Butyl N-ethyl-N-methylphosphoramidocyanidate	1281955-94-9	2931.49.90
1A02	sec-Butyl N-isopropyl-N-methylphosphoramidocyanidate	1281955-96-1	2931.49.90
1A02	sec-Butyl N-isopropyl-N-propylphosphoramidocyanidate	1281955-97-2	2931.49.90
1A02	1,1,2-Trimethylpropyl N,N-diethylphosphoramidocyanidate	1256572-25-4	2931.49.90
1A02	1,1,2-Trimethylpropyl N,N-diisopropylphosphoramidocyanidate	1256634-75-9	2931.49.90
1A02	1,1,2-Trimethylpropyl N,N-dimethylphosphoramidocyanidate	1256634-77-1	2931.49.90
1A02	1,1,2-Trimethylpropyl N-propyl-N-isopropylphosphoramidocyanidate	1256634-76-0	2931.49.90
1A02	1,1,2-Trimethylpropyl N,Ndipropylphosphoramidocyanidate	1253782-51-2	2931.49.90
1A03	Butyl S-2-diethylaminoethyl ethylphosphonothioate	468712-20-1	2930.90.98

1A03	Butyl S-2-diethylaminoethyl isopropylphosphonothioate	468712-46-1	2930.90.98
1A03	Butyl S-2-diethylaminoethyl methylphosphonothioate	468712-10-9	2930.90.98
1A03	Butyl S-2-diethylaminoethyl propylphosphonothioate	468712-35-8	2930.90.98
1A03	Butyl S-2-diisopropylaminoethyl ethylphosphonothiolate	1253757-48-0	2930.90.98
1A03	Butyl S-2-diisopropylaminoethyl isopropylphosphonothioate	958995-46-5	2930.90.98
1A03	Butyl S-2-diisopropylaminoethyl methylphosphonothioate	52364-46-2	2930.90.98
1A03	Butyl S-2-diisopropylaminoethyl propylphosphonothioate	959111-24-1	2930.90.98
1A03	Butyl S-2-dimethylaminoethyl methylphosphonothioate	56217-63-1	2930.90.98
1A03	Butyl S-2-dipropylaminoethyl methylphosphonothiolate	1253759-45-3	2930.90.98
1A03	Cyclohexyl S-2-diethylaminoethyl ethylphosphonothioate	959020-04-3	2930.90.98
1A03	Cyclohexyl S-2-diethylaminoethyl methylphosphonothioate	71293-89-5	2930.90.98
1A03	(R)-Cyclohexyl S-2-dimethylaminoethyl methylphosphonothiolate	1220982-69-3	2930.90.98
1A03	(S)-Cyclohexyl S-2-dimethylaminoethyl methylphosphonothiolate	1186330-22-2	2930.90.98
1A03	Cyclohexyl S-2-dimethylaminoethyl methylphosphonothioate	69795-06-8	2930.90.98
1A03	Cyclohexylmethyl S-2-diisopropylaminoethyl isopropylphosphonothioate	959233-60-4	2930.90.98
1A03	Cyclohexylmethyl S-2-diisopropylaminoethyl propylphosphonothioate	959268-47-4	2930.90.98
1A03	Cyclohexylmethyl S-2-dimethylaminoethyl propylphosphonothioate	959104-17-7	2930.90.98
1A03	Cyclooctyl S-2-dimethylaminoethyl propylphosphonothioate	959010-50-5	2930.90.98
1A03	Cyclopentyl S-2-diethylaminoethyl ethylphosphonothioate	468712-24-5	2930.90.98
1A03	Cyclopentyl S-2-diethylaminoethyl methylphosphonothioate	93240-66-5	2930.90.98
1A03	(R)-Cyclopentyl S-2-diisopropylaminoethyl methylphosphonothioate	102490-57-3	2930.90.98
1A03	(S)-Cyclopentyl S-2-diisopropylaminoethyl methylphosphonothioate	102490-59-5	2930.90.98
1A03	Cyclopentyl S-2-diisopropylaminoethyl methylphosphonothioate	85473-33-2	2930.90.98
1A03	[P(S)]-O-cyclopentyl S-[2-(dimethylamino)ethyl] methylphosphonothioate	22925-95-7	2930.90.98
1A03	Cyclopentyl S-2-dimethylaminoethyl methylphosphonothioate	22925-98-0	2930.90.98
1A03	Decyl S-2-diethylaminoethyl ethylphosphonothioate	468712-33-6	2930.90.98

1A03	Decyl S-2-diethylaminoethyl methylphosphonothioate	959288-69-8	2930.90.98
1A03	Decyl S-2-dimethylaminoethyl methylphosphonothiolate	1253735-72-6	2930.90.98
1A03	N,N-Diethyl-2-(((cyclohexyloxy)methylphosphoryl)thio)-N-methylethanaminium iodide	132412-52-3	2930.90.98
1A03	S-[2-(diethylamino)ethyl] O-ethyl methylphosphonothioate 4-methylbenzenesulfonate	107059-49-4	2930.90.98
1A03	S-[2-(diethylamino)ethyl] O-ethyl methylphosphonothioate oxalate	108776-13-2	2930.90.98
1A03	S-2 Diethylaminoethyl ethylphosphonothioate	161935-18-8	2930.90.98
1A03	S-2-Diethylaminoethyl methylphosphonothioate	21068-51-9	2930.90.98
1A03	S-2 Diisopropylaminoethyl ethylphosphonothioate	161935-16-6	2930.90.98
1A03	S-2-Diisopropylaminoethyl methylphosphonothioate	73207-98-4	2930.90.98
1A03	S-[2-(Dimethylamino)ethyl] O-ethyl methylphosphonothioate	20820-80-8	2930.90.98
1A03	S-[2-(dimethylamino)ethyl] O-ethyl methylphosphonothioate oxalate	2641-09-0	2930.90.98
1A03	S-[2-(dimethylamino)ethyl] O-isopropyl methylphosphonothioate oxalate	2478-93-5	2930.90.98
1A03	S-(2-[[2-(dimethylamino)ethyl]sulfanyl]ethyl) hydrogen methylphosphonothioate	170082-85-6	2930.90.98
1A03	S-2-Dimethylaminoethyl ethylphosphonothiolate	1253735-44-2	2930.90.98
1A03	S-2-Dimethylaminoethyl methylphosphonothioate	34256-71-8	2930.90.98
1A03	S-2-Dimethylaminoethyl propylphosphonothiolate	1253735-61-3	2930.90.98
1A03	2-(((3,3-dimethylbutan-2-yl)oxy)(methyl)phosphoryl)sulfanyl)-N,N,N-trimethylethanaminium	38770-03-5	2930.90.98
1A03	1,2-Dimethylbutyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253739-43-3	2930.90.98
1A03	3,3-Dimethylbutyl S-2-dimethylaminoethyl methylphosphonothioate	34388-36-8	2930.90.98
1A03	2,2-Dimethylpropyl S-2-diethylaminoethyl ethylphosphonothiolate	1253766-83-4	2930.90.98
1A03	2,2-Dimethylpropyl S-2-diisopropylaminoethyl ethylphosphonothiolate	1253767-73-5	2930.90.98
1A03	2,2-Dimethylpropyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253768-73-8	2930.90.98
1A03	2,2-Dimethylpropyl S-2-dimethylaminoethyl methylphosphonothioate	56217-66-4	2930.90.98

1A03	S-2-Dipropylaminoethyl methylphosphonothioate	30102-97-7	2930.90.98
1A03	N-(2-[[Ethoxy(methyl)phosphoryl]thio]ethyl)-N-isopropyl-N-methylpropan-2-aminium iodide	220718-03-6	2930.90.98
1A03	2-[[Ethoxymethylphosphoryl]thio]-N,N,N-trimethylethanaminium iodide	2478-92-4	2930.90.98
1A03	2-[[Ethoxy(ethyl)phosphoryl]thio]-N,N,N-triethylethanaminium iodide	24578-82-3	2930.90.98
1A03	2-[[Ethoxy(ethyl)phosphoryl]thio]-N,N,N-trimethylethanaminium iodide	220718-05-8	2930.90.98
1A03	2-[[Ethoxy(methyl)phosphoryl]thio]-N,N,N-trimethylethanaminium	56217-67-5	2930.90.98
1A03	2-[[Ethoxy(methyl)phosphoryl]thio]-N,N-diethyl-N-methylethanaminium iodide	220718-02-5	2930.90.98
1A03	2-[[Ethyl(isopropoxy)phosphoryl]thio]-N,N,N-trimethylethanaminium iodide	220718-06-9	2930.90.98
1A03	2-[[Isopropoxy(methyl)phosphoryl]thio]-N,N,N-trimethylethanaminium	56217-69-7	2930.90.98
1A03	2-[[Isopropoxy(methyl)phosphoryl]thio]-N,N,N-trimethylethanaminium iodide	1866-98-4	2930.90.98
1A03	(R)-Ethyl S-2-diethylaminoethyl ethylphosphonothiolate	1187548-77-1	2930.90.98
1A03	(R)-Ethyl S-2-diethylaminoethyl methylphosphonothiolate	1187548-81-7	2930.90.98
1A03	(S)-Ethyl S-2-diethylaminoethyl ethylphosphonothiolate	1187548-79-3	2930.90.98
1A03	(S)-Ethyl S-2-diethylaminoethyl methylphosphonothiolate	1187548-82-8	2930.90.98
1A03	Ethyl S-2-diethylaminoethyl ethylphosphonothioate	21738-25-0	2930.90.98
1A03	Ethyl S-2-diethylaminoethyl ethylphosphonothioate oxalate	108302-04-1	2930.90.98
1A03	Ethyl S-2-diethylaminoethyl isopropylphosphonothioate	99991-06-7	2930.90.98
1A03	Ethyl S-2-diethylaminoethyl methylphosphonothioate	21770-86-5	2930.90.98
1A03	Ethyl S-2-diethylaminoethyl propylphosphonothioate	99991-07-8	2930.90.98
1A03	(R)-O-Ethyl S-[2-(diisopropylamino)ethyl] methylphosphonothioate	65167-63-7	2930.90.98
1A03	(S)-O-Ethyl S-[2-(diisopropylamino)ethyl] methylphosphonothioate	65167-64-8	2930.90.98
1A03	Ethyl S-2-diisopropylaminoethyl ethylphosphonothioate	73835-17-3	2930.90.98
1A03	Ethyl S-2-diisopropylaminoethyl propylphosphonothioate	218964-60-4	2930.90.98
1A03	O-Ethyl-diisopropylaminoethyl methyl phosphonothiolate; VX	50782-69-9	2930.90.98

1A03	Ethyl S-2-diisopropylammoniummethyl methylphosphonothiolate chloride	1253746-35-8	2930.90.98
1A03	Ethyl S-2-diisopropylmethylammoniummethyl ethylphosphonothiolate iodide	1253742-77-6	2930.90.98
1A03	Ethyl S-2-dimethylaminoethyl ethylphosphonothioate	98543-25-0	2930.90.98
1A03	Ethyl S-2-dimethylaminoethyl isopropylphosphonothiolate	1253744-32-9	2930.90.98
1A03	Ethyl S-2-dimethylaminoethyl propylphosphonothioate	218964-59-1	2930.90.98
1A03	Ethyl S-2-dipropylaminoethyl methylphosphonothioate	62512-68-9	2930.90.98
1A03	1-Ethylpropyl S-2-diisopropylaminoethyl propylphosphonothioate	958997-65-4	2930.90.98
1A03	1-Ethylpropyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253739-92-2	2930.90.98
1A03	Heptyl S-2-diethylaminoethyl ethylphosphonothioate	468712-29-0	2930.90.98
1A03	Heptyl S-2-diethylaminoethylmethylphosphonothioate	468712-17-6	2930.90.98
1A03	Heptyl S-2-diisopropylaminoethyl isopropylphosphonothioate	959233-58-0	2930.90.98
1A03	Hexyl S-2-diethylaminoethyl ethylphosphonothioate	468712-25-6	2930.90.98
1A03	Hexyl S-2-diethylaminoethyl methylphosphonothioate	468712-15-4	2930.90.98
1A03	Hexyl S-2-diisopropylaminoethyl methylphosphonothioate	82721-31-1	2930.90.98
1A03	Hexyl S-2-dimethylaminoethyl methylphosphonothioate	69777-00-0	2930.90.98
1A03	Isobutyl S-2-diethylaminoethyl ethylphosphonothioate	468712-21-2	2930.90.98
1A03	Isobutyl S-2-diethylaminoethyl isopropylphosphonothioate	468712-47-2	2930.90.98
1A03	Isobutyl S-2-diethylaminoethyl methylphosphonothioate	159939-87-4	2930.90.98
1A03	Isobutyl S-2-diethylaminoethyl propylphosphonothioate	468712-36-9	2930.90.98
1A03	Isobutyl S-2-diisopropylaminoethyl methylphosphonothioate	855307-83-4	2930.90.98
1A03	Isobutyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253771-21-9	2930.90.98
1A03	Isobutyl S-2-dimethylaminoethyl methylphosphonothioate	56217-65-3	2930.90.98
1A03	Isobutyl S-2-dipropylaminoethyl methylphosphonothiolate	1253772-23-4	2930.90.98
1A03	Isopentyl S-2-diethylaminoethyl ethylphosphonothioate	468712-23-4	2930.90.98
1A03	(R)-2-[[Isopropoxy(methyl)phosphoryl]thio]-N,N,N-trimethylethanaminium iodide	26348-71-0	2930.90.98
1A03	Isopropyl S-2-diethylaminoethyl ethylphosphonothioate	162085-93-0	2930.90.98
1A03	Isopropyl S-2-diethylaminoethyl methylphosphonothioate	91134-95-1	2930.90.98

1A03	Isopropyl S-2-diethylaminoethyl propylphosphonothioate	468712-34-7	2930.90.98
1A03	Isopropyl S-2-diethylpropylammoniumethyl ethylphosphonothiolate iodide	1253752-57-6	2930.90.98
1A03	Isopropyl S-2-diisopropylaminoethyl ethylphosphonothioate	162085-95-2	2930.90.98
1A03	Isopropyl S-2-diisopropylaminoethyl isopropylphosphonothioate	959289-50-0	2930.90.98
1A03	Isopropyl S-2-diisopropylaminoethyl methylphosphonothioate	51446-23-2	2930.90.98
1A03	Isopropyl S-2-dimethylaminoethyl (R)-methylphosphonothioate	13915-99-6	2930.90.98
1A03	Isopropyl S-2-dimethylaminoethyl (S)-methylphosphonothioate	13915-98-5	2930.90.98
1A03	Isopropyl S-2-dimethylaminoethyl ethylphosphonothioate	162085-92-9	2930.90.98
1A03	Isopropyl S-2-dimethylaminoethyl methylphosphonothioate	21068-52-0	2930.90.98
1A03	Isopropyl S-2-dimethylpropylammoniumethyl ethylphosphonothiolate iodide	1253753-51-3	2930.90.98
1A03	Methyl S-2-diethylaminoethyl ethylphosphonothioate	170800-77-8	2930.90.98
1A03	Methyl S-2-diethylaminoethyl methylphosphonothioate	203385-78-8	2930.90.98
1A03	Methyl S-2-diisopropylaminoethyl ethylphosphonothioate	162085-94-1	2930.90.98
1A03	Methyl S-2-diisopropylaminoethyl methylphosphonothioate	198830-32-9	2930.90.98
1A03	Methyl S-2-dimethylaminoethyl ethylphosphonothioate	468712-18-7	2930.90.98
1A03	Methyl S-2-dimethylaminoethyl methylphosphonothioate	108490-92-2	2930.90.98
1A03	3-Methylbutyl S-2-diethylaminoethyl methylphosphonothioate	468712-12-1	2930.90.98
1A03	2-Methylbutyl S-2-dipropylaminoethyl ethylphosphonothiolate	1253735-81-7	2930.90.98
1A03	2-Methylbutyl S-2-dipropylaminoethyl methylphosphonothiolate	1253735-83-9	2930.90.98
1A03	3-Methylbutyl S-2-dipropylaminoethyl ethylphosphonothiolate	1253735-73-7	2930.90.98
1A03	3-Methylbutyl S-2-dipropylaminoethyl methylphosphonothiolate	1253735-78-2	2930.90.98
1A03	2-Methylcyclopentyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253736-58-1	2930.90.98
1A03	2-Methylcyclopentyl S-2-dimethylaminoethyl methylphosphonothiolate	1253736-59-2	2930.90.98
1A03	2-Methylpentyl S-2-diethylaminoethyl ethylphosphonothioate	959288-71-2	2930.90.98
1A03	2-Methylpentyl S-2-diethylaminoethyl methylphosphonothioate	468712-14-3	2930.90.98

1A03	4-Methylpentyl S-2-diisopropylaminoethyl propylphosphonothioate	959054-90-1	2930.90.98
1A03	1-Methylpentyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253739-96-6	2930.90.98
1A03	1-Methylpentyl S-2-dimethylaminoethyl methylphosphonothioate	79351-19-2	2930.90.98
1A03	4-Methylpentyl S-2-dimethylaminoethyl propylphosphonothioate	959259-06-4	2930.90.98
1A03	1-Methylpentyl S-2-dipropylaminoethyl methylphosphonothiolate	1253740-08-7	2930.90.98
1A03	Nonyl S-2-diethylaminoethyl ethylphosphonothioate	468712-32-5	2930.90.98
1A03	Nonyl S-2-dipropylaminoethyl ethylphosphonothiolate	1253735-84-0	2930.90.98
1A03	Nonyl S-2-dipropylaminoethyl methylphosphonothiolate	1253736-10-5	2930.90.98
1A03	Octyl S-2-diethylaminoethyl ethylphosphonothioate	468712-30-3	2930.90.98
1A03	Octyl S-2-dimethylaminoethyl propylphosphonothioate	959010-49-2	2930.90.98
1A03	Pentyl S-2-diethylaminoethyl ethylphosphonothiolate	1253761-22-6	2930.90.98
1A03	Pentyl S-2-diethylaminoethyl methylphosphonothiolate	1253764-67-8	2930.90.98
1A03	Pentyl S-2-diisopropylaminoethyl methylphosphonothioate	198830-36-3	2930.90.98
1A03	Pentyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253762-74-1	2930.90.98
1A03	Pentyl S-2-dimethylaminoethyl methylphosphonothioate	56217-64-2	2930.90.98
1A03	Pentyl S-2-dipropylaminoethyl ethylphosphonothiolate	1253763-58-4	2930.90.98
1A03	Pentyl S-2-dipropylaminoethyl methylphosphonothiolate	1253765-64-8	2930.90.98
1A03	Phosphonothioic acid, P-methyl-, S-[2-[bis(1-methylethyl)amino]ethyl] O-ethyl ester	50782-69-9	2930.90.98
1A03	Propyl S-2-diethylaminoethyl ethylphosphonothioate	468712-19-8	2930.90.98
1A03	Propyl S-2-diethylaminoethyl propylphosphonothioate	959288-70-1	2930.90.98
1A03	Propyl S-2-diisopropylaminoethyl ethylphosphonothiolate	1253755-29-1	2930.90.98
1A03	Propyl S-2-diisopropylaminoethyl methylphosphonothioate	52364-45-1	2930.90.98
1A03	Propyl S-2-diisopropylaminoethyl propylphosphonothioate	958997-62-1	2930.90.98
1A03	Propyl S-2-dimethylaminoethyl methylphosphonothioate	56217-62-0	2930.90.98
1A03	Propyl S-2-dimethylaminoethyl propylphosphonothioate	959259-05-3	2930.90.98
1A03	Propyl S-2-dipropylaminoethyl methylphosphonothiolate	1253756-54-5	2930.90.98
1A03	Propyl S-2-dipropylaminoethyl propylphosphonothioate	959233-79-5	2930.90.98

1A03	O-sec-butyl S-[2-(dimethylamino)ethyl] ethylphosphonothioate oxalate	50929-97-0	2930.90.98
1A03	sec-Butyl S-2-diethylaminoethyl ethylphosphonothioate	468712-22-3	2930.90.98
1A03	sec-Butyl S-2-diethylaminoethyl isopropylphosphonothioate	468712-48-3	2930.90.98
1A03	sec-Butyl S-2-diethylaminoethyl methylphosphonothioate	468712-11-0	2930.90.98
1A03	sec-Butyl S-2-diethylaminoethyl propylphosphonothioate	468712-37-0	2930.90.98
1A03	sec-Butyl S-2-diisopropylaminoethyl isopropylphosphonothioate	959040-29-0	2930.90.98
1A03	sec-Butyl S-2-diisopropylaminoethyl methylphosphonothioate	1253773-82-8	2930.90.98
1A03	sec-Butyl S-2-diisopropylaminoethyl propylphosphonothioate	959257-17-1	2930.90.98
1A03	sec-Butyl S-2-dimethylaminoethyl ethylphosphonothioate	50929-96-9	2930.90.98
1A03	tert-Butyl S-2-diethylaminoethyl methylphosphonothioate	288578-18-7	2930.90.98
1A03	3,5,5-Trimethylhexyl S-2-diisopropylaminoethyl propylphosphonothioate	959257-18-2	2930.90.98
1A03	3,5,5-Trimethylhexyl S-2-dimethylaminoethyl propylphosphonothioate	959250-22-7	2930.90.98
1A03	1,2,2-Trimethylpropyl S-2-diethylaminoethyl methylphosphonothioate	468712-13-2	2930.90.98
1A03	1,2,2-Trimethylpropyl S-2-diisopropylaminoethyl methylphosphonothioate	198830-38-5	2930.90.98
1A04	Bis (2-chloroethyl) sulphide; sulphur mustard	505-60-2	2930.90.98
1A04	1,3-Bis (2-chloroethylthio)-n-propane; sulphur mustard	63905-10-2	2930.90.98
1A04	1,4-Bis (2-chloroethylthio)-n-butane; sulphur mustard	142868-93-7	2930.90.98
1A04	1,5-Bis (2-chloroethylthio)-n-pentane; sulphur mustard	142868-94-8	2930.90.98
1A04	Bis (2-chloroethylthio) methane; sulphur mustard	63869-13-6	2930.90.98
1A04	1,2-Bis (2-chloroethylthio)ethane; sulphur mustard	3563-36-8	2930.90.98
1A04	Bis (2-chloroethylthioethyl) ether; sulphur mustard	63918-89-8	2930.90.98
1A04	Bis (2-chloroethylthiomethyl) ether; sulphur mustard	63918-90-1	2930.90.98
1A04	2-Chloroethylchloromethylsulphide; sulphur mustard	2625-76-5	2930.90.98
1A05	Bis (2-chlorovinyl) chloroarsine; Lewisite 3	40334-69-8	2931.90.00
1A05	2-Chlorovinyl dichloroarsine; Lewisite 1	541-25-3	2931.90.00
1A05	Tris (2-chlorovinyl) arsine; Lewisite 2	40334-70-1	2931.90.00
1A06	Bis-(2-chloroethyl) methylamine; HN2	51-75-2	2921.19.99

1A06	Bis(2-chloroethyl)ethylamine ; HN1	538-07-8	2921.19.99
1A06	Tris-(2-chloroethyl) amine; HN3	555-77-1	2921.19.99
1A07	Saxitoxin	35523-89-8	3002.49.00
1A08	Ricin	9009-86-3	3002.49.00
1A13	N-(1-(di-n-decylamino)-n-decylidene)-P-decylphosphonamidic fluoride	2387495-99-8	2931.59.90
1A13	Methyl-(1-(diethylamino)ethylidene)phosphonamidofluoridate; Novichok A-230	2387496-12-8	2931.59.90
1A14	O-n-Decyl N-(1-(di-n-decylamino)-n-decylidene)phosphoramidofluoridate	2387496-00-4	2929.90.00
1A14	Ethyl (1-(diethylamino)ethylidene)phosphoramidofluoridate; Novichok A-234	2387496-06-0	2929.90.00
1A14	Methyl (1-(diethylamino)ethylidene)phosphoramidofluoridate; Novichok A-232	2387496-04-8	2929.90.00
1A15	Methyl-(bis(diethylamino)methylene)phosphonamidofluoridate; Novichok A-242	2387496-14-0	2931.59.90
1A16	1,10-Bis[N-(3-dimethylcarbamoyl- α -picolyl)-N-ethyl-N-methylammonio]decane-2,9-dione dibromide	77104-00-8	2933.39.99
1A16	1-[N,N-dimethyl-N-(2-hydroxy)ethylammonio]-10-[N-(3-dimethylcarbamoyl- α -picolinyl)-N,N-dimethylammonio]decane dibromide	77104-62-2	2933.39.99
1B09	Ethylphosphonyl difluoride	753-98-0	2931.59.90
1B09	Isopropylphosphonic difluoride	677-42-9	2931.59.90
1B09	Methylphosphonyl difluoride; DF	676-99-3	2931.59.10
1B09	Propylphosphonic difluoride	690-14-2	2931.59.90
1B10	Butyl 2-diethylaminoethyl methylphosphonite	169662-68-4	2931.49.90
1B10	Cyclopentyl 2-diisopropylaminoethyl methylphosphonite	1282026-51-0	2931.49.90
1B10	Ethyl 2-diethylaminoethyl methylphosphonite	55523-55-2	2931.49.90
1B10	O-Ethyl O-2-diisopropylaminoethyl methylphosphonite; QL	57856-11-8	2931.49.90
1B11	Chlorosarin	1445-76-7	2931.59.90
1B12	3-[chloro(methyl)phosphoryl]oxy-2,2-dimethylbutane; Chlorosoman	7040-57-5	2931.59.90
2A01	2-[(diethoxyphosphoryl)sulfanyl]-N,N,N-triethylethanaminium; Amiton salt	20194-81-4	2930.90.98

2A01	O,O-diethyl S-[2-(diethylamino)ethyl] phosphorothioate; Amiton	78-53-5	2930.90.98
2A01	[2-(diethylthiophosphor-S-yl)ethyl]diethylammonium hydrogen oxalate; Amiton salt	3734-97-2	2930.90.98
2A02	1,1,3,3,3-pentafluoro-2-(trifluoromethyl)prop-1-ene; PFIB	382-21-8	2903.59.00
2A03	3-Quinuclidinyl benzilate; BZ	6581-06-2	2933.39.99
2B04	Aluminium methyl methylphosphonate	35851-62-8	2931.49.90
2B04	Aluminium methyl propylphosphonate	114076-21-0	2931.49.90
2B04	Bis(1-ethylpropyl) methylphosphonate	5828-67-1	2931.49.90
2B04	Bis(1-methylbutyl) methylphosphonate	460091-25-2	2931.49.90
2B04	Bis(1-methylethyl) methylphosphonate	1445-75-6	2931.49.90
2B04	Bis(1-methylheptyl) methylphosphonate	76341-63-4	2931.49.90
2B04	Bis(1-methylpentyl) methylphosphonate	1020119-28-1	2931.49.90
2B04	Bis(1,2,2-trimethylpropyl) ethylphosphonate	169739-48-4	2931.49.90
2B04	Bis(1,2,2-trimethylpropyl) methylphosphonate	7040-58-6	2931.49.90
2B04	Bis(1,2,2-trimethylpropyl) propylphosphonate	192438-31-6	2931.49.90
2B04	Bis(1,3-dimethylbutyl) methylphosphonate	959028-09-2	2931.49.90
2B04	Bis(2-chloroethyl) methylphosphonate	2799-58-8	2931.59.90
2B04	Bis(2-ethylhexyl) methylphosphonate	60556-68-5	2931.49.90
2B04	Bis(2-methoxyethyl) ethylphosphonate	170275-34-0	2931.49.90
2B04	Bis(2-methoxyethyl) methylphosphonate	6069-09-6	2931.49.90
2B04	Bis(polyoxyethylene) methylphosphonate	363626-50-0	3907.21.00
2B04	Bis[(5-Ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl] methylphosphonate	42595-45-9	2931.49.20
2B04	Boranylidene methylphosphanium	14975-23-6	2931.49.90
2B04	(E)-2-Butenyl methylphosphonofluoridoate	138780-00-4	2931.59.90
2B04	Butyl methyl methylphosphonate	683-32-9	2931.49.90
2B04	Butyl methylphosphinate	6172-80-1	2931.49.90
2B04	Butyl methylphosphonate	1832-55-9	2931.49.90
2B04	Butyl methylphosphonochloridoate	23164-47-8	2931.59.90

2B04	O-(3-chloropropyl) O-[4-nitro-3-(trifluoromethyl)phenyl] methylphosphonothionate	849-29-6	2931.53.00
2B04	Cyclohexyl ethylphosphonate	170424-87-0	2931.49.90
2B04	Cyclohexyl ethylphosphonochloridoate	57523-33-8	2931.59.90
2B04	Cyclohexyl methyl methylphosphonate	7040-52-0	2931.49.90
2B04	Cyclohexyl methylphosphonate	1932-60-1	2931.49.90
2B04	Cyclohexyl methylphosphonochloridoate	7040-92-8	2931.59.90
2B04	O-Cyclohexyl methylphosphonofluoridothioate	4241-34-3	2930.90.98
2B04	Dibutyl methylphosphonate	2404-73-1	2931.49.90
2B04	O,O-Dibutyl methylphosphonothioate	18628-73-4	2930.90.98
2B04	Dibutyl propylphosphonate	4628-12-0	2931.49.90
2B04	Dicyclohexyl methylphosphonate	7040-53-1	2931.49.90
2B04	Dicyclopentyl methylphosphonate	22583-27-3	2931.49.90
2B04	Diethyl ethylphosphonate	78-38-6	2931.43.00
2B04	Diethyl ethylphosphonite	2651-85-6	2931.49.90
2B04	Diethyl isopropylphosphonate	1538-69-8	2931.49.90
2B04	Diethyl isopropylphosphonite	61820-31-3	2931.49.90
2B04	Diethyl methylphosphonate	683-08-9	2931.49.90
2B04	Diethyl methylphosphonite	15715-41-0	2931.49.90
2B04	S,S-Diethyl methylphosphonodithioate	995-88-0	2930.90.98
2B04	O,O-Diethyl methylphosphonothioate	6996-81-2	2930.90.98
2B04	Diethyl propylphosphonate	18812-51-6	2931.49.90
2B04	Diheptyl methylphosphonate	77304-64-4	2931.49.90
2B04	Dihexyl isopropylphosphonate	148456-62-6	2931.49.90
2B04	Dihexyl methylphosphonate	77304-63-3	2931.49.90
2B04	Diisopropyl dimethyldiphosphonate	28616-51-5	2931.49.90
2B04	Diisopropyl ethylphosphonate	1067-69-2	2931.49.90
2B04	Diisopropyl isopropylphosphonate	3759-39-5	2931.49.90
2B04	Diisopropyl propylphosphonate	18812-55-0	2931.49.90

2B04	3,9-Dimethyl-2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane 3,9-dioxide	3001-98-7	2931.48.00
2B04	Dimethyl ethylphosphonate	6163-75-3	2931.49.90
2B04	Dimethyl ethylphosphonite	15715-42-1	2931.49.90
2B04	Dimethyl isopropylphosphonate	54552-77-1	2931.49.90
2B04	Dimethyl methylphosphonate	756-79-6	2931.41.00
2B04	Dimethyl propylphosphonate	18755-43-6	2931.42.00
2B04	Dinonyl methylphosphonate	95428-88-9	2931.49.90
2B04	Diocetyl ethylphosphonate	6156-13-4	2931.49.90
2B04	Diocetyl isopropylphosphonate	83218-22-8	2931.49.90
2B04	Diocetyl methylphosphonate	1832-68-4	2931.49.90
2B04	Diocetyl propylphosphonate	959044-15-6	2931.49.90
2B04	O,O-Dipentyl methylphosphonothioate	91964-75-9	2930.90.98
2B04	Diphenyl methylphosphonate	7526-26-3	2931.49.90
2B04	Dipinacolyl dimethyldiphosphonate	81397-56-0	2931.49.90
2B04	Dipropyl isopropylphosphonate	192698-90-1	2931.49.90
2B04	S-2-Dipropylaminoethyl methylphosphonothionofluoridoate	28841-40-9	2930.90.98
2B04	Dipropyldiphosphonic acid	71760-04-8	2931.49.90
2B04	O-ethyl ethylchloridothiophosphonate	1497-68-3	2930.90.98
2B04	Ethyl ethylphosphonate	7305-61-5	2931.49.90
2B04	Ethyl isopropylphosphonate	4546-11-7	2931.49.90
2B04	(5-Ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphan-5-yl)methyl methyl methylphosphonate	41203-81-0	2931.47.00
2B04	Ethyl methyl ethylisopropylphosphoramidate	906801-34-1	2929.90.00
2B04	Ethyl methyl methylphosphonate	18755-36-7	2931.49.90
2B04	Ethyl methylphosphinate	16391-07-4	2931.49.90
2B04	Ethyl methylphosphonate	1832-53-7	2931.49.90
2B04	Ethyl methylphosphonite	89034-24-2	2931.49.90
2B04	Ethyl methylphosphonochloridoate	5284-09-3	2931.59.90
2B04	O-Ethyl methylphosphonochloridothioate	2524-16-5	2930.90.98

2B04	Ethyl N,N-diethyl-P-methylphosphonamidate	2404-81-1	2931.49.90
2B04	Ethyl propylphosphonochloridoate	28830-00-4	2931.59.90
2B04	Ethyl S-dicyclohexylammonium methylphosphonothiolate	73790-51-9	2930.90.98
2B04	O-Ethyl S-hydrogen methylphosphonothioate	18005-40-8	2930.90.98
2B04	2-Ethylhexyl methylphosphonate	13688-82-9	2931.49.90
2B04	Ethylphosphinyl dichloride	1498-40-4	2931.59.90
2B04	Ethylphosphinyl difluoride	430-78-4	2931.59.90
2B04	Ethylphosphonic acid	6779-09-5	2931.49.90
2B04	Ethylphosphonothioic dichloride	993-43-1	2931.59.90
2B04	Ethylphosphonothioic O,O-acid	13991-98-5	2930.90.98
2B04	Ethylphosphonyl dichloride	1066-50-8	2931.59.90
2B04	Heptyl methylphosphonate	170275-32-8	2931.49.90
2B04	Hexyl methylphosphonate	148456-69-3	2931.49.90
2B04	Isobutyl isopropylphosphonochloridoate	170082-70-9	2931.59.90
2B04	Isobutyl methylphosphonate	1604-38-2	2931.49.90
2B04	Isobutyl methylphosphonochloridoate	18359-05-2	2931.59.90
2B04	O-Isobutyl methylphosphonothioate	20626-99-7	2930.90.98
2B04	Isobutyl propylphosphonochloridoate	13213-47-3	2931.59.90
2B04	Isopropyl 1,2,2-trimethylpropyl methylphosphonate	92411-67-1	2931.49.90
2B04	Isopropyl ethylphosphonate	170135-50-9	2931.49.90
2B04	Isopropyl ethylphosphonochloridoate	28829-95-0	2931.59.90
2B04	Isopropyl isopropylphosphonate	249934-15-4	2931.49.90
2B04	Isopropyl methyl isopropylphosphonate	331954-04-2	2931.49.90
2B04	Isopropyl methyl phosphonic acid	1832-54-8	2931.49.90
2B04	Isopropyl methyl propylphosphonate	211923-89-6	2931.49.90
2B04	Isopropyl propylphosphonate	53621-99-1	2931.49.90
2B04	Octyl isopropylphosphonate	108506-63-4	2931.49.90
2B04	Isopropylphosphonic dichloride	1498-46-0	2931.52.00
2B04	Isopropylphosphonothioic dichloride	1498-60-8	2930.90.98

2B04	Isopropylphosphonous dichloride	25235-15-8	2931.59.90
2B04	Methyl 3-(trimethoxysilyl)propyl methylphosphonate	67812-17-3	2931.49.90
2B04	Methyl 1,2,2-trimethylpropyl methylphosphonate	7040-59-7	2931.49.90
2B04	O-Methyl ethylphosphonochloridothioate	1497-69-4	2930.90.98
2B04	Methyl isopropylphosphonate	249934-13-2	2931.49.90
2B04	Methyl methylphosphonate	1066-53-1	2931.49.90
2B04	O-Methyl methylphosphonochloridothioate	2524-15-4	2930.90.98
2B04	Methyl propyl isopropylphosphonate	741700-63-0	2931.49.90
2B04	Methyl propyl propylphosphonate	18755-44-7	2931.49.90
2B04	1-Methylbutyl methylphosphonate	198885-54-0	2931.49.90
2B04	1-Methylheptyl methylphosphonate	148456-51-3	2931.49.90
2B04	1-Methylpentyl methylphosphonate	944146-50-3	2931.49.90
2B04	4-Methylpentyl methylphosphonate	944146-51-4	2931.49.90
2B04	Methylphosphinic acid	4206-94-4	2931.49.90
2B04	Methylphosphinyl dichloride	676-83-5	2931.59.90
2B04	Methylphosphinyl difluoride	753-59-3	2931.59.90
2B04	Octyl methylphosphonate	1832-58-2	2931.49.90
2B04	Methylphosphonic acid	993-13-5	2931.44.00
2B04	Methylphosphonic acid compound with (aminoiminomethyl)urea (1:1)	84402-58-4	2931.45.00
2B04	P-methylphosphonic diamide	4759-30-2	2931.49.90
2B04	Methylphosphonothioic dichloride	676-98-2	2931.59.90
2B04	Methylphosphonothioic O,O-acid	5994-73-0	2930.90.98
2B04	Methylphosphonyl dichloride	676-97-1	2931.51.00
2B04	1-Methylprop-2-yn-1-yl methylphosphonofluoridoate	30593-71-6	2931.59.90
2B04	2-Methylpropyl methyl methylphosphonate	150799-85-2	2931.49.90
2B04	Methyltriphenoxyphosphonium iodide	17579-99-6	2931.49.90
2B04	Mixture of CAS RN 41203-81-0 and CAS RN 42595-45-9	170836-68-7	3824.91.00
2B04	Nonyl methylphosphonate	1832-60-6	2931.49.90
2B04	Pentamethylphosphonic diamide	2511-17-3	2931.49.90

2B04	Phenyl ethylphosphonofluoridoate	959259-83-7	2931.59.90
2B04	Phenyl methylphosphonofluoridoate	133826-40-1	2931.59.90
2B04	Phosphonic acid, methyl-, polyglycol ester; Exolit OP 560	663176-00-9	3824.92.00
2B04	Phosphonic acid, methyl-, polyglycol ester; Exolit OP 560 TP	294675-51-7	3824.92.00
2B04	Phosphonothioic acid, P-methyl-, O,S-diethyl ester	2511-10-6	2930.90.98
2B04	Phosphorus oxide, polymer with dimethyl methylphosphonate and oxirane; Fyroltex HP or Fyrol 51	70715-06-9	3824.99.86
2B04	Poly(1,3-phenylene methyl phosphonate)	63747-58-0	3911.20.00
2B04	Product from the reaction of Methylphosphonic acid and 1,2-Ethanediamine	99580-93-5	2931.49.90
2B04	Product from the reaction of Methylphosphonic acid and 1,3,5-Triazine-2,4,6-triamine 2,4,6-triamine	129788-86-9	2931.49.90
2B04	Propyl isopropylphosphonate	741700-67-4	2931.49.90
2B04	Propyl methylphosphonate	4546-11-6	2931.49.90
2B04	Propyl methylphosphonochloridoate	15110-09-5	2931.59.90
2B04	O-Propyl methylphosphonothionochloridoate	18005-37-3	2930.90.98
2B04	Propyl propylphosphonate	21921-97-1	2931.49.90
2B04	Propyl 1,2,2-trimethylpropyl methylphosphonate	90550-49-5	2931.49.90
2B04	Octyl propylphosphonate	781566-65-2	2931.49.90
2B04	Propylphosphonic acid	4672-38-2	2931.49.90
2B04	Propylphosphonothioic dichloride	2524-01-8	2930.90.98
2B04	Propylphosphonothioic O,O-acid	27797-35-9	2930.90.98
2B04	Propylphosphonyl dichloride	4708-04-7	2931.52.00
2B04	S-Methyl methylphosphonochloridothioate	13113-89-8	2930.90.98
2B04	S-Methyl methylphosphonothioate	73675-56-6	2930.90.98
2B04	sec-butyl isopropylphosphonochloridoate	170082-69-6	2931.59.90
2B04	Sec-butyl propylphosphonochloridoate	170082-71-0	2931.59.90
2B04	Sodium O-butyl methylphosphonothioate	51825-85-5	2930.90.98
2B04	Sodium O-ethyl ethylphosphonothioate	17390-16-8	2930.90.98
2B04	Sodium O-ethyl methylphosphonothioate	22307-81-9	2930.90.98
2B04	Sodium O-ethyl propylphosphonothioate	117122-90-4	2930.90.98

2B04	Sodium O-isobutyl methylphosphonothioate	74789-32-5	2930.90.98
2B04	Sodium O-isopropyl methylphosphonothioate	92475-33-7	2930.90.98
2B04	Sodium O-methyl methylphosphonothioate	74789-31-4	2930.90.98
2B04	Sodium O-propyl methylphosphonothioate	51825-84-4	2930.90.98
2B04	Sodium 3-(trihydroxysilyl)propyl methylphosphonate	84962-98-1	2931.49.10
2B04	1,2,2-Trimethylpropyl ethylphosphonate	143663-83-6	2931.49.90
2B04	1,2,2-Trimethylpropyl isopropylphosphonate	249934-16-5	2931.49.90
2B04	1,2,2-Trimethylpropyl methylphosphonate	616-52-4	2931.49.90
2B04	1,2,2-Trimethylpropyl propylphosphonate	249934-12-1	2931.49.90
2B04	2,4,6-Tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide	68957-94-8	2931.46.00
2B05	Diethylphosphoramidic chloride fluoride	650-72-6	2929.90.00
2B05	Diethylphosphoramidic dichloride	1498-54-0	2929.90.00
2B05	Diethylphosphoramidic difluoride	359-94-4	2929.90.00
2B05	Diethylphosphoramidic bromide fluoride	758-71-4	2929.90.00
2B05	Diisopropylphosphoramidic dichloride	23306-80-1	2929.90.00
2B05	Dimethylphosphoramidic chloride fluoride	36598-84-2	2929.90.00
2B05	Dimethylphosphoramidic difluoride	354-43-8	2929.90.00
2B05	Dipropylphosphoramidic dichloride	40881-98-9	2929.90.00
2B05	Dipropylphosphoramidic difluoride	40882-01-7	2929.90.00
2B05	Ethylisopropylphosphoramidic dichloride	777943-37-0	2929.90.00
2B05	Ethylmethylphosphoramidic dichloride	777943-34-7	2929.90.00
2B05	Ethylpropylphosphoramidic dichloride	777943-38-1	2929.90.00
2B05	Isopropylmethylphosphoramidic dichloride	777943-36-9	2929.90.00
2B05	Methylpropylphosphoramidic dichloride	777943-35-8	2929.90.00
2B05	N,N-Dimethylaminophosphoryl dichloride	677-43-0	2929.90.00
2B06	Diethyl N,N-dimethylphosphoramidate	2404-03-7	2929.90.00
2B06	Diethyl N,N-dimethylphosphoramidate	2404-03-7	2929.90.00
2B06	Diethyl N,N-dipropylphosphoramidate	91043-34-4	2929.90.00
2B06	Diethyl ethyl(methyl)phosphoramidate	53279-98-4	2929.90.00
2B06	Diisopropyl N,N-dimethylphosphoramidate	2404-04-8	2929.90.00

2B06	Dimethyl N,N-diethylphosphoramidate	65659-19-0	2929.90.00
2B06	Dimethyl N,N-diisopropylphosphoramidate	170275-46-4	2929.90.00
2B06	Dimethyl N,N-dimethylphosphoramidate	597-07-9	2929.90.00
2B06	Dipropyl N,N-diethylphosphoramidate	22250-42-6	2929.90.00
2B06	Dipropyl N,N-dimethylphosphoramidate	98543-28-3	2929.90.00
2B06	Dipropyl N,N-dipropylphosphoramidate	17123-10-3	2929.90.00
2B06	Ethyl methyl N,N-diisopropylphosphoramidate	848216-15-9	2929.90.00
2B06	Phosphoramidic acid, diethyl-, diethyl ester	3167-69-9	2929.90.00
2B07	Arsenic trichloride; AsCl ₃	7784-34-1	2812.19.90
2B08	Benzilic acid	76-93-7	2918.17.00
2B09	R-(-)-3-Quinuclidinol	25333-42-0	2933.35.00
2B09	3-Quinuclidinol	1619-34-7	2933.35.00
2B10	2-chloro-N-ethyl-N-methylethanamine	54153-16-1	2921.19.99
2B10	2-chloro-N-ethyl-N-methylethanamine hydrochloride	4535-88-0	2921.19.99
2B10	2-chloroethyl(diethyl)ammonium sulphate	68391-41-3	2921.19.99
2B10	N-(2-chloroethyl)-N-(isopropyl)propan-1-amine	688299-03-8	2921.19.99
2B10	N-(2-chloroethyl)-N-ethylpropan-1-amine hydrochloride	13105-93-6	2921.19.99
2B10	N-(2-chloroethyl)-N-ethylpropan-2-amine	92204-40-5	2921.19.99
2B10	N-(2-chloroethyl)-N-isopropylpropan-1-amine hydrochloride	4535-89-1	2921.19.99
2B10	N-(2-chloroethyl)-N-methylpropan-1-amine	763884-48-6	2921.19.99
2B10	N-(2-chloroethyl)-N-methylpropan-2-amine hydrochloride	15512-81-9	2921.19.99
2B10	N-(2-chloroethyl)-N-methylpropan-2-amine	408326-30-7	2921.19.99
2B10	N-(2-chloroethyl)-N-propylpropan-1-amine	36716-60-6	2921.19.99
2B10	N-(2-chloroethyl)-N-propylpropan-1-amine hydrochloride	4535-86-8	2921.19.99
2B10	2-Chloroethyldimethylamine	107-99-3	2921.19.99
2B10	N,N-Diethylaminoethyl-2-chloride	100-35-6	2921.19.99
2B10	N,N-Diethylaminoethyl-2-chloride hydrochloride	869-24-9	2921.13.00
2B10	N,N-Diisopropyl-(beta)-aminoethyl chloride	96-79-7	2921.19.99
2B10	N,N-Diisopropyl-2-aminoethyl chloride hydrochloride	4261-68-1	2921.14.00
2B10	2-(N,N-Dimethylamino)ethylchloride hydrochloride	4584-46-7	2921.12.00

2B10	Ethanamine, 2-chloro-N,N-diethyl-, sulfate	67845-39-0	2921.19.99
2B11	2-(diisopropylamino)ethanol hydrochloride	63051-68-3	2922.19.00
2B11	2-(Dipropylamino)ethanol	3238-75-3	2922.19.00
2B11	2-(Ethylisopropylamino)ethanol	2893-61-0	2922.19.00
2B11	2-(Ethylmethylamino)ethanol	2893-43-8	2922.19.00
2B11	2-(Ethylpropylamino)ethanol	2893-56-3	2922.19.00
2B11	2-(Methylpropylamino)ethanol	2893-45-0	2922.19.00
2B11	2-(N,N-Diisopropylamino)ethanol hydrogen sulfide salt	1373773-53-5	2922.19.00
2B11	2-[isopropyl(methyl)amino]ethanol	2893-49-4	2922.19.00
2B11	2-[isopropyl(propyl)amino]ethanol	4535-77-7	2922.19.00
2B11	N,N-Diisopropyl-(beta)-amino-ethanol	96-80-0	2922.18.00
2B11	(2-Hydroxyethyl)dipropan-1-ylammonium chloride	4535-76-6	2922.19.00
2B12	2-(Diisopropylamino)ethanethiol	5842-07-9	2930.90.98
2B12	2-(Dipropylamino)ethanethiol	5842-06-8	2930.90.98
2B12	2-(Ethylisopropylamino)ethanethiol	36759-67-8	2930.90.98
2B12	2-(Ethylpropylamino)ethanethiol	1018124-39-4	2930.90.98
2B12	Diethyl-2-mercaptoethylammonium chloride	1942-52-5	2930.90.98
2B12	2-(N,N-Diethylamino)ethanethiol	100-38-9	2930.60.00
2B12	2-(N,N-diethylamino)ethanethiolate sodium	58607-68-4	2930.90.98
2B12	N,N-Diisopropyl-(beta)-aminoethane thiol	5842-07-9	2930.90.98
2B12	N,N-Diisopropylaminoethanethiol hydrochloride	41480-75-5	2930.90.98
2B12	N,N-Dimethylaminoethane-2-thiol	108-02-1	2930.10.00
2B12	N,N-Dimethylaminoethane-2-thiol hydrochloride	13242-44-9	2930.90.98
2B12	2-(N-Ethyl-N-isopropylamino)ethanethiol hydrochloride	1017861-37-8	2930.90.98
2B12	2-(N-Ethyl-N-methylamino)ethanethiol hydrochloride	1017861-21-0	2930.90.98
2B12	2-(N-Ethyl-N-propylamino)ethanethiol hydrochloride	1017861-34-5	2930.90.98
2B12	2-[ethyl(methyl)amino]ethanethiol	63210-55-9	2930.90.98
2B12	2-(N-Isopropyl-N-methylamino)ethanethiol hydrochloride	1017861-29-8	2930.90.98
2B12	2-(N-Isopropyl-N-propylamino)ethanethiol hydrochloride	1017861-45-8	2930.90.98
2B12	2-[isopropyl(methyl)amino]ethanethiol	36759-66-7	2930.90.98

2B12	2-[isopropyl(propyl)amino]ethanethiol	36759-68-9	2930.90.98
2B12	2-(N-Methyl-N-propylamino)ethanethiol	1018124-38-3	2930.90.98
2B12	2-(N-Methyl-N-propylamino)ethanethiol hydrochloride	1017861-26-5	2930.90.98
2B13	Thiodiglycol	111-48-8	2930.70.00
2B14	Pinacolyl alcohol	464-07-3	2905.19.00
3A01	Phosgene; COCl ₂	75-44-5	2812.11.00
3A02	Cyanogen chloride; CNCl	506-77-4	2853.10.00
3A03	Hydrogen cyanide; HCN	74-90-8	2811.12.00
3A04	Chloropicrin	76-06-2	2904.91.00
3B05	Phosphorus oxychloride; POCl ₃	10025-87-3	2812.12.00
3B06	Phosphorus trichloride; PCl ₃	7719-12-2	2812.13.00
3B07	Phosphorus pentachloride; PCl ₅	10026-13-8	2812.14.00
3B08	Trimethyl phosphite	121-45-9	2920.23.00
3B09	Triethyl phosphite	122-52-1	2920.24.00
3B10	Dimethyl phosphite	868-85-9	2920.21.00
3B11	Diethyl phosphite	762-04-9	2920.22.00
3B12	Sulphur monochloride; S ₂ Cl ₂	10025-67-9	2812.15.00
3B13	Sulphur dichloride; SCl ₂	10545-99-0	2812.16.00
3B14	Thionyl chloride; SOCl ₂	7719-09-7	2812.17.00
3B15	Ethyldiethanolamine	139-87-7	2922.17.00
3B16	Methyldiethanolamine	105-59-9	2922.17.00
3B17	Triethanolamine	102-71-6	2922.15.00

**in bold new chemicals and new CN codes*

2.3 Common Military List

On 13 March 2020, the Official Journal of the European Union published the latest version of the Common Military List of the European Union, updating and replacing the Common Military List of the European Union adopted by the Council ⁽²⁵⁾ The list updates and replaces the previous versions and describes equipment, including a large amount of chemicals, governed by the common rules of the control of exports of military technology and equipment included in the Council Common Position 2008/944/CFSP.

Effective trade controls depend to a great extent on the awareness of exporters and their active efforts to comply with trade restrictions. To this end, in September 2019 the Council of the EU published an **user's guide** ⁽²⁶⁾, that provides a framework to help exporters identify, manage and mitigate risks associated with the export of military items to ensure compliance with the relevant EU and national laws and regulations.

Items included in the military list are classified in 22 categories based on their type and/or application, being the chemicals classified in categories ML7 (toxics) and ML8 (energetic materials), see table 4 below.

Table 4. Codification of military items

Category	Subdivision	Numeric code
ML1= Smooth-bore weapons with a calibre of less than 20 mm	a,b,c,d, etc.	1 or 2 digits
ML2=Smooth-bore weapons with a calibre of 20 mm or more		
ML3= Ammunition and fuze setting devices		
ML4= Bombs, torpedoes, rockets, missiles, other explosive devices		
ML5= Fire control, and related alerting and warning equipment		
ML6= Ground vehicles and components		
ML7= Chemical or biological toxic agents, 'riot control agents', radioactive materials, related equipment		
ML8= 'Energetic materials', and related substances		
ML9= Vessels of war		
ML10, ML11, ..., ML22		

⁽²⁵⁾ Common Military List of the European Union ST/5470/2020/INIT;
[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020XG0313\(07\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020XG0313(07))

⁽²⁶⁾ User's Guide to Council Common Position 2008/944/CFSP defining common rules governing the control of exports of military technology and equipment. <https://data.consilium.europa.eu/doc/document/ST-12189-2019-INIT/en/pdf>

Table 5. Chemicals included in the Military List, 2008/944/CFSP

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
ML7.b.1.a	(1R)-1,2,2-Trimethylpropyl methylphosphonofluoridoate	89254-46-6	2931.59.90
ML7.b.1.a	(1R)-1-Methylheptyl methylphosphonofluoridoate	24753-12-6	2931.59.90
ML7.b.1.a	(1S)-1,2,2-Trimethylpropyl methylphosphonofluoridoate	89254-45-5	2931.59.90
ML7.b.1.a	(1S)-1-Methylheptyl methylphosphonofluoridoate	22925-96-8	2931.59.90
ML7.b.1.a	(2R)-3,3-dimethylbutan-2-yl (R)-methylphosphonofluoridate	22956-47-4	2931.59.90
ML7.b.1.a	(2R)-3,3-dimethylbutan-2-yl (S)-methylphosphonofluoridate	22956-48-5	2931.59.90
ML7.b.1.a	(2S)-3,3-dimethylbutan-2-yl (R)-methylphosphonofluoridate	24753-15-9	2931.59.90
ML7.b.1.a	(2S)-3,3-dimethylbutan-2-yl methylphosphonofluoridate	24753-16-0	2931.59.90
ML7.b.1.a	1,1-Diethyl-2,2-dimethylpropyl methylphosphonofluoridate	159395-78-5	2931.59.90
ML7.b.1.a	1,1-Diethylpropyl methylphosphonofluoridate	959257-62-6	2931.59.90
ML7.b.1.a	1,1-Dimethylpentyl methylphosphonofluoridate	959014-89-2	2931.59.90
ML7.b.1.a	1,1-Dimethylpropyl methylphosphonofluoridoate	159395-77-4	2931.59.90
ML7.b.1.a	1,2,2-Trimethylpropyl ethylphosphonofluoridoate	97931-20-9	2931.59.90
ML7.b.1.a	1,2,2-Trimethylpropyl isopropylphosphonofluoridoate	952104-41-5	2931.59.90
ML7.b.1.a	1,2,2-Trimethylpropyl propylphosphonofluoridoate	952104-35-7	2931.59.90
ML7.b.1.a	1,2-Dimethylbutyl ethylphosphonofluoridoate	1005258-27-4	2931.59.90
ML7.b.1.a	1,2-Dimethylbutyl isopropylphosphonofluoridoate	1005249-16-0	2931.59.90
ML7.b.1.a	1,2-Dimethylbutyl methylphosphonofluoridoate	1005239-89-3	2931.59.90
ML7.b.1.a	1,2-Dimethylpropyl methylphosphonofluoridoate	6154-51-4	2931.59.90
ML7.b.1.a	1,3,3-Trimethylbutyl methylphosphonofluoridoate	30593-65-8	2931.59.90
ML7.b.1.a	1,3-Dimethylbutyl ethylphosphonofluoridoate	345260-86-8	2931.59.90
ML7.b.1.a	1,3-Dimethylbutyl isopropylphosphonofluoridoate	345260-87-9	2931.59.90
ML7.b.1.a	1,3-Dimethylbutyl methylphosphonofluoridoate	352-53-4	2931.59.90
ML7.b.1.a	1,3-Dimethylbutyl propylphosphonofluoridoate	345260-88-0	2931.59.90
ML7.b.1.a	1,4-Dimethylpentyl methylphosphonofluoridoate	199850-62-9	2931.59.90
ML7.b.1.a	1,5-Dimethylhexyl methylphosphonofluoridoate	159395-76-3	2931.59.90

ML7.b.1.a	1-Cyclohexylethyl ethylphosphonofluoridate	1353011-94-5	2931.59.90
ML7.b.1.a	1-Cyclohexylethyl methylphosphonofluoridate	1280106-29-7	2931.59.90
ML7.b.1.a	1-Cyclohexylethyl propylphosphonofluoridate	1280106-32-2	2931.59.90
ML7.b.1.a	1-Ethyl-1-methylpentyl methylphosphonofluoridate	959098-88-5	2931.59.90
ML7.b.1.a	1-Ethyl-1-methylpropyl methylphosphonofluoridate	959083-58-0	2931.59.90
ML7.b.1.a	1-Ethyl-2,2-dimethylpropyl ethylphosphonofluoridoate	345260-76-6	2931.59.90
ML7.b.1.a	1-Ethyl-2,2-dimethylpropyl isopropylphosphonofluoridoate	345260-77-7	2931.59.90
ML7.b.1.a	1-Ethyl-2,2-dimethylpropyl methylphosphonofluoridoate	345260-75-5	2931.59.90
ML7.b.1.a	1-Ethyl-2,2-dimethylpropyl propylphosphonofluoridoate	345260-78-8	2931.59.90
ML7.b.1.a	1-Ethyl-2-methylpentyl ethylphosphonofluoridate	1280106-33-3	2931.59.90
ML7.b.1.a	1-Ethyl-2-methylpentyl methylphosphonofluoridoate	1005240-09-4	2931.59.90
ML7.b.1.a	1-Ethyl-2-methylpentyl propylphosphonofluoridate	1280106-34-4	2931.59.90
ML7.b.1.a	1-Ethyl-2-methylpropyl ethylphosphonofluoridoate	345260-67-5	2931.59.90
ML7.b.1.a	1-Ethyl-2-methylpropyl isopropylphosphonofluoridoate	345260-68-6	2931.59.90
ML7.b.1.a	1-Ethyl-2-methylpropyl methylphosphonofluoridoate	345260-66-4	2931.59.90
ML7.b.1.a	1-Ethyl-2-methylpropyl propylphosphonofluoridoate	345260-69-7	2931.59.90
ML7.b.1.a	1-Ethylbutyl methylphosphonofluoridate	959218-68-9	2931.59.90
ML7.b.1.a	1-Ethylhexyl isopropylphosphonofluoridoate	959088-13-2	2931.59.90
ML7.b.1.a	1-Ethylhexyl methylphosphonofluoridate	1228786-49-9	2931.59.90
ML7.b.1.a	1-Ethylhexyl propylphosphonofluoridoate	959088-14-3	2931.59.90
ML7.b.1.a	1-Ethylpentyl methylphosphonofluoridoate	959098-89-6	2931.59.90
ML7.b.1.a	1-Ethylpropyl ethylphosphonofluoridoate	959086-48-7	2931.59.90
ML7.b.1.a	1-Ethylpropyl methylphosphonofluoridoate	66348-71-8	2931.59.90
ML7.b.1.a	1-Ethylpropyl propylphosphonofluoridoate	959088-15-4	2931.59.90
ML7.b.1.a	1-Isobutyl-3-methylbutyl ethylphosphonofluoridoate	959262-99-8	2931.59.90
ML7.b.1.a	1-Isobutyl-3-methylbutyl methylphosphonofluoridoate	193090-16-3	2931.59.90
ML7.b.1.a	1-Isopropyl-2-methylpropyl ethylphosphonofluoridoate	345260-79-9	2931.59.90
ML7.b.1.a	1-Isopropyl-2-methylpropyl isopropylphosphonofluoridoate	345260-80-2	2931.59.90
ML7.b.1.a	1-Isopropyl-2-methylpropyl methylphosphonofluoridoate	113548-85-9	2931.59.90

ML7.b.1.a	1-Isopropyl-2-methylpropyl propylphosphonofluoridoate	345260-81-3	2931.59.90
ML7.b.1.a	1-Isopropylbutyl ethylphosphonofluoridoate	345260-71-1	2931.59.90
ML7.b.1.a	1-Isopropylbutyl isopropylphosphonofluoridoate	345260-72-2	2931.59.90
ML7.b.1.a	1-Isopropylbutyl methylphosphonofluoridoate	345260-70-0	2931.59.90
ML7.b.1.a	1-Isopropylbutyl propylphosphonofluoridoate	345260-73-3	2931.59.90
ML7.b.1.a	1-Methylbutyl ethylphosphonofluoridoate	333416-09-4	2931.59.90
ML7.b.1.a	1-Methylbutyl isopropylphosphonofluoridoate	333416-37-8	2931.59.90
ML7.b.1.a	1-Methylbutyl methylphosphonofluoridoate	761-93-3	2931.59.90
ML7.b.1.a	1-Methylbutyl propylphosphonofluoridoate	333416-23-2	2931.59.90
ML7.b.1.a	1-Methylheptyl ethylphosphonofluoridoate	468711-98-0	2931.59.90
ML7.b.1.a	1-Methylheptyl isopropylphosphonofluoridoate	468712-09-6	2931.59.90
ML7.b.1.a	1-Methylheptyl methylphosphonofluoridoate	22925-97-9	2931.59.90
ML7.b.1.a	1-Methylheptyl propylphosphonofluoridoate	468712-06-3	2931.59.90
ML7.b.1.a	1-Methylhexyl ethylphosphonofluoridoate	333416-10-7	2931.59.90
ML7.b.1.a	1-Methylhexyl isopropylphosphonofluoridoate	333416-38-9	2931.59.90
ML7.b.1.a	1-Methylhexyl methylphosphonofluoridoate	674-95-3	2931.59.90
ML7.b.1.a	1-Methylhexyl propylphosphonofluoridoate	333416-24-3	2931.59.90
ML7.b.1.a	1-Methylnonyl ethylphosphonofluoridoate	1254104-37-4	2931.59.90
ML7.b.1.a	1-Methylnonyl isopropylphosphonofluoridoate	1280106-25-3	2931.59.90
ML7.b.1.a	1-Methylnonyl methylphosphonofluoridoate	211192-71-1	2931.59.90
ML7.b.1.a	1-Methyloctyl ethylphosphonofluoridoate	333416-11-8	2931.59.90
ML7.b.1.a	1-Methyloctyl isopropylphosphonofluoridoate	333416-39-0	2931.59.90
ML7.b.1.a	1-Methyloctyl methylphosphonofluoridoate	211192-72-2	2931.59.90
ML7.b.1.a	1-Methyloctyl propylphosphonofluoridoate	333416-25-4	2931.59.90
ML7.b.1.a	1-Methylpentyl methylphosphonofluoridoate	13172-12-8	2931.59.90
ML7.b.1.a	1-Propylheptyl ethylphosphonofluoridoate	959217-15-3	2931.59.90
ML7.b.1.a	1-Propylheptyl methylphosphonofluoridoate	959098-86-3	2931.59.90
ML7.b.1.a	2,2-Dimethylpropyl ethylphosphonofluoridoate	959234-06-1	2931.59.90
ML7.b.1.a	2,2-Dimethylpropyl isopropylphosphonofluoridoate	864463-26-3	2931.59.90

ML7.b.1.a	2,2-Dimethylpropyl methylphosphonofluoridoate	372-62-3	2931.59.90
ML7.b.1.a	2,2-Dimethylpropyl propylphosphonofluoridoate	959092-42-3	2931.59.90
ML7.b.1.a	2,3-Dimethylbutyl methylphosphonofluoridoate	83563-66-0	2931.59.90
ML7.b.1.a	2,3-Dimethylcyclohexyl propylphosphonofluoridate	1280106-35-5	2931.59.90
ML7.b.1.a	2,4,4-Trimethylpentyl ethylphosphonofluoridoate	333416-13-0	2931.59.90
ML7.b.1.a	2,4,4-Trimethylpentyl isopropylphosphonofluoridoate	333416-43-6	2931.59.90
ML7.b.1.a	2,4,4-Trimethylpentyl methylphosphonofluoridoate	333416-06-1	2931.59.90
ML7.b.1.a	2,4,4-Trimethylpentyl propylphosphonofluoridoate	333416-28-7	2931.59.90
ML7.b.1.a	2,6-Dimethylcyclohexyl methylphosphonofluoridoate	1005276-38-9	2931.59.90
ML7.b.1.a	2-Cyclohexylethyl ethylphosphonofluoridoate	959093-03-9	2931.59.90
ML7.b.1.a	2-Cyclohexylethyl methylphosphonofluoridoate	959040-72-3	2931.59.90
ML7.b.1.a	2-Cyclohexylethyl propylphosphonofluoridoate	959004-37-6	2931.59.90
ML7.b.1.a	2-Ethylbutyl methylphosphonofluoridoate	126204-48-6	2931.59.90
ML7.b.1.a	2-Ethylcyclohexyl methylphosphonofluoridoate	1005257-56-6	2931.59.90
ML7.b.1.a	2-Ethylhexyl ethylphosphonofluoridoate	468711-97-9	2931.59.90
ML7.b.1.a	2-Ethylhexyl isopropylphosphonofluoridoate	460091-27-4	2931.59.90
ML7.b.1.a	2-Ethylhexyl methylphosphonofluoridoate	458-71-9	2931.59.90
ML7.b.1.a	2-Ethylhexyl propylphosphonofluoridoate	952104-36-8	2931.59.90
ML7.b.1.a	2-Isopropyl-5-methylcyclohexyl ethylphosphonofluoridate	1353011-93-4	2931.59.90
ML7.b.1.a	2-Isopropyl-5-methylcyclohexyl isopropylphosphonofluoridate	1262583-00-5	2931.59.90
ML7.b.1.a	2-Isopropyl-5-methylcyclohexyl methylphosphonofluoridate	1262582-99-9	2931.59.90
ML7.b.1.a	2-Methylbutyl ethylphosphonofluoridoate	468711-94-6	2931.59.90
ML7.b.1.a	2-Methylbutyl isopropylphosphonofluoridoate	952104-39-1	2931.59.90
ML7.b.1.a	2-Methylbutyl methylphosphonofluoridoate	468711-90-2	2931.59.90
ML7.b.1.a	2-Methylbutyl propylphosphonofluoridoate	468712-02-9	2931.59.90
ML7.b.1.a	2-Methylcyclohexyl ethylphosphonofluoridate	1353011-76-3	2931.59.90
ML7.b.1.a	2-Methylcyclohexyl methylphosphonofluoridoate	85473-32-1	2931.59.90
ML7.b.1.a	2-Methylcyclopentyl ethylphosphonofluoridoate	1005164-70-4	2931.59.90
ML7.b.1.a	2-Methylcyclopentyl isopropylphosphonofluoridoate	1005176-59-9	2931.59.90

ML7.b.1.a	2-Methylcyclopentyl propylphosphonofluoridate	1005176-60-2	2931.59.90
ML7.b.1.a	2-Methyloctyl methylphosphonofluoridate	1228786-50-2	2931.59.90
ML7.b.1.a	2-Methylpentyl ethylphosphonofluoridate	333416-12-9	2931.59.90
ML7.b.1.a	2-Methylpentyl isopropylphosphonofluoridate	333416-41-4	2931.59.90
ML7.b.1.a	2-Methylpentyl methylphosphonofluoridate	333416-05-0	2931.59.90
ML7.b.1.a	2-Methylpentyl propylphosphonofluoridate	333416-27-6	2931.59.90
ML7.b.1.a	2-Propylpentyl methylphosphonofluoridate	959089-00-0	2931.59.90
ML7.b.1.a	2-tert-Butylcyclohexyl ethylphosphonofluoridate	1005254-23-8	2931.59.90
ML7.b.1.a	2-tert-Butylcyclohexyl isopropylphosphonofluoridate	1005145-75-4	2931.59.90
ML7.b.1.a	2-tert-Butylcyclohexyl methylphosphonofluoridate	1005247-52-8	2931.59.90
ML7.b.1.a	2-tert-Butylcyclohexyl propylphosphonofluoridate	1005176-90-8	2931.59.90
ML7.b.1.a	3,3,5,5-Tetramethylcyclohexyl ethylphosphonofluoridate	333416-68-5	2931.59.90
ML7.b.1.a	3,3,5,5-Tetramethylcyclohexyl isopropylphosphonofluoridate	333416-76-5	2931.59.90
ML7.b.1.a	3,3,5,5-Tetramethylcyclohexyl methylphosphonofluoridate	333416-63-0	2931.59.90
ML7.b.1.a	3,3,5,5-Tetramethylcyclohexyl propylphosphonofluoridate	333416-72-1	2931.59.90
ML7.b.1.a	3,3-Dimethylbutyl methylphosphonofluoridate	660-21-9	2931.59.90
ML7.b.1.a	3,3-Dimethylbutyl propylphosphonofluoridate	959004-32-1	2931.59.90
ML7.b.1.a	3,5,5-Trimethylhexyl ethylphosphonofluoridate	959027-88-4	2931.59.90
ML7.b.1.a	3,5,5-Trimethylhexyl methylphosphonofluoridate	959304-14-4	2931.59.90
ML7.b.1.a	3,5-Dimethylcyclohexyl ethylphosphonofluoridate	1353011-80-9	2931.59.90
ML7.b.1.a	3,5-Dimethylcyclohexyl methylphosphonofluoridate	1005284-61-6	2931.59.90
ML7.b.1.a	3,7-Dimethyloctyl ethylphosphonofluoridate	345260-83-5	2931.59.90
ML7.b.1.a	3,7-Dimethyloctyl isopropylphosphonofluoridate	345260-84-6	2931.59.90
ML7.b.1.a	3,7-Dimethyloctyl methylphosphonofluoridate	345260-82-4	2931.59.90
ML7.b.1.a	3,7-Dimethyloctyl propylphosphonofluoridate	345260-85-7	2931.59.90
ML7.b.1.a	3-Cyclohexylpropyl ethylphosphonofluoridate	1353011-91-2	2931.59.90
ML7.b.1.a	3-Cyclohexylpropyl methylphosphonofluoridate	211192-73-3	2931.59.90
ML7.b.1.a	3-Cyclohexylpropyl propylphosphonofluoridate	1280106-26-4	2931.59.90
ML7.b.1.a	3-Cyclopentylpropyl ethylphosphonofluoridate	1353011-87-6	2931.59.90

ML7.b.1.a	3-Methylbutyl ethylphosphonofluoridoate	468711-95-7	2931.59.90
ML7.b.1.a	3-Methylbutyl isopropylphosphonofluoridoate	952104-40-4	2931.59.90
ML7.b.1.a	3-Methylbutyl methylphosphonofluoridoate	22107-46-6	2931.59.90
ML7.b.1.a	3-Methylbutyl propylphosphonofluoridoate	468712-03-0	2931.59.90
ML7.b.1.a	3-Methylcyclohexyl ethylphosphonofluoridoate	333416-64-1	2931.59.90
ML7.b.1.a	3-Methylcyclohexyl isopropylphosphonofluoridoate	333416-73-2	2931.59.90
ML7.b.1.a	3-Methylcyclohexyl methylphosphonofluoridoate	113548-86-0	2931.59.90
ML7.b.1.a	3-Methylcyclohexyl propylphosphonofluoridoate	333416-69-6	2931.59.90
ML7.b.1.a	3-Methylcyclopentyl ethylphosphonofluoridoate	1280106-36-6	2931.59.90
ML7.b.1.a	3-Methylpentyl ethylphosphonofluoridoate	959263-01-5	2931.59.90
ML7.b.1.a	3-Methylpentyl methylphosphonofluoridoate	199850-60-7	2931.59.90
ML7.b.1.a	4-Ethylcyclohexyl ethylphosphonofluoridoate	333416-65-2	2931.59.90
ML7.b.1.a	4-Ethylcyclohexyl isopropylphosphonofluoridoate	333416-74-3	2931.59.90
ML7.b.1.a	4-Ethylcyclohexyl methylphosphonofluoridoate	333416-60-7	2931.59.90
ML7.b.1.a	4-Ethylcyclohexyl propylphosphonofluoridoate	333416-70-9	2931.59.90
ML7.b.1.a	4-Methylcyclohexyl ethylphosphonofluoridoate	468711-96-8	2931.59.90
ML7.b.1.a	4-Methylcyclohexyl isopropylphosphonofluoridoate	468712-08-5	2931.59.90
ML7.b.1.a	4-Methylcyclohexyl methylphosphonofluoridoate	113548-87-1	2931.59.90
ML7.b.1.a	4-Methylpentyl ethylphosphonofluoridoate	959276-46-1	2931.59.90
ML7.b.1.a	4-Methylpentyl methylphosphonofluoridoate	959010-20-9	2931.59.90
ML7.b.1.a	4-tert-Butylcyclohexyl ethylphosphonofluoridoate	959217-22-2	2931.59.90
ML7.b.1.a	4-tert-Butylcyclohexyl methylphosphonofluoridoate	959245-06-8	2931.59.90
ML7.b.1.a	4-tert-Butylcyclohexyl propylphosphonofluoridoate	959004-03-6	2931.59.90
ML7.b.1.a	Butyl ethylphosphonofluoridoate	18358-34-4	2931.59.90
ML7.b.1.a	Butyl isopropylphosphonofluoridoate	333416-30-1	2931.59.90
ML7.b.1.a	Butyl methylphosphonofluoridoate	352-63-6	2931.59.90
ML7.b.1.a	Butyl propylphosphonofluoridoate	333416-16-3	2931.59.90
ML7.b.1.a	Cyclobutyl ethylphosphonofluoridoate	345239-03-4	2931.59.90
ML7.b.1.a	Cyclobutyl isopropylphosphonofluoridoate	345239-04-5	2931.59.90

ML7.b.1.a	Cyclobutyl methylphosphonofluoridate	14618-04-3	2931.59.90
ML7.b.1.a	Cyclobutyl propylphosphonofluoridate	345239-05-6	2931.59.90
ML7.b.1.a	Cyclobutyl propylphosphonofluoridoate	345239-05-6	2931.59.90
ML7.b.1.a	Cycloheptyl ethylphosphonofluoridoate	345239-09-0	2931.59.90
ML7.b.1.a	Cycloheptyl isopropylphosphonofluoridoate	345239-10-3	2931.59.90
ML7.b.1.a	Cycloheptyl methylphosphonofluoridoate	7284-83-5	2931.59.90
ML7.b.1.a	Cycloheptyl propylphosphonofluoridoate	345239-11-4	2931.59.90
ML7.b.1.a	Cyclohexyl ethylphosphonofluoridoate	7284-84-6	2931.59.90
ML7.b.1.a	Cyclohexyl isopropylphosphonofluoridoate	333416-55-0	2931.59.90
ML7.b.1.a	Cyclohexyl methylphosphonofluoridoate	329-99-7	2931.59.90
ML7.b.1.a	Cyclohexyl propylphosphonofluoridoate	28364-21-8	2931.59.90
ML7.b.1.a	Cyclohexylmethyl ethylphosphonofluoridoate	959093-05-1	2931.59.90
ML7.b.1.a	Cyclohexylmethyl isopropylphosphonofluoridoate	959004-34-3	2931.59.90
ML7.b.1.a	Cyclohexylmethyl methylphosphonofluoridoate	959019-47-7	2931.59.90
ML7.b.1.a	Cyclohexylmethyl propylphosphonofluoridoate	959025-93-5	2931.59.90
ML7.b.1.a	Cyclooctyl ethylphosphonofluoridoate	345239-12-5	2931.59.90
ML7.b.1.a	Cyclooctyl isopropylphosphonofluoridoate	345239-13-6	2931.59.90
ML7.b.1.a	Cyclooctyl methylphosphonofluoridoate	14719-38-1	2931.59.90
ML7.b.1.a	Cyclooctyl propylphosphonofluoridoate	345239-14-7	2931.59.90
ML7.b.1.a	Cyclopentyl ethylphosphonofluoridoate	345239-06-7	2931.59.90
ML7.b.1.a	Cyclopentyl isopropylphosphonofluoridoate	345239-07-8	2931.59.90
ML7.b.1.a	Cyclopentyl methylphosphonofluoridoate	7284-82-4	2931.59.90
ML7.b.1.a	Cyclopentyl propylphosphonofluoridoate	345239-08-9	2931.59.90
ML7.b.1.a	Cyclopentylmethyl ethylphosphonofluoridate	1353011-72-9	2931.59.90
ML7.b.1.a	Decyl ethylphosphonofluoridoate	333416-08-3	2931.59.90
ML7.b.1.a	Decyl isopropylphosphonofluoridoate	333416-36-7	2931.59.90
ML7.b.1.a	Decyl methylphosphonofluoridoate	193090-25-4	2931.59.90
ML7.b.1.a	Decyl propylphosphonofluoridoate	333416-22-1	2931.59.90
ML7.b.1.a	Ethyl ethylphosphonofluoridoate	650-20-4	2931.59.90

ML7.b.1.a	Ethyl isopropylphosphonofluoridoate	1426-08-0	2931.59.90
ML7.b.1.a	Ethyl methylphosphonofluoridoate	673-97-2	2931.59.90
ML7.b.1.a	Ethyl propylphosphonofluoridoate	333416-15-2	2931.59.90
ML7.b.1.a	Heptyl ethylphosphonofluoridoate	162085-85-0	2931.59.90
ML7.b.1.a	Heptyl isopropylphosphonofluoridoate	333416-33-4	2931.59.90
ML7.b.1.a	Heptyl methylphosphonofluoridoate	62085-82-7	2931.59.90
ML7.b.1.a	Heptyl methylphosphonofluoridoate	162085-82-7	2931.59.90
ML7.b.1.a	Heptyl propylphosphonofluoridoate	333416-19-6	2931.59.90
ML7.b.1.a	Hexyl ethylphosphonofluoridoate	135445-19-1	2931.59.90
ML7.b.1.a	Hexyl isopropylphosphonofluoridoate	333416-32-3	2931.59.90
ML7.b.1.a	Hexyl methylphosphonofluoridoate	113548-89-3	2931.59.90
ML7.b.1.a	Hexyl propylphosphonofluoridoate	333416-18-5	2931.59.90
ML7.b.1.a	Isobutyl ethylphosphonofluoridoate	2261-83-8	2931.59.90
ML7.b.1.a	Isobutyl isopropylphosphonofluoridoate	333416-40-3	2931.59.90
ML7.b.1.a	Isobutyl methylphosphonofluoridoate	2053-81-8	2931.59.90
ML7.b.1.a	Isobutyl propylphosphonofluoridoate	333416-26-5	2931.59.90
ML7.b.1.a	Isopropyl ethylphosphonofluoridoate	1189-87-3	2931.59.90
ML7.b.1.a	Isopropyl isopropylphosphonofluoridoate	665-33-8	2931.59.90
ML7.b.1.a	Isopropyl propylphosphonofluoridoate	18358-37-7	2931.59.90
ML7.b.1.a	Methyl ethylphosphonofluoridoate	665-03-2	2931.59.90
ML7.b.1.a	Methyl isopropylphosphonofluoridoate	648-59-9	2931.59.90
ML7.b.1.a	Methyl methylphosphonofluoridoate	353-88-8	2931.59.90
ML7.b.1.a	Methyl propylphosphonofluoridoate	333416-14-1	2931.59.90
ML7.b.1.a	Nonyl ethylphosphonofluoridoate	171741-07-4	2931.59.90
ML7.b.1.a	Nonyl isopropylphosphonofluoridoate	333416-35-6	2931.59.90
ML7.b.1.a	Nonyl methylphosphonofluoridoate	211192-74-4	2931.59.90
ML7.b.1.a	Nonyl propylphosphonofluoridoate	333416-21-0	2931.59.90
ML7.b.1.a	Octyl ethylphosphonofluoridoate	333416-07-2	2931.59.90
ML7.b.1.a	Octyl isopropylphosphonofluoridoate	333416-34-5	2931.59.90

ML7.b.1.a	Octyl methylphosphonofluoridoate	144313-52-0	2931.59.90
ML7.b.1.a	Octyl propylphosphonofluoridoate	333416-20-9	2931.59.90
ML7.b.1.a	O-Isopropyl methylphosphonofluoridoate; Sarin (GB)	107-44-8	2931.59.90
ML7.b.1.a	O-Pinacolyl methylphosphonofluoridoate; Soman (GD)	96-64-0	2931.59.90
ML7.b.1.a	Pentyl ethylphosphonofluoridoate	162085-84-9	2931.59.90
ML7.b.1.a	Pentyl isopropylphosphonofluoridoate	333416-31-2	2931.59.90
ML7.b.1.a	Pentyl methylphosphonofluoridoate	13454-59-6	2931.59.90
ML7.b.1.a	Pentyl propylphosphonofluoridoate	333416-17-4	2931.59.90
ML7.b.1.a	Propyl ethylphosphonofluoridoate	2992-95-2	2931.59.90
ML7.b.1.a	Propyl isopropylphosphonofluoridoate	333416-29-8	2931.59.90
ML7.b.1.a	Propyl methylphosphonofluoridoate	763-14-4	2931.59.90
ML7.b.1.a	Propyl propylphosphonofluoridoate	18358-36-6	2931.59.90
ML7.b.1.a	sec-Butyl ethylphosphonofluoridoate	162085-83-8	2931.59.90
ML7.b.1.a	sec-Butyl isopropylphosphonofluoridoate	468712-07-4	2931.59.90
ML7.b.1.a	sec-Butyl methylphosphonofluoridoate	352-52-3	2931.59.90
ML7.b.1.a	sec-Butyl propylphosphonofluoridoate	468712-01-8	2931.59.90
ML7.b.1.a	tert-Butyl methylphosphonofluoridoate	13273-12-6	2931.59.90
ML7.b.1.b	1,1,2-Trimethylpropyl N,N-diethylphosphoramidocyanidate	1256572-25-4	2931.49.90
ML7.b.1.b	1,1,2-Trimethylpropyl N,N-diisopropylphosphoramidocyanidate	1256634-75-9	2931.49.90
ML7.b.1.b	1,1,2-Trimethylpropyl N,N-dimethylphosphoramidocyanidate	1256634-77-1	2931.49.90
ML7.b.1.b	1,1,2-Trimethylpropyl N,Ndipropylphosphoramidocyanidate	1253782-51-2	2931.49.90
ML7.b.1.b	1,1,2-Trimethylpropyl N-propyl-N-isopropylphosphoramidocyanidate	1256634-76-0	2931.49.90
ML7.b.1.b	1,2-Dimethylpropyl N,N-diisopropylphosphoramidocyanidate	1256634-86-2	2931.49.90
ML7.b.1.b	1,3-Dimethylbutyl N,N-diisopropylphosphoramidocyanidate	1256572-10-7	2931.49.90
ML7.b.1.b	1-Cyclohexylethyl N,N-diisopropylphosphoramidocyanidate	1256572-20-9	2931.49.90
ML7.b.1.b	1-Ethylbutyl N,N-diisopropylphosphoramidocyanidate	1256634-91-9	2931.49.90
ML7.b.1.b	1-Ethylhexyl N,N-diethylphosphoramidocyanidate	1256572-21-0	2931.49.90
ML7.b.1.b	1-Ethylhexyl N,N-diisopropylphosphoramidocyanidate	1256572-22-1	2931.49.90

ML7.b.1.b	1-Ethylhexyl N,N-dimethylphosphoramidocyanidate	1253782-49-8	2931.49.90
ML7.b.1.b	1-Ethylhexyl N,N-dipropylphosphoramidocyanidate	1256572-24-3	2931.49.90
ML7.b.1.b	1-Ethylhexyl N-isopropyl-N-propylphosphoramidocyanidate	1256572-23-2	2931.49.90
ML7.b.1.b	1-Ethylpentyl N,N-diisopropylphosphoramidocyanidate	1256634-84-0	2931.49.90
ML7.b.1.b	1-Isopropyl-2-methylpentyl N-isopropyl-N-propylphosphoramidocyanidate	1311200-15-3	2931.49.90
ML7.b.1.b	1-Isopropyl-2-methylpropyl N,N-diethylphosphoramidocyanidate	1256634-87-3	2931.49.90
ML7.b.1.b	1-Isopropyl-2-methylpropyl N,N-diisopropylphosphoramidocyanidate	1256634-88-4	2931.49.90
ML7.b.1.b	1-Isopropyl-2-methylpropyl N,N-dimethylphosphoramidocyanidate	1256634-89-5	2931.49.90
ML7.b.1.b	1-Isopropyl-2-methylpropyl N,N-dipropylphosphoramidocyanidate	1256634-90-8	2931.49.90
ML7.b.1.b	1-Isopropyl-2-methylpropyl N-isopropyl-N-propylphosphoramidocyanidate	1252610-36-8	2931.49.90
ML7.b.1.b	1-Methylbutyl N,N-diisopropylphosphoramidocyanidate	1311200-13-1	2931.49.90
ML7.b.1.b	1-Methylheptyl N,N-diisopropylphosphoramidocyanidate	1254103-95-1	2931.49.90
ML7.b.1.b	1-Methylhexyl N,N-dimethylphosphoramidocyanidate	1311200-08-4	2931.49.90
ML7.b.1.b	1-Methylhexyl N-methyl-N-propylphosphoramidocyanidate	1311200-11-9	2931.49.90
ML7.b.1.b	1-Methylnonyl N-methyl-N-propylphosphoramidocyanidate	1311200-10-8	2931.49.90
ML7.b.1.b	1-Methylpentyl N,N-diethylphosphoramidocyanidate	1252610-35-7	2931.49.90
ML7.b.1.b	1-Methylpentyl N,N-dimethylphosphoramidocyanidate	1311200-07-3	2931.49.90
ML7.b.1.b	2,2-Dimethylpropyl N,N-diisopropylphosphoramidocyanidate	1253782-83-0	2931.49.90
ML7.b.1.b	2,2-Dimethylpropyl N-isopropyl-N-propylphosphoramidocyanidate	1253782-84-1	2931.49.90
ML7.b.1.b	2,6-Dimethylcyclohexyl N,N-diethylphosphoramidocyanidate	1256634-80-6	2931.49.90
ML7.b.1.b	2,6-Dimethylcyclohexyl N,N-diisopropylphosphoramidocyanidate	1256634-81-7	2931.49.90
ML7.b.1.b	2,6-Dimethylcyclohexyl N,N-dimethylphosphoramidocyanidate	1256634-83-9	2931.49.90
ML7.b.1.b	2,6-Dimethylcyclohexyl N,N-dipropylphosphoramidocyanidate	1252610-38-0	2931.49.90
ML7.b.1.b	2,6-Dimethylcyclohexyl N-isopropyl-N-propylphosphoramidocyanidate	1256634-82-8	2931.49.90
ML7.b.1.b	2-Cyclohexylethyl diisopropylphosphoramidocyanidoate	959231-14-2	2931.49.90
ML7.b.1.b	2-Cyclohexylethyl dipropylphosphoramidocyanidoate	959304-98-4	2931.49.90

ML7.b.1.b	2-Ethylhexyl N,N-dimethylphosphoramidocyanidate	1311200-06-2	2931.49.90
ML7.b.1.b	2-Methylcyclohexyl N,N-diisopropylphosphoramidocyanidate	1256634-85-1	2931.49.90
ML7.b.1.b	2-Methylpentyl N-ethyl-N-methylphosphoramidocyanidate	1311200-09-5	2931.49.90
ML7.b.1.b	Butyl diethylphosphoramidocyanidoate	870124-31-5	2931.49.90
ML7.b.1.b	Butyl dimethylphosphoramidocyanidoate	162085-87-2	2931.49.90
ML7.b.1.b	Butyl dipropylphosphoramidocyanidate	870124-35-9	2931.49.90
ML7.b.1.b	Butyl ethylmethylphosphoramidocyanidoate	870124-03-1	2931.49.90
ML7.b.1.b	Butyl isopropylmethylphosphoramidocyanidoate	870124-14-4	2931.49.90
ML7.b.1.b	Butyl isopropylpropylphosphoramidocyanidoate	870124-28-0	2931.49.90
ML7.b.1.b	Butyl N,N-diisopropylphosphoramidocyanidate	1253782-71-6	2931.49.90
ML7.b.1.b	Butyl N-ethyl-N-isopropylphosphoramidocyanidate	1256571-96-6	2931.49.90
ML7.b.1.b	Butyl N-ethyl-N-propylphosphoramidocyanidate	1256571-97-7	2931.49.90
ML7.b.1.b	Butyl N-methyl-N-propylphosphoramidocyanidate	1253782-74-9	2931.49.90
ML7.b.1.b	Cycloheptyl diisopropylphosphoramidocyanidoate	959299-72-0	2931.49.90
ML7.b.1.b	Cycloheptyl dipropylphosphoramidocyanidoate	959220-92-9	2931.49.90
ML7.b.1.b	Cycloheptyl N,N-diethylphosphoramidocyanidate	1256634-78-2	2931.49.90
ML7.b.1.b	Cycloheptyl N,N-dimethylphosphoramidocyanidate	1256634-79-3	2931.49.90
ML7.b.1.b	Cyclohexyl N,N-diethylphosphoramidocyanidate	1256572-11-8	2931.49.90
ML7.b.1.b	Cyclohexyl N,N-dimethylphosphoramidocyanidate	1256572-12-9	2931.49.90
ML7.b.1.b	Cyclohexyl N,N-dipropylphosphoramidocyanidate	1256572-13-0	2931.49.90
ML7.b.1.b	Cyclohexyl N-isopropyl-Npropylphosphoramidocyanidate	1253782-35-2	2931.49.90
ML7.b.1.b	Cyclohexylmethyl dipropylphosphoramidocyanidoate	959285-51-9	2931.49.90
ML7.b.1.b	Cyclooctyl diisopropylphosphoramidocyanidoate	959299-70-8	2931.49.90
ML7.b.1.b	Cyclooctyl dipropylphosphoramidocyanidoate	959220-91-8	2931.49.90
ML7.b.1.b	Cyclooctyl N,N-dimethylphosphoramidocyanidate	1256634-94-2	2931.49.90
ML7.b.1.b	Cyclopentyl dipropylphosphoramidocyanidoate	959305-00-1	2931.49.90
ML7.b.1.b	Decyl N,N-diisopropylphosphoramidocyanidate	1256572-18-5	2931.49.90
ML7.b.1.b	Decyl N-isopropyl-N-propylphosphoramidocyanidate	1256572-19-6	2931.49.90
ML7.b.1.b	Ethyl diethylphosphoramidocyanidoate	63815-60-1	2931.49.90

ML7.b.1.b	Ethyl diisopropylphosphoramidocyanidoate	870124-37-1	2931.49.90
ML7.b.1.b	Ethyl dipropylphosphoramidocyanidoate	870124-33-7	2931.49.90
ML7.b.1.b	Ethyl ethylisopropylphosphoramidocyanidoate	870124-22-4	2931.49.90
ML7.b.1.b	Ethyl ethylmethylphosphoramidocyanidoate	870124-00-8	2931.49.90
ML7.b.1.b	Ethyl ethylpropylphosphoramidocyanidoate	870124-17-7	2931.49.90
ML7.b.1.b	Ethyl isopropylmethylphosphoramidocyanidoate	870124-11-1	2931.49.90
ML7.b.1.b	Ethyl isopropylpropylphosphoramidocyanidoate	870124-26-8	2931.49.90
ML7.b.1.b	Ethyl methylpropylphosphoramidocyanidoate	870124-07-5	2931.49.90
ML7.b.1.b	Ethyl N,N-Dimethylphosphoramidocyanidate; Tabun (GA)	77-81-6	2931.49.90
ML7.b.1.b	Ethyl N-isopropyl-N-propylphosphoramidocyanidate	870124-26-8	2931.49.90
ML7.b.1.b	Heptyl diisopropylphosphoramidocyanidoate	959231-41-5	2931.49.90
ML7.b.1.b	Heptyl dimethylphosphoramidocyanidoate	162085-91-8	2931.49.90
ML7.b.1.b	Heptyl dipropylphosphoramidocyanidoate	959304-97-3	2931.49.90
ML7.b.1.b	Heptyl N,N-diethylphosphoramidocyanidate	870124-32-6	2931.49.90
ML7.b.1.b	Hexyl diisopropylphosphoramidocyanidoate	870124-39-3	2931.49.90
ML7.b.1.b	Hexyl dimethylphosphoramidocyanidoate	162085-90-7	2931.49.90
ML7.b.1.b	Hexyl methylpropylphosphoramidocyanidoate	870124-10-0	2931.49.90
ML7.b.1.b	Hexyl N,N-dipropylphosphoramidocyanidate	870124-36-0	2931.49.90
ML7.b.1.b	Hexyl N-ethyl-N-isopropylphosphoramidocyanidate	870124-25-7	2931.49.90
ML7.b.1.b	Hexyl N-ethyl-N-methylphosphoramidocyanidate	870124-06-4	2931.49.90
ML7.b.1.b	Hexyl N-ethyl-N-propylphosphoramidocyanidate	870124-21-3	2931.49.90
ML7.b.1.b	Isobutyl diisopropylphosphoramidocyanidoate	870124-38-2	2931.49.90
ML7.b.1.b	Isobutyl dimethylphosphoramidocyanidoate	162085-88-3	2931.49.90
ML7.b.1.b	Isobutyl ethylisopropylphosphoramidocyanidoate	870124-23-5	2931.49.90
ML7.b.1.b	Isobutyl ethylmethylphosphoramidocyanidoate	870124-04-2	2931.49.90
ML7.b.1.b	Isobutyl ethylpropylphosphoramidocyanidoate	870124-19-9	2931.49.90
ML7.b.1.b	Isobutyl N,N-diethylphosphoramidocyanidate	1253782-85-2	2931.49.90
ML7.b.1.b	Isobutyl N,N-dipropylphosphoramidocyanidate	1281955-89-2	2931.49.90
ML7.b.1.b	Isobutyl N-isopropyl-N-methylphosphoramidocyanidate	1281955-87-0	2931.49.90

ML7.b.1.b	Isobutyl N-isopropyl-N-propylphosphoramidocyanidate	1281955-88-1	2931.49.90
ML7.b.1.b	Isobutyl N-methyl-N-propylphosphoramidocyanidate	1253782-86-3	2931.49.90
ML7.b.1.b	Isopropyl diethylphosphoramidocyanidoate	870124-30-4	2931.49.90
ML7.b.1.b	Isopropyl dimethylphosphoramidocyanidoate	63815-55-4	2931.49.90
ML7.b.1.b	Isopropyl ethylmethylphosphoramidocyanidoate	870124-02-0	2931.49.90
ML7.b.1.b	Isopropyl ethylpropylphosphoramidocyanidoate	870124-18-8	2931.49.90
ML7.b.1.b	Isopropyl isopropylmethylphosphoramidocyanidoate	870124-12-2	2931.49.90
ML7.b.1.b	Isopropyl methylpropylphosphoramidocyanidoate	870124-08-6	2931.49.90
ML7.b.1.b	Isopropyl N,N-diisopropylphosphoramidocyanidate	1252610-37-9	2931.49.90
ML7.b.1.b	Isopropyl N,N-dipropylphosphoramidocyanidate	1256634-93-1	2931.49.90
ML7.b.1.b	Isopropyl N-ethyl-N-isopropylphosphoramidocyanidate	1253782-69-2	2931.49.90
ML7.b.1.b	Isopropyl N-isopropyl-N-propylphosphoramidocyanidate	1256634-92-0	2931.49.90
ML7.b.1.b	Methyl diethylphosphoramidocyanidoate	870124-43-9	2931.49.90
ML7.b.1.b	Methyl diisopropylphosphoramidocyanidoate	870124-47-3	2931.49.90
ML7.b.1.b	Methyl dimethylphosphoramidocyanidoate	63815-56-5	2931.49.90
ML7.b.1.b	Methyl dipropylphosphoramidocyanidoate	870124-46-2	2931.49.90
ML7.b.1.b	Methyl ethylmethylphosphoramidocyanidoate	870124-40-6	2931.49.90
ML7.b.1.b	Methyl ethylpropylphosphoramidocyanidoate	870124-45-1	2931.49.90
ML7.b.1.b	Methyl isopropylmethylphosphoramidocyanidoate	870124-42-8	2931.49.90
ML7.b.1.b	Methyl isopropylpropylphosphoramidocyanidoate	870124-48-4	2931.49.90
ML7.b.1.b	Methyl methylpropylphosphoramidocyanidoate	870124-41-7	2931.49.90
ML7.b.1.b	Methyl N-ethyl-N-isopropylphosphoramidocyanidate	870124-44-0	2931.49.90
ML7.b.1.b	Nonyl N-isopropyl-N-methylphosphoramidocyanidate	1311200-12-0	2931.49.90
ML7.b.1.b	Octyl N,N-diethylphosphoramidocyanidate	1256572-14-1	2931.49.90
ML7.b.1.b	Octyl N,N-diisopropylphosphoramidocyanidate	1256572-15-2	2931.49.90
ML7.b.1.b	Octyl N,N-dimethylphosphoramidocyanidate	1253782-45-4	2931.49.90
ML7.b.1.b	Octyl N,N-dipropylphosphoramidocyanidate	1256572-17-4	2931.49.90
ML7.b.1.b	Octyl N-isopropyl-N-propylphosphoramidocyanidate	1256572-16-3	2931.49.90
ML7.b.1.b	Pentyl diisopropylphosphoramidocyanidate	959231-39-1	2931.49.90

ML7.b.1.b	Pentyl dimethylphosphoramidocyanidoate	148461-87-4	2931.49.90
ML7.b.1.b	Pentyl dipropylphosphoramidocyanidate	959014-75-6	2931.49.90
ML7.b.1.b	Pentyl N-ethyl-N-isopropylphosphoramidocyanidate	870124-24-6	2931.49.90
ML7.b.1.b	Pentyl N-ethyl-N-methylphosphoramidocyanidate	870124-05-3	2931.49.90
ML7.b.1.b	Pentyl N-ethyl-N-propylphosphoramidocyanidate	870124-20-2	2931.49.90
ML7.b.1.b	Pentyl N-isopropyl-N-methylphosphoramidocyanidate	870124-15-5	2931.49.90
ML7.b.1.b	Pinacolyl N,N-dipropylphosphoramidocyanidate	1311200-14-2	2931.49.90
ML7.b.1.b	Propyl diisopropylphosphoramidocyanidoate	959231-16-4	2931.49.90
ML7.b.1.b	Propyl dimethylphosphoramidocyanidoate	162085-86-1	2931.49.90
ML7.b.1.b	Propyl dipropylphosphoramidocyanidoate	870124-34-8	2931.49.90
ML7.b.1.b	Propyl ethylmethylphosphoramidocyanidoate	870124-01-9	2931.49.90
ML7.b.1.b	Propyl isopropylmethylphosphoramidocyanidoate	870124-13-3	2931.49.90
ML7.b.1.b	Propyl isopropylpropylphosphoramidocyanidoate	870124-27-9	2931.49.90
ML7.b.1.b	Propyl N,N-diethylphosphoramidocyanidate	1256571-92-2	2931.49.90
ML7.b.1.b	Propyl N-ethyl-N-isopropylphosphoramidocyanidate	1256571-93-3	2931.49.90
ML7.b.1.b	Propyl N-ethyl-N-propylphosphoramidocyanidate	1256571-94-4	2931.49.90
ML7.b.1.b	Propyl N-isopropyl-N-propylphosphoramidocyanidate	870124-27-9	2931.49.90
ML7.b.1.b	Propyl N-methyl-N-propylphosphoramidocyanidate	1256571-95-5	2931.49.90
ML7.b.1.b	sec-Butyl dimethylphosphoramidocyanidoate	162085-89-4	2931.49.90
ML7.b.1.b	sec-Butyl methylpropylphosphoramidocyanidoate	870124-09-7	2931.49.90
ML7.b.1.b	sec-Butyl N,N-diethylphosphoramidocyanidate	1281955-92-7	2931.49.90
ML7.b.1.b	sec-Butyl N,N-diisopropylphosphoramidocyanidate	1281955-95-0	2931.49.90
ML7.b.1.b	sec-Butyl N,N-dipropylphosphoramidocyanidate	1281955-98-3	2931.49.90
ML7.b.1.b	sec-Butyl N-ethyl-N-isopropylphosphoramidocyanidate	1281955-93-8	2931.49.90
ML7.b.1.b	sec-Butyl N-ethyl-N-methylphosphoramidocyanidate	1281955-94-9	2931.49.90
ML7.b.1.b	sec-Butyl N-isopropyl-N-methylphosphoramidocyanidate	1281955-96-1	2931.49.90
ML7.b.1.b	sec-Butyl N-isopropyl-N-propylphosphoramidocyanidate	1281955-97-2	2931.49.90
ML7.b.1.c	(R)-2-[[Isopropoxy(methyl)phosphoryl]thio]-N,N,N-trimethylethanaminium iodide	26348-71-0	2930.90.98

ML7.b.1.c	(R)-Cyclohexyl S-2-dimethylaminoethyl methylphosphonothiolate	1220982-69-3	2930.90.98
ML7.b.1.c	(R)-Cyclopentyl S-2-diisopropylaminoethyl methylphosphonothioate	102490-57-3	2930.90.98
ML7.b.1.c	(R)-Ethyl S-2-diethylaminoethyl ethylphosphonothiolate	1187548-77-1	2930.90.98
ML7.b.1.c	(R)-Ethyl S-2-diethylaminoethyl methylphosphonothiolate	1187548-81-7	2930.90.98
ML7.b.1.c	(R)-O-Ethyl S-[2-(diisopropylamino)ethyl] methylphosphonothioate	65167-63-7	2930.90.98
ML7.b.1.c	(S)-Cyclohexyl S-2-dimethylaminoethyl methylphosphonothiolate	1186330-22-2	2930.90.98
ML7.b.1.c	(S)-Cyclopentyl S-2-diisopropylaminoethyl methylphosphonothioate	102490-59-5	2930.90.98
ML7.b.1.c	(S)-Ethyl S-2-diethylaminoethyl ethylphosphonothiolate	1187548-79-3	2930.90.98
ML7.b.1.c	(S)-Ethyl S-2-diethylaminoethyl methylphosphonothiolate	1187548-82-8	2930.90.98
ML7.b.1.c	(S)-O-Ethyl S-[2-(diisopropylamino)ethyl] methylphosphonothioate	65167-64-8	2930.90.98
ML7.b.1.c	[P(S)]-O-cyclopentyl S-[2-(dimethylamino)ethyl] methylphosphonothioate	22925-95-7	2930.90.98
ML7.b.1.c	1,2,2-Trimethylpropyl S-2-diethylaminoethyl methylphosphonothioate	468712-13-2	2930.90.98
ML7.b.1.c	1,2,2-Trimethylpropyl S-2-diisopropylaminoethyl methylphosphonothioate	198830-38-5	2930.90.98
ML7.b.1.c	1,2-Dimethylbutyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253739-43-3	2930.90.98
ML7.b.1.c	1-Ethylpropyl S-2-diisopropylaminoethyl propylphosphonothioate	958997-65-4	2930.90.98
ML7.b.1.c	1-Ethylpropyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253739-92-2	2930.90.98
ML7.b.1.c	1-Methylpentyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253739-96-6	2930.90.98
ML7.b.1.c	1-Methylpentyl S-2-dimethylaminoethyl methylphosphonothioate	79351-19-2	2930.90.98
ML7.b.1.c	1-Methylpentyl S-2-dipropylaminoethyl methylphosphonothiolate	1253740-08-7	2930.90.98
ML7.b.1.c	2-(((3,3-dimethylbutan-2-yl)oxy)(methyl)phosphoryl)sulfanyl) - N,N,N-trimethylethanaminium	38770-03-5	2930.90.98
ML7.b.1.c	2,2-Dimethylpropyl S-2-diethylaminoethyl ethylphosphonothiolate	1253766-83-4	2930.90.98
ML7.b.1.c	2,2-Dimethylpropyl S-2-diisopropylaminoethyl ethylphosphonothiolate	1253767-73-5	2930.90.98

ML7.b.1.c	2,2-Dimethylpropyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253768-73-8	2930.90.98
ML7.b.1.c	2,2-Dimethylpropyl S-2-dimethylaminoethyl methylphosphonothioate	56217-66-4	2930.90.98
ML7.b.1.c	2-[[Ethoxymethylphosphoryl]thio]-N,N,N-trimethylethanaminium iodide	2478-92-4	2930.90.98
ML7.b.1.c	2-[[Ethoxy(ethyl)phosphoryl]thio]-N,N,N-triethylethanaminium iodide	24578-82-3	2930.90.98
ML7.b.1.c	2-[[Ethoxy(ethyl)phosphoryl]thio]-N,N,N-trimethylethanaminium iodide	220718-05-8	2930.90.98
ML7.b.1.c	2-[[Ethoxy(methyl)phosphoryl]thio]-N,N,N-trimethylethanaminium	56217-67-5	2930.90.98
ML7.b.1.c	2-[[Ethoxy(methyl)phosphoryl]thio]-N,N-diethyl-N-methylethanaminium iodide	220718-02-5	2930.90.98
ML7.b.1.c	2-[[Ethyl(isopropoxy)phosphoryl]thio]-N,N,N-trimethylethanaminium iodide	220718-06-9	2930.90.98
ML7.b.1.c	2-[[Isopropoxy(methyl)phosphoryl]thio]-N,N,N-trimethylethanaminium	56217-69-7	2930.90.98
ML7.b.1.c	2-[[Isopropoxy(methyl)phosphoryl]thio]-N,N,N-trimethylethanaminium iodide	1866-98-4	2930.90.98
ML7.b.1.c	2-Methylbutyl S-2-dipropylaminoethyl ethylphosphonothiolate	1253735-81-7	2930.90.98
ML7.b.1.c	2-Methylbutyl S-2-dipropylaminoethyl methylphosphonothiolate	1253735-83-9	2930.90.98
ML7.b.1.c	2-Methylcyclopentyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253736-58-1	2930.90.98
ML7.b.1.c	2-Methylcyclopentyl S-2-dimethylaminoethyl methylphosphonothiolate	1253736-59-2	2930.90.98
ML7.b.1.c	2-Methylpentyl S-2-diethylaminoethyl ethylphosphonothioate	959288-71-2	2930.90.98
ML7.b.1.c	2-Methylpentyl S-2-diethylaminoethyl methylphosphonothioate	468712-14-3	2930.90.98
ML7.b.1.c	3,3-Dimethylbutyl S-2-dimethylaminoethyl methylphosphonothioate	34388-36-8	2930.90.98
ML7.b.1.c	3,5,5-Trimethylhexyl S-2-diisopropylaminoethyl propylphosphonothioate	959257-18-2	2930.90.98
ML7.b.1.c	3,5,5-Trimethylhexyl S-2-dimethylaminoethyl propylphosphonothioate	959250-22-7	2930.90.98
ML7.b.1.c	3-Methylbutyl S-2-diethylaminoethyl methylphosphonothioate	468712-12-1	2930.90.98
ML7.b.1.c	3-Methylbutyl S-2-dipropylaminoethyl ethylphosphonothiolate	1253735-73-7	2930.90.98
ML7.b.1.c	3-Methylbutyl S-2-dipropylaminoethyl methylphosphonothiolate	1253735-78-2	2930.90.98
ML7.b.1.c	4-Methylpentyl S-2-diisopropylaminoethyl	959054-90-1	2930.90.98

	propylphosphonothioate		
ML7.b.1.c	4-Methylpentyl S-2-dimethylaminoethyl propylphosphonothioate	959259-06-4	2930.90.98
ML7.b.1.c	Butyl S-2-diethylaminoethyl ethylphosphonothioate	468712-20-1	2930.90.98
ML7.b.1.c	Butyl S-2-diethylaminoethyl isopropylphosphonothioate	468712-46-1	2930.90.98
ML7.b.1.c	Butyl S-2-diethylaminoethyl methylphosphonothioate	468712-10-9	2930.90.98
ML7.b.1.c	Butyl S-2-diethylaminoethyl propylphosphonothioate	468712-35-8	2930.90.98
ML7.b.1.c	Butyl S-2-diisopropylaminoethyl ethylphosphonothiolate	1253757-48-0	2930.90.98
ML7.b.1.c	Butyl S-2-diisopropylaminoethyl isopropylphosphonothioate	958995-46-5	2930.90.98
ML7.b.1.c	Butyl S-2-diisopropylaminoethyl methylphosphonothioate	52364-46-2	2930.90.98
ML7.b.1.c	Butyl S-2-diisopropylaminoethyl propylphosphonothioate	959111-24-1	2930.90.98
ML7.b.1.c	Butyl S-2-dimethylaminoethyl methylphosphonothioate	56217-63-1	2930.90.98
ML7.b.1.c	Butyl S-2-dipropylaminoethyl methylphosphonothiolate	1253759-45-3	2930.90.98
ML7.b.1.c	Cyclohexyl S-2-diethylaminoethyl ethylphosphonothioate	959020-04-3	2930.90.98
ML7.b.1.c	Cyclohexyl S-2-diethylaminoethyl methylphosphonothioate	71293-89-5	2930.90.98
ML7.b.1.c	Cyclohexyl S-2-dimethylaminoethyl methylphosphonothioate	69795-06-8	2930.90.98
ML7.b.1.c	Cyclohexylmethyl S-2-diisopropylaminoethyl isopropylphosphonothioate	959233-60-4	2930.90.98
ML7.b.1.c	Cyclohexylmethyl S-2-diisopropylaminoethyl propylphosphonothioate	959268-47-4	2930.90.98
ML7.b.1.c	Cyclohexylmethyl S-2-dimethylaminoethyl propylphosphonothioate	959104-17-7	2930.90.98
ML7.b.1.c	Cyclooctyl S-2-dimethylaminoethyl propylphosphonothioate	959010-50-5	2930.90.98
ML7.b.1.c	Cyclopentyl S-2-diethylaminoethyl ethylphosphonothioate	468712-24-5	2930.90.98
ML7.b.1.c	Cyclopentyl S-2-diethylaminoethyl methylphosphonothioate	93240-66-5	2930.90.98
ML7.b.1.c	Cyclopentyl S-2-diisopropylaminoethyl methylphosphonothioate	85473-33-2	2930.90.98
ML7.b.1.c	Cyclopentyl S-2-dimethylaminoethyl methylphosphonothioate	22925-98-0	2930.90.98
ML7.b.1.c	Decyl S-2-diethylaminoethyl ethylphosphonothioate	468712-33-6	2930.90.98
ML7.b.1.c	Decyl S-2-diethylaminoethyl methylphosphonothioate	959288-69-8	2930.90.98
ML7.b.1.c	Decyl S-2-dimethylaminoethyl methylphosphonothiolate	1253735-72-6	2930.90.98
ML7.b.1.c	Ethyl S-2-diethylaminoethyl ethylphosphonothioate	21738-25-0	2930.90.98
ML7.b.1.c	Ethyl S-2-diethylaminoethyl ethylphosphonothioate oxalate	108302-04-1	2930.90.98

ML7.b.1.c	Ethyl S-2-diethylaminoethyl isopropylphosphonothioate	99991-06-7	2930.90.98
ML7.b.1.c	Ethyl S-2-diethylaminoethyl methylphosphonothioate	21770-86-5	2930.90.98
ML7.b.1.c	Ethyl S-2-diethylaminoethyl propylphosphonothioate	99991-07-8	2930.90.98
ML7.b.1.c	Ethyl S-2-diisopropylaminoethyl ethylphosphonothioate	73835-17-3	2930.90.98
ML7.b.1.c	Ethyl S-2-diisopropylaminoethyl propylphosphonothioate	218964-60-4	2930.90.98
ML7.b.1.c	Ethyl S-2-diisopropylammoniummethyl methylphosphonothiolate chloride	1253746-35-8	2930.90.98
ML7.b.1.c	Ethyl S-2-diisopropylmethylammoniummethyl ethylphosphonothiolate iodide	1253742-77-6	2930.90.98
ML7.b.1.c	Ethyl S-2-dimethylaminoethyl ethylphosphonothioate	98543-25-0	2930.90.98
ML7.b.1.c	Ethyl S-2-dimethylaminoethyl isopropylphosphonothiolate	1253744-32-9	2930.90.98
ML7.b.1.c	Ethyl S-2-dimethylaminoethyl propylphosphonothioate	218964-59-1	2930.90.98
ML7.b.1.c	Ethyl S-2-dipropylaminoethyl methylphosphonothioate	62512-68-9	2930.90.98
ML7.b.1.c	Heptyl S-2-diethylaminoethyl ethylphosphonothioate	468712-29-0	2930.90.98
ML7.b.1.c	Heptyl S-2-diethylaminoethylmethylphosphonothioate	468712-17-6	2930.90.98
ML7.b.1.c	Heptyl S-2-diisopropylaminoethyl isopropylphosphonothioate	959233-58-0	2930.90.98
ML7.b.1.c	Hexyl S-2-diethylaminoethyl ethylphosphonothioate	468712-25-6	2930.90.98
ML7.b.1.c	Hexyl S-2-diethylaminoethyl methylphosphonothioate	468712-15-4	2930.90.98
ML7.b.1.c	Hexyl S-2-diisopropylaminoethyl methylphosphonothioate	82721-31-1	2930.90.98
ML7.b.1.c	Hexyl S-2-dimethylaminoethyl methylphosphonothioate	69777-00-0	2930.90.98
ML7.b.1.c	Isobutyl S-2-diethylaminoethyl ethylphosphonothioate	468712-21-2	2930.90.98
ML7.b.1.c	Isobutyl S-2-diethylaminoethyl isopropylphosphonothioate	468712-47-2	2930.90.98
ML7.b.1.c	Isobutyl S-2-diethylaminoethyl methylphosphonothioate	159939-87-4	2930.90.98
ML7.b.1.c	Isobutyl S-2-diethylaminoethyl propylphosphonothioate	468712-36-9	2930.90.98
ML7.b.1.c	Isobutyl S-2-diisopropylaminoethyl methylphosphonothioate	855307-83-4	2930.90.98
ML7.b.1.c	Isobutyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253771-21-9	2930.90.98
ML7.b.1.c	Isobutyl S-2-dimethylaminoethyl methylphosphonothioate	56217-65-3	2930.90.98
ML7.b.1.c	Isobutyl S-2-dipropylaminoethyl methylphosphonothiolate	1253772-23-4	2930.90.98
ML7.b.1.c	Isopentyl S-2-diethylaminoethyl ethylphosphonothioate	468712-23-4	2930.90.98
ML7.b.1.c	Isopropyl S-2-diethylaminoethyl ethylphosphonothioate	162085-93-0	2930.90.98
ML7.b.1.c	Isopropyl S-2-diethylaminoethyl methylphosphonothioate	91134-95-1	2930.90.98

ML7.b.1.c	Isopropyl S-2-diethylaminoethyl propylphosphonothioate	468712-34-7	2930.90.98
ML7.b.1.c	Isopropyl S-2-diethylpropylammoniumethyl ethylphosphonothiolate iodide	1253752-57-6	2930.90.98
ML7.b.1.c	Isopropyl S-2-diisopropylaminoethyl ethylphosphonothioate	162085-95-2	2930.90.98
ML7.b.1.c	Isopropyl S-2-diisopropylaminoethyl isopropylphosphonothioate	959289-50-0	2930.90.98
ML7.b.1.c	Isopropyl S-2-diisopropylaminoethyl methylphosphonothioate	51446-23-2	2930.90.98
ML7.b.1.c	Isopropyl S-2-dimethylaminoethyl (R)-methylphosphonothioate	13915-99-6	2930.90.98
ML7.b.1.c	Isopropyl S-2-dimethylaminoethyl (S)-methylphosphonothioate	13915-98-5	2930.90.98
ML7.b.1.c	Isopropyl S-2-dimethylaminoethyl ethylphosphonothioate	162085-92-9	2930.90.98
ML7.b.1.c	Isopropyl S-2-dimethylaminoethyl methylphosphonothioate	21068-52-0	2930.90.98
ML7.b.1.c	Isopropyl S-2-dimethylpropylammoniumethyl ethylphosphonothiolate iodide	1253753-51-3	2930.90.98
ML7.b.1.c	Methyl S-2-diethylaminoethyl ethylphosphonothioate	170800-77-8	2930.90.98
ML7.b.1.c	Methyl S-2-diethylaminoethyl methylphosphonothioate	203385-78-8	2930.90.98
ML7.b.1.c	Methyl S-2-diisopropylaminoethyl ethylphosphonothioate	162085-94-1	2930.90.98
ML7.b.1.c	Methyl S-2-diisopropylaminoethyl methylphosphonothioate	198830-32-9	2930.90.98
ML7.b.1.c	Methyl S-2-dimethylaminoethyl ethylphosphonothioate	468712-18-7	2930.90.98
ML7.b.1.c	Methyl S-2-dimethylaminoethyl methylphosphonothioate	108490-92-2	2930.90.98
ML7.b.1.c	N-(2-[[Ethoxy(methyl)phosphoryl]thio]ethyl)-N-isopropyl-N-methylpropan-2-aminium iodide	220718-03-6	2930.90.98
ML7.b.1.c	N,N-Diethyl-2-[[cyclohexyloxy)methylphosphoryl]thio]-N-methylethanaminium iodide	132412-52-3	2930.90.98
ML7.b.1.c	Nonyl S-2-diethylaminoethyl ethylphosphonothioate	468712-32-5	2930.90.98
ML7.b.1.c	Nonyl S-2-dipropylaminoethyl ethylphosphonothiolate	1253735-84-0	2930.90.98
ML7.b.1.c	Nonyl S-2-dipropylaminoethyl methylphosphonothiolate	1253736-10-5	2930.90.98
ML7.b.1.c	Octyl S-2-diethylaminoethyl ethylphosphonothioate	468712-30-3	2930.90.98
ML7.b.1.c	Octyl S-2-dimethylaminoethyl propylphosphonothioate	959010-49-2	2930.90.98
ML7.b.1.c	O-Ethyl-diisopropylaminoethyl methyl phosphonothiolate; VX	50782-69-9	2930.90.98
ML7.b.1.c	O-sec-butyl S-[2-(dimethylamino)ethyl] ethylphosphonothioate oxalate	50929-97-0	2930.90.98
ML7.b.1.c	Pentyl S-2-diethylaminoethyl ethylphosphonothiolate	1253761-22-6	2930.90.98
ML7.b.1.c	Pentyl S-2-diethylaminoethyl methylphosphonothiolate	1253764-67-8	2930.90.98

ML7.b.1.c	Pentyl S-2-diisopropylaminoethyl methylphosphonothioate	198830-36-3	2930.90.98
ML7.b.1.c	Pentyl S-2-dimethylaminoethyl ethylphosphonothiolate	1253762-74-1	2930.90.98
ML7.b.1.c	Pentyl S-2-dimethylaminoethyl methylphosphonothioate	56217-64-2	2930.90.98
ML7.b.1.c	Pentyl S-2-dipropylaminoethyl ethylphosphonothiolate	1253763-58-4	2930.90.98
ML7.b.1.c	Pentyl S-2-dipropylaminoethyl methylphosphonothiolate	1253765-64-8	2930.90.98
ML7.b.1.c	Phosphonothioic acid, P-methyl-, S-[2-[bis(1-methylethyl)amino]ethyl] O-ethyl ester	50782-69-9	2930.90.98
ML7.b.1.c	Propyl S-2-diethylaminoethyl ethylphosphonothioate	468712-19-8	2930.90.98
ML7.b.1.c	Propyl S-2-diethylaminoethyl propylphosphonothioate	959288-70-1	2930.90.98
ML7.b.1.c	Propyl S-2-diisopropylaminoethyl ethylphosphonothiolate	1253755-29-1	2930.90.98
ML7.b.1.c	Propyl S-2-diisopropylaminoethyl methylphosphonothioate	52364-45-1	2930.90.98
ML7.b.1.c	Propyl S-2-diisopropylaminoethyl propylphosphonothioate	958997-62-1	2930.90.98
ML7.b.1.c	Propyl S-2-dimethylaminoethyl methylphosphonothioate	56217-62-0	2930.90.98
ML7.b.1.c	Propyl S-2-dimethylaminoethyl propylphosphonothioate	959259-05-3	2930.90.98
ML7.b.1.c	Propyl S-2-dipropylaminoethyl methylphosphonothiolate	1253756-54-5	2930.90.98
ML7.b.1.c	Propyl S-2-dipropylaminoethyl propylphosphonothioate	959233-79-5	2930.90.98
ML7.b.1.c	S-(2-([2-(dimethylamino)ethyl]sulfanyl)ethyl) hydrogen methylphosphonothioate	170082-85-6	2930.90.98
ML7.b.1.c	S-[2-(diethylamino)ethyl] O-ethyl methylphosphonothioate 4-methylbenzenesulfonate	107059-49-4	2930.90.98
ML7.b.1.c	S-[2-(diethylamino)ethyl] O-ethyl methylphosphonothioate oxalate	108776-13-2	2930.90.98
ML7.b.1.c	S-[2-(Dimethylamino)ethyl] O-ethyl methylphosphonothioate	20820-80-8	2930.90.98
ML7.b.1.c	S-[2-(dimethylamino)ethyl] O-ethyl methylphosphonothioate oxalate	2641-09-0	2930.90.98
ML7.b.1.c	S-[2-(dimethylamino)ethyl] O-isopropyl methylphosphonothioate oxalate	2478-93-5	2930.90.98
ML7.b.1.c	S-2 Diethylaminoethyl ethylphosphonothioate	161935-18-8	2930.90.98
ML7.b.1.c	S-2 Diisopropylaminoethyl ethylphosphonothioate	161935-16-6	2930.90.98
ML7.b.1.c	S-2-Diethylaminoethyl methylphosphonothioate	21068-51-9	2930.90.98
ML7.b.1.c	S-2-Diisopropylaminoethyl methylphosphonothioate	73207-98-4	2930.90.98
ML7.b.1.c	S-2-Dimethylaminoethyl ethylphosphonothiolate	1253735-44-2	2930.90.98
ML7.b.1.c	S-2-Dimethylaminoethyl methylphosphonothioate	34256-71-8	2930.90.98

ML7.b.1.c	S-2-Dimethylaminoethyl propylphosphonothioate	1253735-61-3	2930.90.98
ML7.b.1.c	S-2-Dipropylaminoethyl methylphosphonothioate	30102-97-7	2930.90.98
ML7.b.1.c	sec-Butyl S-2-diethylaminoethyl ethylphosphonothioate	468712-22-3	2930.90.98
ML7.b.1.c	sec-Butyl S-2-diethylaminoethyl isopropylphosphonothioate	468712-48-3	2930.90.98
ML7.b.1.c	sec-Butyl S-2-diethylaminoethyl methylphosphonothioate	468712-11-0	2930.90.98
ML7.b.1.c	sec-Butyl S-2-diethylaminoethyl propylphosphonothioate	468712-37-0	2930.90.98
ML7.b.1.c	sec-Butyl S-2-diisopropylaminoethyl isopropylphosphonothioate	959040-29-0	2930.90.98
ML7.b.1.c	sec-Butyl S-2-diisopropylaminoethyl methylphosphonothioate	1253773-82-8	2930.90.98
ML7.b.1.c	sec-Butyl S-2-diisopropylaminoethyl propylphosphonothioate	959257-17-1	2930.90.98
ML7.b.1.c	sec-Butyl S-2-dimethylaminoethyl ethylphosphonothioate	50929-96-9	2930.90.98
ML7.b.1.c	tert-Butyl S-2-diethylaminoethyl methylphosphonothioate	288578-18-7	2930.90.98
ML7.b.2.a.1	2-Chloroethylchloromethylsulphide; sulphur mustard	2625-76-5	2930.90.98
ML7.b.2.a.2	Bis (2-chloroethyl) sulphide; sulphur mustard	505-60-2	2930.90.98
ML7.b.2.a.3	Bis (2-chloroethylthio) methane; sulphur mustard	63869-13-6	2930.90.98
ML7.b.2.a.4	1,2-Bis (2-chloroethylthio)ethane; sulphur mustard	3563-36-8	2930.90.98
ML7.b.2.a.5	1,3-Bis (2-chloroethylthio)-n-propane; sulphur mustard	63905-10-2	2930.90.98
ML7.b.2.a.6	1,4-Bis (2-chloroethylthio)-n-butane; sulphur mustard	142868-93-7	2930.90.98
ML7.b.2.a.7	1,5-Bis (2-chloroethylthio)-n-pentane; sulphur mustard	142868-94-8	2930.90.98
ML7.b.2.a.8	Bis (2-chloroethylthiomethyl) ether; sulphur mustard	63918-90-1	2930.90.98
ML7.b.2.a.9	Bis (2-chloroethylthioethyl) ether; sulphur mustard	63918-89-8	2930.90.98
ML7.b.2.b.1	2-Chlorovinylchloroarsine; Lewisite 1	541-25-3	2931.90.00
ML7.b.2.b.2	Tris (2-chlorovinyl) arsine; Lewisite 2	40334-70-1	2931.90.00
ML7.b.2.b.3	Bis (2-chlorovinyl) chloroarsine; Lewisite 3	40334-69-8	2931.90.00
ML7.b.2.c.1	Bis(2-chloroethyl)ethylamine; HN1	538-07-8	2921.19.99
ML7.b.2.c.2	Bis-(2-chloroethyl) methylamine; HN2	51-75-2	2921.19.99
ML7.b.2.c.3	Tris-(2-chloroethyl) amine; HN3	555-77-1	2921.19.99
ML7.b.3.a	3-Quinuclidinyl benzilate; BZ	6581-06-2	2933.39.99
ML7.b.4.a	Butyl 2-chloro-4-fluorophenoxyacetate; LNF	N/A	2918.29.00
ML7.b.4.b	Agent Orange	39277-47-9	3808.59.00
ML7.c.1	Isopropylphosphonic difluoride	677-42-9	2931.59.90

ML7.c.1	Methyphosphonyl difluoride; DF	676-99-3	2931.59.10
ML7.c.1	Propylphosphonic difluoride	690-14-2	2931.59.90
ML7.c.1	Ethylphosphonyl difluoride	753-98-0	2931.59.90
ML7.c.2	Butyl 2-diethylaminoethyl methylphosphonite	169662-68-4	2931.49.90
ML7.c.2	Cyclopentyl 2-diisopropylaminoethyl methylphosphonite	1282026-51-0	2931.49.90
ML7.c.2	Ethyl 2-diethylaminoethyl methylphosphonite	55523-55-2	2931.49.90
ML7.c.2	O-Ethyl O-2-diisopropylaminoethyl methylphosphonite; QL	57856-11-8	2931.49.90
ML7.c.3	Chlorosarin	1445-76-7	2931.59.90
ML7.c.4	3-[chloro(methyl)phosphoryl]oxy-2,2-dimethylbutane; Chlorosoman	7040-57-5	2931.59.90
ML7.d.1	α -Bromobenzeneacetonitrile; CA	5798-79-8	2926.90.70
ML7.d.2	[(2-Chlorophenyl) methylene] propanedinitrile; CS	2698-41-1	2926.90.70
ML7.d.3	2-Chloro-1-phenylethanone; CN	532-27-4	2914.79.00
ML7.d.4	Dibenzo-(b,f)-1,4-oxazepine; CR	257-07-8	2934.99.90
ML7.d.5	10-chloro-5,10-dihydrophenarsazine; DM	578-94-9	2934.99.90
ML7.d.6	N-Nonanoylmorpholine; MPA	5299-64-9	2934.99.90
ML8.a.1	7-amino-4,6-dinitrobenzofurazane-1-oxid; ADNBF	97096-78-1	2934.99.90
ML8.a.2	Cis-bis (5-nitrotetrazolato) tetra amine-cobalt (III) perchlorate; BNCP	117412-28-9	2933.99.80
ML8.a.3	5,7-diamino-4,6-dinitrobenzofurazane-1-oxide; CL-14	117907-74-1	2934.99.90
ML8.a.4	Hexanitrohexaazaisowurtzitane; CL-20 or HNIW	135285-90-4	2933.99.80
ML8.a.5	2-(5-cyanotetrazolato) penta amine-cobalt (III) perchlorate; CP	70247-32-4	2933.99.80
ML8.a.6	1,1-diamino-2,2-dinitroethylene; DADE	145250-81-3	2921.29.00
ML8.a.7	Diaminotrinitrobenzene; DATB	1630-08-6	2921.51.19
ML8.a.8	1,4-dinitrodifurazanopiperazine; DDFP	N/A	2934.99.90
ML8.a.9	2,6-diamino-3,5-dinitropyrazine-1-oxide; DDPO	194486-77-6	2933.99.80
ML8.a.10	3,3'-diamino-2,2',4,4',6,6'-hexanitrobiphenyl; DIPAM	17215-44-0	2921.59.90
ML8.a.11	Dinitroglycoluril; DNGU or DINGU	55510-04-8	2933.99.80
ML8.a.12.a	Diaminoazoxyfurazan; DAAOF	78644-89-0	2934.99.90
ML8.a.12.b	Diaminoazofurazan; DAAZF	78644-90-3	2934.99.90
ML8.a.13.a	Cyclotetramethylenetetranitramine; HMX or octogen	2691-41-0	2933.99.80

ML8.a.13.c	2,4,6,8-tetranitro-2,4,6,8-tetraazabicyclo [3,3,0]-octanone-3; K-55	130256-72-3	2933.99.80
ML8.a.14	Hexanitroadamantane; HNAD	143850-71-9	2904.20.00
ML8.a.15	Hexanitrostilbene; HNS	20062-22-0	2904.20.00
ML8.a.16.a	Octahydro-2,5-bis(nitroimino)imidazo [4,5-d]imidazole; BNII	N/A	2933.99.80
ML8.a.16.b	2,4-dinitroimidazole; DNI	5213-49-0	2933.29.90
ML8.a.16.c	1-fluoro-2,4-dinitroimidazole; FDIA	N/A	2933.29.90
ML8.a.16.d	N-(2-nitrotriazolo)-2,4-dinitroimidazole; NTDNIA	N/A	2933.29.90
ML8.a.16.e	1-picryl-2,4,5-trinitroimidazole; PTIA	N/A	2933.29.90
ML8.a.17	1-(2-nitrotriazolo)-2-dinitromethylene hydrazine; NTNMH	N/A	2928.00.90
ML8.a.18	3-nitro-1,2,4-triazol-5-one; NTO or ONTA	932-64-9	2933.99.80
ML8.a.19	Polynitrocubanes	N/A	2902.19.00
ML8.a.20	2,6-Bis(picrylamino)-3,5-dinitropyridine; PYX	38082-89-2	2933.39.99
ML8.a.21.a	Cyclotrimethylenetrinitramine; RDX	121-82-4	2933.69.10
ML8.a.21.b	2,4,6-trinitro-2,4,6-triazacyclohexanone; Keto-RDX or K-6	115029-35-1	2933.69.80
ML8.a.22	Triaminoguanidinenitrate; TAGN	4000-16-2	2928.00.90
ML8.a.23	Triaminotrinitrobenzene; TATB	3058-38-6	2921.59.90
ML8.a.24	3,3,7,7-tetrakis(difluoroamine) octahydro-1,5-dinitro-1,5-diazocine; TEDDZ	N/A	2933.99.80
ML8.a.25.a	Nitrotriazol aminotetrazole; NTAT	N/A	2933.99.80
ML8.a.25.b	1-N-(2-nitrotriazolo)-4-nitrotetrazole; NTNT	N/A	2933.99.80
ML8.a.26	Trinitrophenylmethylnitramine; Tetryl	479-45-8	2929.90.00
ML8.a.27	1,4,5,8-tetranitro-1,4,5,8-tetraazadecalin; TNAD	135877-16-6	2933.99.80
ML8.a.28	1,3,3-trinitroazetidine; TNAZ	97645-24-4	2933.99.80
ML8.a.29	Tetranitroglycoluril; TNGU or SORGUYL	55510-03-7	2933.99.80
ML8.a.30	1,4,5,8-tetranitro-pyridazino[4,5-d]pyridazine; TNP	229176-04-9	2933.99.80
ML8.a.31.a	2-oxy-4,6-dinitroamino-s-triazine; DNAM	19899-80-0	2933.69.80
ML8.a.31.b	2-nitroimino-5-nitro-hexahydro-1,3,5-triazine; NNHT	130400-13-4	2933.69.80
ML8.a.32.a	5-Azido-2-nitrotriazole	53566-50-0	2933.99.80
ML8.a.32.b	4-amino-3,5-dihydrazino-1,2,4-triazole dinitramide; ADHTDN	1614-08-0	2933.99.80
ML8.a.32.c	1-amino-3,5-dinitro-1,2,4-triazole; ADNT	N/A	2933.99.80

ML8.a.32.d	[bis-dinitrotriazole]amine; BDNTA	N/A	2933.99.80
ML8.a.32.e	3,3'-dinitro-5,5-bi-1,2,4-triazole; DBT	30003-46-4	2933.99.80
ML8.a.32.f	Dinitrobistriazole; DNBT	70890-46-9	2933.99.80
ML8.a.32.h	1-N-(2-nitrotriazolo) 3,5-dinitrotriazole; NTDNT	N/A	2933.99.80
ML8.a.32.i	1-picryl-3,5-dinitrotriazole; PDNT	N/A	2933.99.80
ML8.a.32.j	Tetranitrobenzotriazolobenzotriazole; TACOT	25243-36-1	2933.99.80
ML8.a.35	2,4-dinitroanisole; DNAN	119-27-7	2909.30.90
ML8.a.36	4,10-Dinitro-2,6,8,12-tetraoxa-4,10-diazaisowurtzitane; TEX	N/A	2934.99.90
ML8.a.37	Guanylurea dinitramide; GUDN	217464-38-5	2925.29.00
ML8.a.38.a	Bis(2,2,2-trinitroethyl)-3,6-diaminotetrazine; BTAT	N/A	2933.99.80
ML8.a.38.b	3,6-diamino-1,2,4,5-tetrazine-1,4-dioxide; LAX-112	153757-93-8	2933.99.80
ML8.a.40	Bis(2,2,2-trinitroethyl)-nitramine; BTNEN	19836-28-3	2929.90.00
ML8.a.41	5,6-(3',4'-furazano)-1,2,3,4-tetrazine-1,3-dioxide; FTDO	N/A	2934.99.90
ML8.a.42	Ethylenedinitramine; EDNA	505-71-5	2929.90.00
ML8.a.43	Dihydroxylammonium 5,5'-bistetrazole-1,1'-diolate; TKX-50	N/A	2933.99.80
ML8.c.2	Aluminium hydride; alane	7784-21-6	2850.00.20
ML8.c.3	Decaborane; B ₁₀ H ₄	17702-41-9	2850.00.20
ML8.c.3	Pentaborane-11; B ₅ H ₁₁	18433-84-6	2850.00.20
ML8.c.3	Pentaborane-9; B ₅ H ₉	19624-22-7	2850.00.20
ML8.c.4.a	Hydrazine	302-01-2	2825.10.00
ML8.c.4.b	Monomethylhydrazine	60-34-4	2928.00.90
ML8.c.4.c	Symmetrical dimethyl hydrazine	540-73-8	2928.00.90
ML8.c.4.d	Unsymmetrical dimethylhydrazine; UDMH	57-14-7	2928.00.90
ML8.c.5.a.1	Beryllium powder	7440-41-7	8112.12.00
ML8.c.5.a.2	Iron powder	7439-89-6	7205.29.00
ML8.c.5.b.1	Magnesium powder	7439-95-4	8104.30.00
ML8.c.5.b.1	Zirconium powder	7440-67-7	8109.29.00
ML8.c.5.b.2	Boron carbide powder; B ₄ C	12069-32-8	2849.90.10
ML8.c.5.b.2	Boron powder	7440-42-8	2804.50.10
ML8.c.6	Aluminium tristearate; octal	637-12-7	2915.70.50

ML8.c.8	Aluminium powder	7429-90-5	7603.10.00
ML8.c.9	Titanium subhydride	7704-98-5	2850.00.20
ML8.d.1	Ammonium dinitramide; ADN	140456-78-6	2853.90.90
ML8.d.10	Inhibited red fuming nitric acid; IRFNA	8007-58-7	2808.00.00
ML8.d.2	Ammonium perchlorate; AP	7790-98-9	2829.90.10
ML8.d.3	Bromine pentafluoride; BrF ₅	7789-30-2	2812.90.00
ML8.d.3	Bromine pentafluoride; BrF ₅	7789-30-2	2812.90.00
ML8.d.3	Bromine trifluoride; BrF ₃	7787-71-5	2812.90.00
ML8.d.3	Bromine trifluoride; BrF ₃	7787-71-5	2812.90.00
ML8.d.3	Bromyl fluoride; BrO ₂ F	22585-64-4	2812.90.00
ML8.d.3	Bromyl fluoride; BrO ₂ F	22585-64-4	2812.90.00
ML8.d.3	Chlorine monofluoride; ClF	7790-89-8	2812.90.00
ML8.d.3	Chlorine monofluoride; ClF	7790-89-8	2812.90.00
ML8.d.3	Chlorine pentafluoride; ClF ₅	13637-63-3	2812.90.00
ML8.d.3	Chlorine pentafluoride; ClF ₅	13637-63-3	2812.90.00
ML8.d.3	Chloryl fluoride; ClO ₂ F	13637-83-7	2812.90.00
ML8.d.3	Chloryl fluoride; ClO ₂ F	13637-83-7	2812.90.00
ML8.d.3	Perbromyl fluoride	25251-03-0	2812.90.00
ML8.d.3	Perbromyl fluoride; BrO ₃ F	25251-03-0	2812.90.00
ML8.d.3	Perchloryl trifluoride; ClO ₃ F	7616-94-6	2812.90.00
ML8.d.4	1,3-dinitro-1,3-diazetidene; DNAD	78246-06-7	2933.99.80
ML8.d.5	Hydroxylammonium nitrate; HAN	13465-08-2	2825.10.00
ML8.d.6	Hydroxylammonium perchlorate; HAP	15588-62-2	2825.10.00
ML8.d.7	Hydrazinium nitroformate; HNF	20773-28-8	2928.00.90
ML8.d.8	Hydrazine nitrate	37836-27-4	2825.10.00
ML8.d.9	Hydrazinium perchlorate	27978-54-7	2825.10.00
ML8.e.1	Azidomethylmethyloxetane; AMMO	90683-29-7	2932.99.00
ML8.e.2	3,3-bis(azidomethyl)oxetane; BAMO	17607-20-4	2932.99.00
ML8.e.3	Bis (2,2-dinitropropyl)acetal; BDNPA	5108-69-0	2911.00.00
ML8.e.4	Bis (2,2-dinitropropyl)formal; BDNPF	5917-61-3	2911.00.00

ML8.e.5	Butanetrioltrinitrate; BTTN	6659-60-5	2920.90.70
ML8.e.7	3-difluoroaminomethyl-3-azidomethyl oxetane; FAMA0	N/A	2932.99.00
ML8.e.8	Bis-(2-fluoro-2,2-dinitroethyl) formal; FEFO	17003-79-1	2911.00.00
ML8.e.9	Poly-2,2,3,3,4,4-hexafluoropentane-1,5-diol formal; FPF-1	376-90-9	3907.10.00
ML8.e.10	Poly-2,4,4,5,5,6,6-heptafluoro-2-tri-fluoromethyl-3-oxaheptane-1,7-diol formal ; FPF-3	N/A	3907.10.00
ML8.e.11	Glycidylazide polymer; GAP	143178-24-9	3907.29.11
ML8.e.12	Hydroxyl terminated polybutadiene; HTPB	69102-90-5	4002.20.00
ML8.e.14	2-(butylnitroamino)ethyl nitrate; Butyl-NENA	82486-82-6	2929.90.00
ML8.e.14	2-(ethylnitroamino)ethyl nitrate; Ethyl-NENA	85068-73-1	2929.90.00
ML8.e.14	2-(methylnitroamino)ethyl nitrate; Methyl-NENA	17096-47-8	2929.90.00
ML8.e.14	2-(propylnitroamino)ethyl nitrate; Propyl-NENA	82486-83-7	2929.90.00
ML8.e.14	2-[nitro(pentyl)amino]ethyl nitrate	85954-06-9	2929.90.00
ML8.e.15	Polyglycidyl nitrate; Poly-GLYN or PGN	27814-48-8	3907.29.11
ML8.e.16	Poly(3-nitratomethyl-3-methyloxetane); Poly-NIMMO	84051-81-0	2932.99.00
ML8.e.18	1,2,3-tris[1,2-bis(difluoroamino)ethoxy] propane; TVOPA	53159-39-0	2929.90.00
ML8.e.19	4,5-diazidomethyl-2-methyl-1,2,3-triazole; iso-DAMTR	N/A	2933.99.80
ML8.e.19	Trimethylolethane trinitrate; TMETN	3032-55-1	2920.90.70
ML8.e.20	Poly(3-nitrato oxetane); PNO	N/A	3907.29.11
ML8.f.1	Basic copper salicylate	62320-94-9	2918.21.00
ML8.f.2	Bis-(2-hydroxyethyl) glycolamide; BHEGA	17409-41-5	2924.19.00
ML8.f.4.a	Butacene	125856-62-4	4002.20.00
ML8.f.4.b	Catocene	37206-42-1	2931.90.00
ML8.f.4.c	1,1'-Ferrocenedicarboxylic acid	1293-87-4	2931.90.00
ML8.f.4.c	Ferrocene carboxylic acid	1271-42-7	2931.90.00
ML8.f.4.d	n-Butyl ferrocene	31904-29-7	2931.90.00
ML8.f.4.f	Ethyl ferrocene	1273-89-8	2931.90.00
ML8.f.4.g	iso-propyl ferrocene	12126-81-7	2931.90.00
ML8.f.4.g	n-Propyl ferrocene	1273-92-3	2931.90.00
ML8.f.4.h	Pentyl ferrocene	1274-00-6	2931.90.00

ML8.f.4.i	Dicyclopentyl ferrocene	125861-17-8	2931.90.00
ML8.f.4.j	Dicyclohexyl ferrocene	N/A	2931.90.00
ML8.f.4.k	Diethyl ferrocene	1273-97-8	2931.90.00
ML8.f.4.l	Dipropyl ferrocene	N/A	2931.90.00
ML8.f.4.m	Dibutyl ferrocene	1274-08-4	2931.90.00
ML8.f.4.n	Dihexyl ferrocene	93894-59-8	2931.90.00
ML8.f.4.o	1,1'-Diacetyl ferrocene	1273-94-5	2931.90.00
ML8.f.4.o	Acetyl ferrocene	1271-55-2	2931.90.00
ML8.f.5	Copper β -resorcyate	70983-44-7	2918.29.00
ML8.f.5	Lead β -resorcyate	20936-32-7	2918.29.00
ML8.f.6	Lead citrate	14450-60-3	2918.15.00
ML8.f.7	Lead-copper chelates of beta-resorcyate or salicylates	68411-07-4	3824.99.93
ML8.f.8	Lead maleate	19136-34-6	2917.19.80
ML8.f.9	Lead salicylate	15748-73-9	2918.21.00
ML8.f.10	Lead stannate; PbSnO ₃	12036-31-6	2841.90.85
ML8.f.11	bis(2-methyl aziridinyl); BOBBA 8	N/A	2933.99.80
ML8.f.11	Tris-1-(2-methyl)aziridinyl phosphine oxide; MAPO	57-39-6	2933.99.80
ML8.f.12	N-methyl-P,P-bis(2-methylaziridin-1-yl)phosphinamide; Methyl BAPO	85068-72-0	2933.99.80
ML8.f.13	N-Methyl-p-nitroaniline	100-15-2	2921.42.00
ML8.f.14	3-Nitroaza-1,5-pentane diisocyanate	7406-61-9	2929.10.00
ML8.f.15.a	LICA 12	103850-22-2	2919.90.00
ML8.f.15.a	Titanium IV, 2,2[bis 2-propenolato-methyl, butanolato, tris (dioctyl) phosphato]	110438-25-0	2919.90.00
ML8.f.15.b	Titanium IV, [(2-propenolato-1) methyl, n-propanolatomethyl] butanolato-1, tris[dioctyl] pyrophosphate; KR3538	N/A	2919.90.00
ML8.f.15.c	Titanium IV, [(2-propenolato-1) methyl, n-propanolatomethyl] butanolato-1, tris(dioctyl)phosphate	N/A	2919.90.00
ML8.f.17.a	1,1',1''-Trimesoyl-tris(2-ethylaziridine); HX-868	7722-73-8	2933.99.80
ML8.f.17.b	1,1'-Isophthaloyl-bis(2-methylaziridine)	7652-64-4	2933.99.80
ML8.f.17.b	1,1'-Trimethyladipoylbis(2-ethylaziridine)	71463-62-2	2933.99.80
ML8.f.17.b	2,4,6-tris(2-Ethyl-1-aziridinyl)-1,3,5-triazine	18924-91-9	2933.69.80

ML8.f.18	Propyleneimine or 2-methylaziridine	75-55-8	2933.99.80
ML8.f.19	Superfine iron oxide; Fe ₂ O ₃	1317-60-8	2821.10.00
ML8.f.20	Tetraethylenepentaamineacrylonitrile; Tepan	68412-45-3	2926.90.70
ML8.f.21	Tetraethylenepentaamine acrylonitrileglycidol; Tepanol	68412-46-4	2926.90.70
ML8.f.22	Triphenyl bismuth; TPB	603-33-8	2931.90.00
ML8.f.23	Tris (ethoxyphenyl) bismuth); TEPB	90591-48-3	2931.90.00
ML8.g.1	3,3-bis(chloromethyl)oxetane; BCMO	78-71-7	2932.99.00
ML8.g.2	Dinitroazetidide-t-butyl salt	125735-38-8	2933.99.80
ML8.g.3	Hexabenzylhexaazaisowurtzitane; HBIW	124782-15-6	2933.59.95
ML8.g.3	Tetraacetyldibenzylhexaazaisowurtzitane; TAIW	182763-60-6	2933.59.95
ML8.g.5	1,3,5,7 tetraacetyl-1,3,5,7,-tetraaza cyclo-octane; TAT	41378-98-7	2933.99.80
ML8.g.6	1,4,5,8-Tetraazadecalin	5409-42-7	2933.99.80
ML8.g.7	1,3,5-Trichlorobenzene	108-70-3	2903.99.80
ML8.g.8	1,2,4-Trihydroxybutane	3068-00-6	2905.49.00
ML8.g.9	1,5-diacetyl-3,7-dinitro-1,3,5,7-tetraaza-cyclooctane; DADN	N/A	2933.99.80

**in bold new chemicals and new CN codes*

2.4 Hazardous chemicals (PIC regulation)

The Regulation (EU) No 649/2012 ⁽²⁷⁾ also known as Prior Informed Consent (PIC) Regulation, is the regulation of the European Parliament and of the Council concerning the export and import of hazardous chemicals. It applies to industrial chemicals and pesticides (including biocides) that are banned or severely restricted for health or environmental reasons. It places obligations on companies that wish to export these chemicals to non-EU countries. The PIC Regulation implements within the EU the Rotterdam Convention ⁽²⁸⁾ on the Prior Informed Consent procedure for certain Hazardous Chemicals and Pesticides in international trade.

The PIC Regulation entered into operation on 1 March 2014. From this date, the European Chemicals Agency (ECHA) ⁽²⁹⁾ is responsible for the administrative and technical tasks related to the new Regulation.

The PIC Regulation covers the following chemicals:

- Certain hazardous chemicals that are subject to the prior informed consent procedure under the Convention (the 'PIC procedure');
- Certain hazardous chemicals that are banned or severely restricted within the Union or a Member State;
- Chemicals when exported in so far as their classification, labelling and packaging are concerned.

The regulation differentiates chemicals in two annexes, Annex I (restricted) and Annex V (prohibited), but in its turn Annex I is split in three parts (see table 6).

Table 6. Description of PIC annexes

Annex	Description
Annex I Part 1	Chemicals banned or severely restricted within the EU in a subcategory of a Convention use category
Annex I Part 2	Chemicals banned or severely restricted within the EU in a Convention use category
Annex I Part 3	Chemicals that are subject to the prior informed consent (PIC) procedure under the Rotterdam Convention
Annex V	Chemicals prohibited within the EU and banned from export

The European Chemicals Agency published a guidance ⁽³⁰⁾ with the aim of assisting, providing assistance and technical and scientific guidance to industry, economic operators and authorities on complying with their obligations under the Regulation (EU) No 649/2012 (the PIC Regulation).

⁽²⁷⁾ Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02012R0649-20200901>

⁽²⁸⁾ Rotterdam Convention <http://www.pic.int/>

⁽²⁹⁾ European Chemicals Agency (ECHA); <https://echa.europa.eu/regulations/prior-informed-consent/understanding-pic>

⁽³⁰⁾ Guidance for implementation of Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals https://echa.europa.eu/documents/10162/23036412/guidance_pic_en.pdf/813e3826-5b6d-4a31-9088-6bb9ceae34b4

Table 7. Chemicals subject to PIC regulation on hazardous chemicals, (EU) No 649/2012

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
Annex I Part 1	1,1,1,2-Tetrachloroethane	630-20-6	2903.19.00
Annex I Part 1	1,1,1-Trichloroethane	71-55-6	2903.19.00
Annex I Part 1	1,1,2,2-Tetrachloroethane	79-34-5	2903.19.00
Annex I Part 1	1,1,2-Trichloroethane	79-00-5	2903.19.00
Annex I Part 1	1,1-Dichloroethene	75-35-4	2903.29.00
Annex I Part 1	Acifluorfen	50594-66-6	2918.99.90
Annex I Part 1	Ametryn	834-12-8	2933.69.80
Annex I Part 1	Anthracene oil	90640-80-5	2707.99.20
Annex I Part 1	Azinphos-ethyl	2642-71-9	2933.99.80
Annex I Part 1	Bensultap	17606-31-4	2930.90.98
Annex I Part 1	Benzene crude	71-43-2	2707.10.00
Annex I Part 1	Benzene pure	71-43-2	2902.20.00
Annex I Part 1	Cadmium Nitrate; Cd(NO ₃) ₂	10325-94-7	2834.29.20
Annex I Part 1	Cadmium oxide; CdO	1306-19-0	2825.90.60
Annex I Part 1	Cadmium powder	7440-43-9	8112.69.10
Annex I Part 1	Cadmium sulphate; CdSO ₄	7790-84-3	2833.29.20
Annex I Part 1	Calciferol	50-14-6	2936.29.00
Annex I Part 1	Carbendazim	10605-21-7	2933.99.80
Annex I Part 1	Carbon tetrachloride	56-23-5	2903.14.00
Annex I Part 1	Cartap	15263-53-3	2930.20.00
Annex I Part 1	Chinomethionat	2439-01-2	2934.99.90
Annex I Part 1	Chlorfenvinphos	470-90-6	2919.90.00
Annex I Part 1	Chlormephos	24934-91-6	2930.90.98
Annex I Part 1	Chloroform	67-66-3	2903.13.00
Annex I Part 1	Chlorothalonil	1897-45-6	2926.90.70
Annex I Part 1	Chlorpropham	101-21-3	2924.29.70
Annex I Part 1	Chlorthal-dimethyl	1861-32-1	2917.39.85

Annex I Part 1	Cholecalciferol	67-97-0	2936.29.00
Annex I Part 1	Cis-1,3-dichloropropene	10061-01-5	2903.29.00
Annex I Part 1	Clothianidin	210880-92-5	2934.10.00
Annex I Part 1	Coal tar distillate	65996-91-0	2707.99.19
Annex I Part 1	Coal tar distillate fraction	84650-04-4	2707.40.00
Annex I Part 1	Coal tar distillate fraction	84650-04-4	2707.50.00
Annex I Part 1	Coumafuryl	117-52-2	2932.20.90
Annex I Part 1	Creosote oil	61789-28-4	2707.91.00
Annex I Part 1	Creosote oil	8001-58-9	2707.91.00
Annex I Part 1	Creosote oil fraction	90640-84-9	2707.91.00
Annex I Part 1	Crimidine	535-89-7	2933.59.95
Annex I Part 1	Cyanamide	420-04-2	2853.90.90
Annex I Part 1	Cyanazine	21725-46-2	2933.69.80
Annex I Part 1	Cyfluthrin	68359-37-5	2926.90.70
Annex I Part 1	Cyhalothrine	68085-85-8	2926.90.70
Annex I Part 1	Desmedipham	13684-56-5	2924.29.70
Annex I Part 1	Di- μ -oxo-di-n-butylstannio-hydroxyborane; DBB	75113-37-0	2931.90.00
Annex I Part 1	Dibutyltin diacetate	1067-33-0	2931.90.00
Annex I Part 1	Dibutyltin dichloride	683-18-1	2931.90.00
Annex I Part 1	Dibutyltin dilaurate	77-58-7	2931.90.00
Annex I Part 1	Dibutyltin oxide	818-08-6	2931.90.00
Annex I Part 1	Didecyldimethylammonium chloride	7173-51-5	2923.90.00
Annex I Part 1	Dinobuton	973-21-7	2920.90.10
Annex I Part 1	Diocetyl tin	3542-36-7	2931.90.00
Annex I Part 1	Diocetyl tin diacetate	17586-94-6	2931.90.00
Annex I Part 1	Diocetyl tin dilaurate	3648-18-8	2931.90.00
Annex I Part 1	Diocetyl tin maleate	16091-18-2	2931.90.00
Annex I Part 1	Diocetyl tin maleate	16091-18-2	2931.90.00
Annex I Part 1	Diocetyl tin oxide	870-08-6	2931.90.00
Annex I Part 1	Ethion	563-12-2	2930.90.98

Annex I Part 1	Fenpropathrin	39515-41-8	2926.90.70
Annex I Part 1	Fenvalerate	51630-58-1	2926.90.70
Annex I Part 1	Ferbam	14484-64-1	2930.20.00
Annex I Part 1	Flurenol	467-69-6	2918.19.98
Annex I Part 1	Furathiocarb	65907-30-4	2932.99.00
Annex I Part 1	Methidathion	950-37-8	2934.99.90
Annex I Part 1	Methomyl	16752-77-5	2930.90.98
Annex I Part 1	Metoxuron	19937-59-8	2924.21.00
Annex I Part 1	Monolinuron	1746-81-2	2928.00.90
Annex I Part 1	Monuron	150-68-5	2924.21.00
Annex I Part 1	Omethoate	1113-02-6	2930.90.98
Annex I Part 1	Pebulate	1114-71-2	2930.20.00
Annex I Part 1	Pentachloroethane	76-01-7	2903.19.00
Annex I Part 1	Permethrin	52645-53-1	2916.20.00
Annex I Part 1	Phenylmercuric acetate	62-38-4	2852.10.00
Annex I Part 1	Phenylmercury neodecanoate	26545-49-3	2852.10.00
Annex I Part 1	Pigment white 1	1319-46-6	3206.49.70
Annex I Part 1	Pigment white 30	7446-27-7	3206.49.70
Annex I Part 1	Pigment yellow 34	1344-37-2	3206.20.00
Annex I Part 1	Propham	122-42-9	2924.29.70
Annex I Part 1	Propiconazole	60207-90-1	2934.99.90
Annex I Part 1	Scilliroside	507-60-8	2938.90.90
Annex I Part 1	Sec-butylamine	13952-84-6	2921.19.99
Annex I Part 1	Strychnine	57-24-9	2939.79.90
Annex I Part 1	Tar acid, coal	65996-85-2	2707.99.80
Annex I Part 1	Tar oil	122384-78-5	3807.00.90
Annex I Part 1	Terbufos	13071-79-9	2930.90.98
Annex I Part 1	Thallium sulphate; Tl_2SO_4	7446-18-6	2833.29.80
Annex I Part 1	Thiocyclam	31895-22-4	2934.99.90
Annex I Part 1	Triazophos	24017-47-8	2933.99.80

Annex I Part 1	Trichlorobenzene	120-82-1	2903.99.80
Annex I Part 1	Tridemorph	24602-86-6	2934.99.90
Annex I Part 1	Triflumuron	64628-44-0	2924.21.00
Annex I Part 1	Tris-aziridinyl-phosphin oxide	545-55-1	2933.99.80
Annex I Part 1	Vamidothion	2275-23-2	2930.90.98
Annex I Part 1	Warfarin	81-81-2	2932.20.90
Annex I Part 1	Wood creosote	8021-39-4	3807.00.90
Annex I Part 1	Zineb	12122-67-7	3824.99.93
Annex I Parts 1 & 2	1,3-dichloropropene	542-75-6	2903.29.00
Annex I Parts 1 & 2	2-naphthylamine	91-59-8	2921.45.00
Annex I Parts 1 & 2	2-naphthylammonium acetate	553-00-4	2921.45.00
Annex I Parts 1 & 2	2-Naphthyloxyacetic acid	120-23-0	2918.99.90
Annex I Parts 1 & 2	3-decen-2-one	10519-33-2	2914.19.90
Annex I Parts 1 & 2	4-aminobiphenyl	92-67-1	2921.49.00
Annex I Parts 1 & 2	4-aminobiphenyl hydrochloride	2113-61-3	2921.49.00
Annex I Parts 1 & 2	4-nitrobiphenyl	92-93-3	2904.20.00
Annex I Parts 1 & 2	4-nonylphenol	104-40-5	2907.13.00
Annex I Parts 1 & 2	4-nonylphenol branched	84852-15-3	2907.13.00
Annex I Parts 1 & 2	5-tert-butyl-2,4,6-trinitro-m-xylene	81-15-2	2904.20.00
Annex I Parts 1 & 2	Acephate	30560-19-1	2930.90.98
Annex I Parts 1 & 2	Acetochlor	34256-82-1	2924.29.70
Annex I Parts 1 & 2	Amitraz	33089-61-1	2925.29.00
Annex I Parts 1 & 2	Amitrole	61-82-5	2933.99.80
Annex I Parts 1 & 2	Anthraquinone	84-65-1	2914.61.00
Annex I Parts 1 & 2	Asulam	3337-71-1	2935.90.90
Annex I Parts 1 & 2	Atrazine	1912-24-9	2933.69.10
Annex I Parts 1 & 2	Azocyclotin	41083-11-8	2933.99.80
Annex I Parts 1 & 2	β -cypermethrin	65731-84-2	2926.90.70
Annex I Parts 1 & 2	Benfuracarb	82560-54-1	2932.99.00
Annex I Parts 1 & 2	Benzidine	92-87-5	2921.59.90

Annex I Parts 1 & 2	Benzidine acetate	36341-27-2	2921.59.90
Annex I Parts 1 & 2	Benzidine hydrochloride	531-85-1	2921.59.90
Annex I Parts 1 & 2	Benzidine sulphate	536-86-2	2921.59.90
Annex I Parts 1 & 2	Benzyl butyl phthalate	85-68-7	2917.34.00
Annex I Parts 1 & 2	Bitertanol	55179-31-2	2933.99.80
Annex I Parts 1 & 2	Butralin	33629-47-9	2921.49.00
Annex I Parts 1 & 2	Cadusafos	95465-99-9	2930.90.98
Annex I Parts 1 & 2	Calcium chlorate; Ca(ClO ₃) ₂	10137-74-3	2829.19.00
Annex I Parts 1 & 2	Carbaryl	63-25-2	2924.29.70
Annex I Parts 1 & 2	Carbosulfan	55285-14-8	2932.99.00
Annex I Parts 1 & 2	Chlorfenapyr	122453-73-0	2933.99.80
Annex I Parts 1 & 2	Chloropicrin	76-06-2	2904.91.00
Annex I Parts 1 & 2	Chlorthal-dimethyl	1861-32-1	2917.39.85
Annex I Parts 1 & 2	Chlozolate	84332-86-5	2934.99.90
Annex I Parts 1 & 2	Cinidon-ethyl	142891-20-1	2925.19.95
Annex I Parts 1 & 2	Cybutryne	28159-98-0	2933.69.80
Annex I Parts 1 & 2	Cyclanilide	113136-77-9	2924.29.70
Annex I Parts 1 & 2	Cyhexatin	13121-70-5	2931.90.00
Annex I Parts 1 & 2	Diarsenic pentaoxide; As ₂ O ₅	1303-28-2	2811.29.90
Annex I Parts 1 & 2	Diazinon	333-41-5	2933.59.10
Annex I Parts 1 & 2	Dichlobenil	1194-65-6	2926.90.70
Annex I Parts 1 & 2	Dichlorvos	62-73-7	2919.90.00
Annex I Parts 1 & 2	Dicloran	99-30-9	2921.42.00
Annex I Parts 1 & 2	Dicofol	115-32-2	2906.29.00
Annex I Parts 1 & 2	Diisobutyl phthalate	84-69-5	2917.34.00
Annex I Parts 1 & 2	Dimethenamid	87674-68-8	2934.99.90
Annex I Parts 1 & 2	Dimethoate	60-51-5	2930.90.98
Annex I Parts 1 & 2	Diniconazole-M	83657-18-5	2933.99.80
Annex I Parts 1 & 2	Dinoterb	1420-07-1	2908.99.00
Annex I Parts 1 & 2	Diphenylamine	122-39-4	2921.44.00

Annex I Parts 1 & 2	Diquat	2764-72-9	2933.99.80
Annex I Parts 1 & 2	Diquat dibromide	85-00-7	2933.99.80
Annex I Parts 1 & 2	Ethalfuralin	55283-68-6	2921.43.00
Annex I Parts 1 & 2	Ethoprophos	13194-48-4	2930.90.98
Annex I Parts 1 & 2	Ethoxyquin	91-53-2	2933.49.90
Annex I Parts 1 & 2	Ethoxysulfuron	126801-58-9	2933.59.95
Annex I Parts 1 & 2	Fenamidone	161326-34-7	2933.29.90
Annex I Parts 1 & 2	Fenarimol	60168-88-9	2933.59.95
Annex I Parts 1 & 2	Fenbutatin oxide	13356-08-6	2931.90.00
Annex I Parts 1 & 2	Fenitrothion	122-14-5	2920.19.00
Annex I Parts 1 & 2	Fenthion	55-38-9	2930.90.98
Annex I Parts 1 & 2	Fentin acetate	900-95-8	2931.90.00
Annex I Parts 1 & 2	Fentin hydroxide	76-87-9	2931.90.00
Annex I Parts 1 & 2	Fipronil	120068-37-3	2933.19.90
Annex I Parts 1 & 2	Flufenoxuron	101463-69-8	2919.90.00
Annex I Parts 1 & 2	Flupyrsulfuron	150315-10-9	2935.90.90
Annex I Parts 1 & 2	Flupyrsulfuron-methyl; DPX KE 459	144740-53-4	2935.90.90
Annex I Parts 1 & 2	Flupyrsulfuron-methyl-sodium	144740-54-5	2935.90.90
Annex I Parts 1 & 2	Flurprimidol	56425-91-3	2933.59.95
Annex I Parts 1 & 2	Flurtamone	96525-23-4	2932.19.00
Annex I Parts 1 & 2	Glufosinate	51276-47-2	2931.49.90
Annex I Parts 1 & 2	Glufosinate-ammonium	77182-82-2	2931.49.90
Annex I Parts 1 & 2	Guazatine	108173-90-6	3808.99.90
Annex I Parts 1 & 2	Guazatine acetate	115044-19-4	3808.99.90
Annex I Parts 1 & 2	Hexachloroethane	67-72-1	2903.19.00
Annex I Parts 1 & 2	Hexazinone	51235-04-2	2933.69.80
Annex I Parts 1 & 2	Imidacloprid	138261-41-3	2933.39.99
Annex I Parts 1 & 2	Iminoctadine	13516-27-3	2925.29.00
Annex I Parts 1 & 2	Indolylacetic acid	87-51-4	2933.99.80
Annex I Parts 1 & 2	Iprodione	36734-19-7	2933.21.00

Annex I Parts 1 & 2	Isononylphenol	11066-49-2	2907.13.00
Annex I Parts 1 & 2	Isononylphenol ethoxilated	37205-87-1	3402.13.00
Annex I Parts 1 & 2	Isoproturon	34123-59-6	2924.21.00
Annex I Parts 1 & 2	Isoxathion	18854-01-8	2934.99.90
Annex I Parts 1 & 2	Lead 2,4,6-trinitrobenzene-1,3-diolate	15245-44-0	2908.99.00
Annex I Parts 1 & 2	Lead carbonate; PbCO ₃	598-63-0	2836.99.17
Annex I Parts 1 & 2	Lead chromate; PbCrO ₄	7758-97-6	2841.15.00
Annex I Parts 1 & 2	Lead diacetate	301-04-2	2915.29.00
Annex I Parts 1 & 2	Lead diazide	13424-46-9	2850.00.60
Annex I Parts 1 & 2	Lead hexafluorosilicate; PbSiF ₆	25808-74-6	2826.90.80
Annex I Parts 1 & 2	Lead hydrogenarsenate; PbHAsO ₄	7784-40-9	2842.90.80
Annex I Parts 1 & 2	Lead sulphate; PbSO ₄	7446-14-2	2833.29.60
Annex I Parts 1 & 2	Linuron	330-55-2	2928.00.90
Annex I Parts 1 & 2	Malathion	121-75-5	2930.90.98
Annex I Parts 1 & 2	Maleic hydrazide	123-33-1	2933.99.80
Annex I Parts 1 & 2	Maleic hydrazide pcholine salt	61167-10-0	2933.99.80
Annex I Parts 1 & 2	Maleic hydrazide potassium salt	51542-52-0	2933.99.80
Annex I Parts 1 & 2	Maleic hydrazide sodium salt	28330-26-9	2933.99.80
Annex I Parts 1 & 2	Maneb	12427-38-2	3824.99.93
Annex I Parts 1 & 2	Methyl bromide	74-83-9	2903.61.00
Annex I Parts 1 & 2	Methyl-parathion	298-00-0	2920.11.00
Annex I Parts 1 & 2	Monomethyl-dibromo-diphenyl methane; DBBT	99688-47-8	2903.99.80
Annex I Parts 1 & 2	Monomethyl-Tetrachlorodiphenyl methane; Ugilec 141	76253-60-6	2903.99.80
Annex I Parts 1 & 2	Naled	300-76-5	2919.90.00
Annex I Parts 1 & 2	Naphthalen-2-amine monohydrochloride	612-52-2	2921.45.00
Annex I Parts 1 & 2	Nicotine	54-11-5	2939.79.10
Annex I Parts 1 & 2	Nitrofen	1836-75-5	2909.30.90
Annex I Parts 1 & 2	Nonylpheno branchedl ethoxilated	26027-38-3	3402.13.00
Annex I Parts 1 & 2	Nonylphenol	25154-52-3	2907.13.00
Annex I Parts 1 & 2	Nonylphenol branched	90481-04-2	2907.13.00

Annex I Parts 1 & 2	Nonylphenol branched ethoxilated	68412-54-4	3402.13.00
Annex I Parts 1 & 2	Nonylphenol ethoxilated	127087-87-0	3402.13.00
Annex I Parts 1 & 2	Nonylphenol ethoxilated; nonoxinol	9016-45-9	3402.13.00
Annex I Parts 1 & 2	Octabromodiphenyl ether	32536-52-0	2909.30.38
Annex I Parts 1 & 2	Orthosulfamuron	213464-77-8	2933.59.95
Annex I Parts 1 & 2	Oxadiargyl	39807-15-3	2934.99.90
Annex I Parts 1 & 2	Oxasulfuron	144651-06-9	2935.90.90
Annex I Parts 1 & 2	Oxydemeton-methyl	301-12-2	2925.19.95
Annex I Parts 1 & 2	Paraquat	4685-14-7	2933.39.99
Annex I Parts 1 & 2	Paraquat dichloride	1910-42-5	2933.39.99
Annex I Parts 1 & 2	Paraquat dimethylsulfate	2074-50-2	2933.39.99
Annex I Parts 1 & 2	Phosalone	2310-17-0	2934.99.90
Annex I Parts 1 & 2	Picoxystrobin	117428-22-5	2933.39.99
Annex I Parts 1 & 2	Potassium chlorate; KClO ₃	3811-04-9	2829.19.00
Annex I Parts 1 & 2	Procymidone	32809-16-8	2925.19.95
Annex I Parts 1 & 2	Propachlor	1918-16-7	2924.29.70
Annex I Parts 1 & 2	Propanil	709-98-8	2924.29.70
Annex I Parts 1 & 2	Propargite	2312-35-8	2920.90.70
Annex I Parts 1 & 2	Propineb	12071-83-9	2930.20.00
Annex I Parts 1 & 2	Propisochlor	86763-47-5	2924.29.70
Annex I Parts 1 & 2	Pymetrozine	123312-89-0	2933.69.80
Annex I Parts 1 & 2	Pyrazophos	13457-18-6	2933.59.95
Annex I Parts 1 & 2	Quinoxifen	124495-18-7	2933.49.90
Annex I Parts 1 & 2	Quintozene	82-68-8	2904.99.00
Annex I Parts 1 & 2	Rotenone	83-79-4	2932.99.00
Annex I Parts 1 & 2	Silver chlorate; AgClO ₃	7783-92-8	2843.29.00
Annex I Parts 1 & 2	Simazine	122-34-9	2933.69.10
Annex I Parts 1 & 2	Sodium chlorate; NaClO ₃	7775-09-9	2829.11.00
Annex I Parts 1 & 2	Tecnazene	117-18-0	2904.99.00
Annex I Parts 1 & 2	Tepraloxydim	149979-41-9	2932.99.00

Annex I Parts 1 & 2	Thiamethoxam	153719-23-4	2934.10.00
Annex I Parts 1 & 2	Thiobencarb	28249-77-6	2930.20.00
Annex I Parts 1 & 2	Thiodicarb	59669-26-0	2930.90.98
Annex I Parts 1 & 2	Thiram	137-26-8	2930.30.00
Annex I Parts 1 & 2	Tolyfluanid	731-27-1	2930.90.98
Annex I Parts 1 & 2	Triasulfuron	82097-50-5	2935.90.90
Annex I Parts 1 & 2	Triclosan	3380-34-5	2909.50.00
Annex I Parts 1 & 2	Tricyclazole	41814-78-2	2934.99.90
Annex I Parts 1 & 2	Trifluralin	1582-09-8	2921.43.00
Annex I Parts 1 & 2	Tris (2-chloroethyl) phosphate	115-96-8	2919.90.00
Annex I Parts 1 & 2	Vinclozolin	50471-44-8	2934.99.90
Annex I Parts 1 & 3	1,2-dibromoethane; EDB	106-93-4	2903.62.00
Annex I Parts 1 & 3	2-(butan-2-yl)-4,6-dinitrophenol; Dinoseb	88-85-7	2908.91.00
Annex I Parts 1 & 3	2,4,5-Trichlorophenoxyacetic acid; 2,4,5-T	93-76-5	2918.91.00
Annex I Parts 1 & 3	Actinolite	77536-66-4	2524.90.00
Annex I Parts 1 & 3	Alachlor	15972-60-8	2924.25.00
Annex I Parts 1 & 3	Aldicarb	116-06-3	2930.80.00
Annex I Parts 1 & 3	Amosite	12172-73-5	2524.90.00
Annex I Parts 1 & 3	Anthophyllite	77536-67-5	2524.90.00
Annex I Parts 1 & 3	Azinphos-methyl	86-50-0	2933.92.00
Annex I Parts 1 & 3	Binapacryl	485-31-4	2916.16.00
Annex I Parts 1 & 3	Captafol	2425-06-1	2930.80.00
Annex I Parts 1 & 3	Carbofuran	1563-66-2	2932.96.00
Annex I Parts 1 & 3	Chlordimeform	6164-98-3	2925.21.00
Annex I Parts 1 & 3	Chlorobenzilate	510-15-6	2918.18.00
Annex I Parts 1 & 3	Crocidolite	12001-28-4	2524.10.00
Annex I Parts 1 & 3	Didecyldimethylammonium perfluorooctane sulfonate	251099-16-8	2923.40.00
Annex I Parts 1 & 3	Diethanolammonium perfluorooctane sulfonate	70225-14-8	2922.16.00
Annex I Parts 1 & 3	Dinitro-ortho-cresol; DNOC	534-52-1	2908.92.00
Annex I Parts 1 & 3	Dinoseb-acetate	2813-95-8	2915.36.00

Annex I Parts 1 & 3	Dinoseb-ammonium	6365-83-9	2908.91.00
Annex I Parts 1 & 3	Dinoseb-sodium	35040-03-0	2908.91.00
Annex I Parts 1 & 3	Dinoseb-trolamine	6420-47-9	2922.19.00
Annex I Parts 1 & 3	DNOC-ammonium	2980-64-5	2908.92.00
Annex I Parts 1 & 3	DNOC-potassium	5787-96-2	2908.92.00
Annex I Parts 1 & 3	DNOC-sodium	2312-76-7	2908.92.00
Annex I Parts 1 & 3	E/Z-Phosphamidon	13171-21-6	2924.12.00
Annex I Parts 1 & 3	E-Phosphamidon	297-99-4	2924.12.00
Annex I Parts 1 & 3	Ethylene dichloride; 1,2-dichloroethane	107-06-2	2903.15.00
Annex I Parts 1 & 3	Ethylene oxide; oxirane	75-21-8	2910.10.00
Annex I Parts 1 & 3	Fluoroacetamide	640-19-7	2924.12.00
Annex I Parts 1 & 3	Methamidophos	10265-92-6	2930.80.00
Annex I Parts 1 & 3	Monocrotophos	6923-22-4	2924.12.00
Annex I Parts 1 & 3	Parathion	56-38-2	2920.11.00
Annex I Parts 1 & 3	Pentachlorophenol	87-86-5	2908.11.00
Annex I Parts 1 & 3	Perfluorooctane sulfonic acid	1763-23-1	2904.31.00
Annex I Parts 1 & 3	Phorate	298-02-2	2930.90.98
Annex I Parts 1 & 3	Polychlorinated terphenyl	61788-33-8	2903.99.80
Annex I Parts 1 & 3	Tetraethyl lead	78-00-2	2931.10.00
Annex I Parts 1 & 3	Tetramethyl lead	75-74-1	2931.10.00
Annex I Parts 1 & 3	Tremolite	77536-68-6	2524.90.00
Annex I Parts 1 & 3	Tributyltin benzoate	4342-36-3	2931.20.00
Annex I Parts 1 & 3	Tributyltin chloride	1461-22-9	2931.20.00
Annex I Parts 1 & 3	Tributyltin fluoride	1983-10-4	2931.20.00
Annex I Parts 1 & 3	Tributyltin linoleate	24124-25-2	2931.20.00
Annex I Parts 1 & 3	Tributyltin methacrylate	2155-70-6	2931.20.00
Annex I Parts 1 & 3	Tributyltin naphthenate	85409-17-2	2931.20.00
Annex I Parts 1 & 3	Tributyltin oxide	56-35-9	2931.20.00
Annex I Parts 1 & 3	Trichlorfon	52-68-6	2931.54.00
Annex I Parts 1 & 3	tris-(2,3-dibromopropyl) phosphate	126-72-7	2919.10.00

Annex I Parts 1 & 3	Z-Phosphamidon	23783-98-4	2924.12.00
Annex V Part 1	1,1,1-trichloro-2,2-bis (p-chlorophenyl) ethane; DDT	50-29-3	2903.92.00
Annex V Part 1	1,2,3,4,5,6-hexachlorocyclohexane	608-73-1	2903.81.00
Annex V Part 1	1,2,5,6,9,10-hexabromocyclododecane	3194-55-6	2903.89.80
Annex V Part 1	2,2',3,3',4,5',6-heptabromodiphenyl ether	446255-22-7	2909.30.38
Annex V Part 1	2,2',3,4,4',5',6-heptabromodiphenyl ether	207122-16-5	2909.30.38
Annex V Part 1	2,2',4,4',5,6'-hexabromodiphenyl ether	207122-15-4	2909.30.38
Annex V Part 1	2,2',4,4',5-pentabromodiphenyl ether	60348-60-9	2909.30.31
Annex V Part 1	α -Endosulfan	959-98-8	2920.90.70
Annex V Part 1	Aldrin	309-00-2	2903.82.00
Annex V Part 1	α -Lindane; α -hexachlorocyclohexane	319-84-6	2903.81.00
Annex V Part 1	β -hexabromocyclododecane	134237-51-7	2903.89.80
Annex V Part 1	bis(2,4,5-tribromophenyl) ether	68631-49-2	2909.30.38
Annex V Part 1	bis(2,4-dibromophenyl) ether	5436-43-1	2909.30.38
Annex V Part 1	β -Lindane; β -hexachlorocyclohexane	319-85-7	2903.81.00
Annex V Part 1	Chlordane	57-74-9	2903.82.00
Annex V Part 1	Chlordecone	143-50-0	2914.29.00
Annex V Part 1	Chloro-alkanes (C10-C12)	108171-26-2	3824.89.00
Annex V Part 1	Chloro-alkanes (C10-C13)	85535-84-8	3824.89.00
Annex V Part 1	Chloro-alkanes (C10-C14)	85681-73-8	3824.89.00
Annex V Part 1	Chloro-alkanes (C12-C13)	71011-12-6	3824.89.00
Annex V Part 1	Chloro-alkanes (C12-C14)	85536-22-7	3824.89.00
Annex V Part 1	Chloro-alkanes (C6-C18)	68920-70-7	3824.89.00
Annex V Part 1	Chloro-naphtalenes (mixture)	70776-03-3	3824.99.92
Annex V Part 1	Decabromodiphenyl ether	1163-19-5	2909.30.38
Annex V Part 1	Dieldrin	60-57-1	2910.40.00
Annex V Part 1	Endosulfan	115-29-7	2920.30.00
Annex V Part 1	Endrin	72-20-8	2910.50.00
Annex V Part 1	γ -hexabromocyclododecane	134237-52-8	2903.89.80

Annex V Part 1	Heptabromodiphenyl ether	68928-80-3	2909.30.38
Annex V Part 1	Heptachlor	76-44-8	2903.82.00
Annex V Part 1	Hexabromobiphenyl	36355-01-8	2903.94.00
Annex V Part 1	Hexabromocyclododecane	25637-99-4	2903.89.80
Annex V Part 1	Hexabromodiphenyl ether	36483-60-0	2909.30.38
Annex V Part 1	Hexachlorobenzene	118-74-1	2903.92.00
Annex V Part 1	Hexachlorobutadiene	87-68-3	2903.29.00
Annex V Part 1	Lindane	58-89-9	2903.81.00
Annex V Part 1	Mirex	2385-85-5	2903.83.00
Annex V Part 1	Pentabromodiphenyl ether (mixture of isomers)	32534-81-9	2909.30.31
Annex V Part 1	Pentachlorobenzene	608-93-5	2903.93.00
Annex V Part 1	Polychlorinated biphenyl	1336-36-3	2903.99.80
Annex V Part 1	Tetrabromodiphenyl ether	40088-47-9	2909.30.38
Annex V Part 1	Toxaphene (camphechlor)	8001-35-2	3808.59.00
Annex V Part 1	α -hexabromocyclododecane	134237-50-6	2903.89.80
Annex V Part 1	β -Endosulfan	33213-65-9	2920.90.70
Annex V Part 2	Ammonium perfluorooctane sulfonate	29081-56-9	2904.32.00
Annex V Part 2	Cinnabar ore	N/A	2617.90.00
Annex V Part 2	Dimercury dichloride; Hg ₂ Cl ₂	10112-91-1	2852.10.00
Annex V Part 2	Dimercury diiodide; Hg ₂ I ₂	15385-57-6	2852.10.00
Annex V Part 2	Dimercury sulphate; HgSO ₄	7783-36-0	2852.10.00
Annex V Part 2	Lithium perfluorooctane sulfonate	29457-72-5	2904.33.00
Annex V Part 2	Mercury	7439-97-6	2805.40 (subheading)
Annex V Part 2	Mercury (II) nitrate; Hg(NO ₃) ₂	10045-94-0	2852.10.00
Annex V Part 2	Mercury (II) oxide; HgO	21908-53-2	2852.10.00
Annex V Part 2	Mercury dithiocyanate; Hg(SCN) ₂	592-85-8	2852.10.00
Annex V Part 2	Mercury sulphide; HgS	1344-48-5	2852.10.00
Annex V Part 2	Perfluorooctane sulfonyl fluoride	307-35-7	2904.36.00
Annex V Part 2	Potassium perfluorooctane sulfonate	2795-39-3	2904.34.00

Annex V Part 2	Tetraethylammonium perfluorooctanesulfonate	56773-42-3	2923.30.00
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**in bold new chemicals and new CN codes*

2.5 Anti-torture regulation

Torture means any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from that person or from a third person information or a confession, punishing that person for an act that either that person or a third person has committed or is suspected of having committed, or intimidating or coercing that person or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted either by or at the instigation of, or with the consent or acquiescence of, a public official or other person acting in an official capacity.

The EU regulation aimed to control the export of such items is the Regulation (EU) No 2019/125 ⁽³¹⁾ of the European Parliament and of the Council of 16 January 2019 concerning trade in certain goods which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment, including chemicals which are listed below in the following table 8.

Table 8. Description of anti-torture annexes

Annex	Description
Annex III	Annex III lists goods that have some practical use other than for the purpose of torture or other cruel, inhuman or degrading treatment or punishment. Exports of any of the goods listed in Annex III of the Regulation generally require authorisation.
Annex IV	It specifies goods which could be used for the execution of human beings. An export authorisation is required for the goods listed in Annex IV of the Regulation.

In 2019 the Council of the EU published Guidelines ⁽³²⁾ with the aim of providing practical guidance to EU institutions and Member States, that can be used in their engagement with third countries as well as in multilateral human rights fora, to support ongoing efforts to eradicate torture and other ill-treatment worldwide.

Table 9. Chemicals subject to the anti-torture regulation, (EU) No 2019/125

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
Annex III	Oleoresin capsicum; OC	8023-77-6	3301.90.30
Annex III	Pelargonic acid vanillylamide; PAVA	2444-46-4	2939.79.90
Annex IV	Amobarbital	57-43-2	2933.53.90
Annex IV	Amobarbital sodium salt	64-43-7	2933.53.90
Annex IV	Pentobarbital	76-74-4	2933.53.90

⁽³¹⁾ Regulation (EU) No 2019/125 of the European Parliament and of the Council of 16 January 2019 concerning trade in certain goods which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02019R0125-20200527&qid=1610983638632>

⁽³²⁾ Guidelines on EU Policy Towards Third Countries on Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment – 2019 Revision. <https://www.consilium.europa.eu/media/40644/guidelines-st12107-en19.pdf>

Annex IV	Pentobarbital sodium salt	57-33-0	2933.53.90
Annex IV	Secobarbital	76-73-3	2933.53.90
Annex IV	Secobarbital sodium salt	309-43-3	2933.53.90
Annex IV	Thiopental	76-75-5	2933.53.90
Annex IV	Thiopental sodium salt	71-73-8	2933.53.90

**in bold new chemicals and new CN codes*

2.6 Sanctions and embargoes

Restrictive measures (sanctions) are an essential tool in the EU's Common Foreign and Security Policy (CFSP), through which the EU can intervene where necessary to prevent conflict or respond to emerging or current crises. The EU has over forty different sanctions regimes in place. Some are mandated by the United Nations Security Council, whereas others are adopted autonomously by the EU, and some of them includes chemicals because it was evidenced that they were used in a chemical/nuclear weapons program, or in long range missiles program.

- Syria: Chemicals whose sale, supply, transfer or export to Syria is restricted were first listed in annexes to Council Regulation (EU) No 36/2012⁽³³⁾. Later on, there were relevant amendments like the (EU) No 509/2012⁽³⁴⁾ and (EU) 697/2013⁽³⁵⁾. Annexes I, VI and IX to the consolidated version of the regulation (EU) No 36/2012 contain those chemicals subject to a prior authorisation for export, whereas there is a total ban for those chemicals included in control list to the dual-use regulation (see table 10)
- Iran: The consolidated version of the regulation (EU) No 2016/1375⁽³⁶⁾ governs the export control of strategic items to Iran, some of which are chemicals (see table 11).
- DPRK: The consolidated version of the regulation (EU) No 2017/1509⁽³⁷⁾ governs the export control of strategic items to the Democratic Popular Republic of Korea, some of which are chemicals (see table 12).
- Russia: The consolidated version of the regulation (EU) No 833/2014⁽³⁸⁾ governs the export control of dual-use items and advanced technology items to Russia, in view of the Russia's actions destabilising the situation in Ukraine. In 2014 it was banned the export of dual-use items to military end-users in Russia. Lately, on the 25th of February 2022 the restriction was extended to all end-users in Russia, plus the creation of a new annex for Advanced Technology items (Annex VII), which included more chemicals in addition to the ones covered by the Annex I to the dual-use regulation (EU) 2021/821. In addition Annex XXIII includes other chemicals which could contribute to the enhancement of Russian industrial capacities (see table 13).

⁽³³⁾ Council Regulation (EU) No 36/2012 of 18 January 2012 concerning restrictive measures in view of the situation in Syria and repealing Regulation (EU) No 442/2011
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02012R0036-20201016>

⁽³⁴⁾ COUNCIL REGULATION (EU) No 509/2012 of 15 June 2012 amending Regulation (EU) No 36/2012 concerning restrictive measures in view of the situation in Syria
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32012R0509>

⁽³⁵⁾ Council Regulation (EU) No 697/2013 of 22 July 2013 amending Regulation (EU) No 36/2012 concerning restrictive measures in view of the situation in Syria
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R0697>

⁽³⁶⁾ Commission Implementing Regulation (EU) 2016/1375 of 29 July 2016 amending Council Regulation (EU) No 267/2012 concerning restrictive measures against Iran
https://eur-lex.europa.eu/eli/reg_impl/2016/1375/oj

⁽³⁷⁾ Council Regulation (EU) 2017/1509 of 30 August 2017 concerning restrictive measures against the Democratic People's Republic of Korea and repealing Regulation (EC) No 329/2007
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02017R1509-20200801&qid=1611046530086>

⁽³⁸⁾ Council Regulation (EU) No 833/2014 of 31 July 2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine
<http://data.europa.eu/eli/reg/2014/833/oj>

Table 10. Chemicals subject to the restrictive measures against Syria, (EU) No 36/2012

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
I.C.A.001 (Syria)	Ethylene dichloride; 1,2-dichloroethane	107-06-2	2903.15.00
I.C.A.002 (Syria)	Nitromethane	75-52-5	2904.20.00
I.C.A.002 (Syria)	Picric acid	88-89-1	2908.99.00
I.C.A.003 (Syria)	Aluminium chloride; AlCl ₃	7446-70-0	2827.32.00
I.C.A.003 (Syria)	Arsenic	7440-38-2	2804.80.00
I.C.A.003 (Syria)	Arsenic trioxide; As ₂ O ₃	1327-53-3	2811.29.10
I.C.A.003 (Syria)	Bis(2-chloroethyl)ethylamine hydrochloride	3590-07-6	2921.19.99
I.C.A.003 (Syria)	Bis(2-chloroethyl)methylamine hydrochloride	55-86-7	2921.19.99
I.C.A.003 (Syria)	Tris(2-chloroethyl)amine hydrochloride	817-09-4	2921.19.99
VI.2.C.1 (Syria)	Diethyleneglycol	111-46-6	2909.41.00
VI.2.C.1 (Syria)	Triethylene glycol	112-27-6	2909.49.80
VI.2.C.2 (Syria)	N-Methylpyrrolidone	872-50-4	2933.79.00
VI.2.C.2 (Syria)	Sulfolane	126-33-0	2934.99.90
VI.2.C.5 (Syria)	Ethyl tert-butyl ether; ETBE	637-92-3	2909.19.10
VI.2.C.5 (Syria)	Methyl tert-butyl ether; MTBE	1634-04-4	2909.19.90
IX.A1.001 (Syria)	Tributylphosphite	102-85-2	2920.29.00
IX.A1.001 (Syria)	Isocyanomethane	624-83-9	2929.10.00
IX.A1.001 (Syria)	Quinaldine	91-63-4	2933.49.90
IX.A1.001 (Syria)	2-bromochloroethane	107-04-0	2903.79.30
IX.A1.002 (Syria)	Benzil	134-81-6	2914.39.00
IX.A1.002 (Syria)	Diethyl ether	60-29-7	2909.11.00
IX.A1.002 (Syria)	Dimethyl ether	115-10-6	2909.19.90
IX.A1.002 (Syria)	Dimethylaminoethanol	108-01-0	2922.19.00
IX.A1.003 (Syria)	2-methoxyethanol	109-86-4	2909.44.00
IX.A1.003 (Syria)	Butyrylcholinesterase; BCHE	9001-08-5	3507.90.90
IX.A1.003 (Syria)	Diethylenetriamine	111-40-0	2921.29.00

IX.A1.003 (Syria)	Dichloromethane	75-09-2	2903.12.00
IX.A1.003 (Syria)	N,N-Dimethylaniline	121-69-7	2921.42.00
IX.A1.003 (Syria)	Ethyl bromide	74-96-4	2903.69.19
IX.A1.003 (Syria)	Ethyl chloride	75-00-3	2903.11.00
IX.A1.003 (Syria)	Ethylamine	75-04-7	2921.19.99
IX.A1.003 (Syria)	Hexamethylenetetramine; Hexamine	100-97-0	2933.69.40
IX.A1.003 (Syria)	Isopropyl bromide	75-26-3	2903.69.19
IX.A1.003 (Syria)	Isopropyl ether	108-20-3	2909.19.90
IX.A1.003 (Syria)	Methylamine	74-89-5	2921.11.00
IX.A1.003 (Syria)	Methyl bromide	74-83-9	2903.61.00
IX.A1.003 (Syria)	Monoisopropylamine	75-31-0	2921.19.99
IX.A1.003 (Syria)	Obidoxime chloride	114-90-9	2933.39.99
IX.A1.003 (Syria)	Potassium bromide; KBr	7758-02-3	2827.51.00
IX.A1.003 (Syria)	Pyridine	110-86-1	2933.31.00
IX.A1.003 (Syria)	Pyridostigmine bromide	101-26-8	2933.39.10
IX.A1.003 (Syria)	Sodium bromide; NaBr	7647-15-6	2827.51.00
IX.A1.003 (Syria)	Sodium metal	7440-23-5	2805.11.00
IX.A1.003 (Syria)	Tributylamine	102-82-9	2921.19.99
IX.A1.003 (Syria)	Triethylamine	121-44-8	2921.19.99
IX.A1.003 (Syria)	Trimethylamine	75-50-3	2921.11.00
IX.A1.004 (Syria)	Acetone	67-64-1	2914.11.00
IX.A1.004 (Syria)	Acetylene	74-86-2	2901.29.00
IX.A1.004 (Syria)	Ammonia	7664-41-7	2814.10.00
IX.A1.004 (Syria)	Antimony	7440-36-0	8110 (heading)
IX.A1.004 (Syria)	Benzaldehyde	100-52-7	2912.21.00
IX.A1.004 (Syria)	Benzoin	119-53-9	2914.40.90
IX.A1.004 (Syria)	1-Butanol	71-36-3	2905.13.00
IX.A1.004 (Syria)	2-Butanol	78-92-2	2905.14.90
IX.A1.004 (Syria)	iso-Butanol	78-83-1	2905.14.90

IX.A1.004 (Syria)	tert-Butanol	75-65-0	2905.14.10
IX.A1.004 (Syria)	Calcium carbide; CaC ₂	75-20-7	2849.10.00
IX.A1.004 (Syria)	Carbon monoxide; CO	630-08-0	2811.29.90
IX.A1.004 (Syria)	Chlorine; Cl ₂	7782-50-5	2801.10.00
IX.A1.004 (Syria)	Cyclohexanol	108-93-0	2906.12.00
IX.A1.004 (Syria)	Dicyclohexylamine	101-83-7	2921.30.99
IX.A1.004 (Syria)	Ethanol	64-17-5	2207.10.00
IX.A1.004 (Syria)	Ethylene	74-85-1	2901.21.00
IX.A1.004 (Syria)	Ethylene oxide; oxirane	75-21-8	2910.10.00
IX.A1.004 (Syria)	Fluoroapatite	1306-05-4	2835.39.00
IX.A1.004 (Syria)	Hydrogen chloride; HCl	7647-01-0	2806.10.00
IX.A1.004 (Syria)	Hydrogen sulphide; H ₂ S	7783-06-04	2811.19.80
IX.A1.004 (Syria)	Isopropanol	67-63-0	2905.12.00
IX.A1.004 (Syria)	Mandelic acid	90-64-2	2918.19.98
IX.A1.004 (Syria)	Methanol	67-56-1	2905.11.00
IX.A1.004 (Syria)	Methyl chloride	74-87-3	2903.11.00
IX.A1.004 (Syria)	Methyl iodide	74-88-4	2903.69.80
IX.A1.004 (Syria)	Methyl mercaptan	74-93-1	2930.90.98
IX.A1.004 (Syria)	Monoethyleneglycol; MEG	107-21-1	2905.31.00
IX.A1.004 (Syria)	Oxalyl chloride	79-37-8	2917.19.80
IX.A1.004 (Syria)	Potassium sulphide; K ₂ S	1312-73-8	2830.90.85
IX.A1.004 (Syria)	Potassium thiocyanate; KSCN	333-20-0	2842.90.80
IX.A1.004 (Syria)	Sodium hypochlorite; NaClO	7681-52-9	2828.90.00
IX.A1.004 (Syria)	Sulphur	7704-34-9	2802.00.00
IX.A1.004 (Syria)	Sulphur dioxide	7446-09-5	2811.29.05
IX.A1.004 (Syria)	Sulphur trioxide	7446-11-9	2811.29.10
IX.A1.004 (Syria)	Thiophosphoryl chloride	3982-91-0	2853.90.90
IX.A1.004 (Syria)	Tri-isobutyl phosphite	1606-96-8	2920.29.00
IX.A1.004 (Syria)	White/yellow phosphorus	12185-10-3	2804.70.90

Table 11. Chemicals subject to the restrictive measures against Iran, (EU) No 267/2012

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
II.A1.001 (Iran)	Bis(2-ethylhexyl) phosphoric acid	298-07-7	2919.90.00
II.A1.002 (Iran)	Fluorine; F ₂	7782-41-4	2801.30.10
II.A1.015 (Iran)	Tributyl phosphate; TBP	126-73-8	2919.90.00
Annex III (Iran)	1,1'-Diacetyl ferrocene	1273-94-5	2931.90.00
Annex III (Iran)	1,1-Diethylhydrazine nitrate; DEHN	N/A	2928.00.90
Annex III (Iran)	1,1-Dimethylhydrazinium azide	227955-52-4	2928.00.90
Annex III (Iran)	1,1'-Ferrocenedicarboxylic acid	1293-87-4	2931.90.00
Annex III (Iran)	1,2-Diethylhydrazine nitrate; DEHN	36453-17-2	2928.00.90
Annex III (Iran)	1,2-dimethyladamantane	702-79-4	2902.19.00
Annex III (Iran)	1,2-Dimethylaminoethylazide; DMAZ	86147-04-8	2928.00.90
Annex III (Iran)	1,2-Dimethylhydrazinium azide	299177-50-7	2928.00.90
Annex III (Iran)	2-hydroxyethylhydrazine nitrate; HEHN	N/A	2928.00.90
Annex III (Iran)	2-Nitrodiphenylamine	119-75-5	2921.44.00
Annex III (Iran)	3,6-Dihydrazino tetrazine nitrate; DHTN	N/A	2933.99.80
Annex III (Iran)	4,5-diazidomethyl-2-methyl-1,2,3-triazole; iso-DAMTR	N/A	2933.99.80
Annex III (Iran)	Acetyl ferrocene	1271-55-2	2931.90.00
Annex III (Iran)	Allylhydrazine	7422-78-8	2928.00.90
Annex III (Iran)	Aluminium powder	7429-90-5	7603.10.00
Annex III (Iran)	Beryllium powder	7440-41-7	8112.12.00
Annex III (Iran)	Boron carbide powder; B ₄ C	12069-32-8	2849.90.10
Annex III (Iran)	Boron powder	7440-42-8	2804.50.10
Annex III (Iran)	Bromine pentafluoride; BrF ₅	7789-30-2	2812.90.00
Annex III (Iran)	Bromine trifluoride; BrF ₃	7787-71-5	2812.90.00
Annex III (Iran)	Bromyl fluoride; BrO ₂ F	22585-64-4	2812.90.00
Annex III (Iran)	Butacene	125856-62-4	4002.20.00
Annex III (Iran)	Carboranes	N/A	2934.99.90
Annex III (Iran)	Carboxy-terminated polybutadiene; CTPB	N/A	4002.20.00

Annex III (Iran)	Catocene	37206-42-1	2931.90.00
Annex III (Iran)	Chlorine monofluoride; ClF	7790-89-8	2812.90.00
Annex III (Iran)	Chlorine pentafluoride; ClF ₅	13637-63-3	2812.90.00
Annex III (Iran)	Chloryl fluoride; ClO ₂ F	13637-83-7	2812.90.00
Annex III (Iran)	Cubane	277-10-1	2902.19.00
Annex III (Iran)	Decaborane; B ₁₀ H ₄	17702-41-9	2850.00.20
Annex III (Iran)	Dibutyl ferrocene	1274-08-4	2931.90.00
Annex III (Iran)	Dicyclohexyl ferrocene	N/A	2931.90.00
Annex III (Iran)	Dicyclopentyl ferrocene	125861-17-8	2931.90.00
Annex III (Iran)	Diethyl ferrocene	1273-97-8	2931.90.00
Annex III (Iran)	Diethylene glycol dinitrate; DEGDN	693-21-0	2920.90.70
Annex III (Iran)	Dihexyl ferrocene	93894-59-8	2931.90.00
Annex III (Iran)	Dihydrobenzvalene	287-12-7	2902.19.00
Annex III (Iran)	Diimido oxalic acid dihydrazine	3457-37-2	2928.00.90
Annex III (Iran)	Dinitrogen pentoxide; N ₂ O ₅	10102-03-1	2811.29.30
Annex III (Iran)	Dinitrogen tetroxide; N ₂ O ₄	10544-72-6	2811.29.30
Annex III (Iran)	Dinitrogen trioxide; N ₂ O ₃	10544-73-7	2811.29.30
Annex III (Iran)	Dipropyl ferrocene	N/A	2931.90.00
Annex III (Iran)	Ethyl ferrocene	1273-89-8	2931.90.00
Annex III (Iran)	Ethylene dihydrazine	N/A	2928.00.90
Annex III (Iran)	exo-tetrahydro-dicyclopentadiene	2825-82-3	2902.19.00
Annex III (Iran)	Ferrocene carboxylic acid	1271-42-7	2931.90.00
Annex III (Iran)	Guanidine nitrate	506-93-4	2925.29.00
Annex III (Iran)	Hydrazinium azide	14546-44-2	2825.10.00
Annex III (Iran)	Hydrazinium dinitrate	13464-98-7	2825.10.00
Annex III (Iran)	Hydrazinium diperchlorate	13812-39-0	2825.10.00
Annex III (Iran)	Hydrazinium perchlorate	27978-54-7	2825.10.00
Annex III (Iran)	Hydroxyl terminated polybutadiene; HTPB	69102-90-5	4002.20.00
Annex III (Iran)	Inhibited red fuming nitric acid; IRFNA	8007-58-7	2808.00.00
Annex III (Iran)	iso-propyl ferrocene	12126-81-7	2931.90.00

Annex III (Iran)	Magnesium >99.8%	7439-95-4	8104.11.00
Annex III (Iran)	Magnesium powder	7439-95-4	8104.30.00
Annex III (Iran)	Methylhydrazine nitrate	29674-96-2	2928.00.90
Annex III (Iran)	Mixed oxydes of nitrogen; MON _x	N/A	3824.99.96
Annex III (Iran)	Monomethylhydrazine dinitrate	N/A	2928.00.90
Annex III (Iran)	N,N-Diallylhydrazine	5164-11-4	2928.00.90
Annex III (Iran)	n-Butyl ferrocene	31904-29-7	2931.90.00
Annex III (Iran)	Nitrogen dioxide; NO ₂	10102-44-0	2811.29.30
Annex III (Iran)	Nitrogen trifluoride; NF ₃	7783-54-2	2812.90.00
Annex III (Iran)	Nitroguanidine	556-88-7	2929.90.00
Annex III (Iran)	n-Propyl ferrocene	1273-92-3	2931.90.00
Annex III (Iran)	Pentaborane-11; B ₅ H ₁₁	18433-84-6	2850.00.20
Annex III (Iran)	Pentaborane-9; B ₅ H ₉	19624-22-7	2850.00.20
Annex III (Iran)	Pentyl ferrocene	1274-00-6	2931.90.00
Annex III (Iran)	Perbromyl fluoride; BrO ₃ F	25251-03-0	2812.90.00
Annex III (Iran)	Perchloryl trifluoride; ClO ₃ F	7616-94-6	2812.90.00
Annex III (Iran)	Perhydro-dinorbornadiene	66289-74-5	2902.19.00
Annex III (Iran)	Polybutadiene-acrylic acid; PBAA	N/A	4002.99.90
Annex III (Iran)	Polybutadiene-acrylic acid-acrylonitrile; PBAN	N/A	4002.99.90
Annex III (Iran)	PolyglycidylNitrate; Poly-GLYN or PGN	27814-48-8	3907.29.11
Annex III (Iran)	Polytetrahydrofuran polyethylene glycol; TPEG	N/A	3907.29.20
Annex III (Iran)	Quadricyclane	278-06-8	2902.19.00
Annex III (Iran)	Tetramethylhydrazine	6415-12-9	2928.00.90
Annex III (Iran)	Tricyclo[2.2.1.0(2,6)]heptane	279-19-6	2902.19.00
Annex III (Iran)	Triethylene glycol dinitrate; TEGDN	111-22-8	2920.90.70
Annex III (Iran)	Trimethylhydrazine	1741-01-1	2928.00.90
Annex III (Iran)	Trimethylolethane trinitrate; TMETN	3032-55-1	2920.90.70
Annex III (Iran)	Unsymmetrical dimethylhydrazine nitrate	N/A	2928.00.90
Annex III (Iran)	Zirconium (nuclear grade)	7440-67-7	8109.21.00 8109.31.00 8109.91.00

Table 12. Chemicals subject to the restrictive measures against DPRK, (EU) No 2017/1509

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
II A1.001 (DPRK)	(2-ethylhexyl) phosphoric acid; HDEHP	298-07-7	2919.90.00
II.A1.002 (DPRK)	Fluorine; F ₂	7782-41-4	2801.30.10
II.A1.015 (DPRK)	Tributyl phosphate; TBP	126-73-8	2919.90.00
VI.A1.006 (DPRK)	Diethyl adipate; DOA	123-79-5	2917.12.00
VI.A1.006 (DPRK)	Diethyl azelate; DOZ	103-24-2	2917.13.90
VI.A1.006 (DPRK)	Diethyl sebacate; DOS	122-62-3	2917.13.90
VI.A1.010 (DPRK)	Diethylenetriamine	111-40-0	2921.29.00
VI.A1.011 (DPRK)	Butyrylcholinesterase; BCHE	9001-08-5	3507.90.90
VI.A1.011 (DPRK)	Obidoxime chloride	114-90-9	2933.39.99
VI.A1.011 (DPRK)	Pyridostigmine bromide	101-26-8	2933.39.10
VII.A1.013 (DPRK)	Guanidine nitrate	506-93-4	2925.29.00
VII.A1.013 (DPRK)	Nitroguanidine	556-88-7	2929.90.00

**in bold new chemicals and new CN codes*

Table 13. Chemicals subject to the restrictive measures against Russia, (EU) No 833/2014

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
X.C.I.002.c.1	Ferric chloride	7705-08-0	2827.39.20
X.C.I.002.c.2	Cupric chloride	7447-39-4	2827.39.85
X.C.I.002.c.3	Ammonium persulphate	7727-54-0	2833.40.00
X.C.I.002.c.4	Sodium persulphate	7775-27-1	2833.40.00
X.A.VIII.021.b	Pelargonic acid vanillylamide; PAVA	2444-46-4	2939.79.90
X.A.VIII.021.c	Oleoresin capsicum; OC	8023-77-6	3301.90.30
X.A.VIII.021.g.1	Dibenzo[b,f][1,4]oxazepine; CR	257-07-8	2934.99.90
X.A.VIII.021.g.2	8-Methyl-N-vanillyl-trans-6-nonenamide; Capsaicin	404-86-4	2939.79.90
X.A.VIII.021.g.3	8-Methyl-N-vanillynonamide; Dihydrocapsaicin	19408-84-5	2939.79.90
X.A.VIII.021.g.4	N-Vanillyl-9-methyldec-7-(E)-enamide; Homocapsaicin	58493-48-4	2939.79.90
X.A.VIII.021.g.5	N-Vanillyl-9-methyldecanamide; Homodihydrocapsaicin	20279-06-5	2939.79.90
X.A.VIII.021.g.6	N-Vanillyl-7-methyloctanamide; Nordihydrocapsaicin	5299-64-9	2939.79.90
X.A.VIII.021.g.7	4-Nonanolylmorpholine; MPA	5299-64-9	2934.99.90
X.A.VIII.021.g.8	Cis-4-acetylamindicyclohexylmethane	N/A	2924.29.70
X.A.VIII.021.g.9	N,N'-Bis(isopropyl)ethylenediimine	4013-94-9	2921.29.00
X.A.VIII.021.g.10	N,N'-Bis(tert-butyl)ethylenediimine	4062-60-6	2921.29.00
X.A.VIII.022.a.1	Amobarbital	57-43-2	2933.53.90
X.A.VIII.022.a.2	Amobarbital sodium salt	64-43-7	2933.53.90
X.A.VIII.022.a.3	Pentobarbital	76-74-4	2933.53.90
X.A.VIII.022.a.4	Pentobarbital sodium salt	57-33-0	2933.53.90
X.A.VIII.022.a.5	Secobarbital	76-73-3	2933.53.90
X.A.VIII.022.a.6	Secobarbital sodium salt	309-43-3	2933.53.90
X.A.VIII.022.a.7	Thiopental	76-75-5	2933.53.90
X.A.VIII.022.a.8	Thiopental sodium salt	71-73-8	2933.53.90

X.C.VIII.004 .a	Ammonium picrate	131-74-8	2908.99.00
X.C.VIII.004 .b	Black powder (Gunpowder)	N/A	3601.00.00
X.C.VIII.004 .bb	Ethyl-N,N-diphenylurea (ethyl unsymmetrical diphenylurea)	64544-71-4	2924.21.00
X.C.VIII.004 .c	Hexanitrodiphenylamine	131-73-7	2921.44.00
X.C.VIII.004 .cc	4-Nitrodiphenylamine; 4-NDPA	836-30-6	2921.44.00
X.C.VIII.004 .d	Difluoroamine	10405-27-3	2812.90.00
X.C.VIII.004 .dd	2,2-dinitropropanol	918-52-5	2905.59.98
X.C.VIII.004 .e	Nitrostarch	9056-38-6	3505.10.50
X.C.VIII.004 .h	Tetranitronaphthalene	N/A	2902.90.00
X.C.VIII.004 .i	Trinitroanisol	606-35-9	2909.30.90
X.C.VIII.004 .j	Trinitronaphthalene	N/A	2902.90.00
X.C.VIII.004 .k	Trinitroxylene	N/A	2902.41.00
X.C.VIII.004 .k	Trinitroxylene	N/A	2902.42.00
X.C.VIII.004 .k	Trinitroxylene	N/A	2902.43.00
X.C.VIII.004 .k	Trinitroxylene	N/A	2902.44.00
X.C.VIII.004 .l	N-pyrrolidinone; 1-methyl-2-pyrrolidinone	872-50-4	2939.79.90
X.C.VIII.004 .m	Diocylmaleate	142-16-5	2917.19.80
X.C.VIII.004 .n	Ethylhexylacrylate	103-11-7	2916.12.00
X.C.VIII.004 .o	Triethylaluminium;	97-93-8	2931.90.00
X.C.VIII.004 .o	Trimethylaluminium	75-24-1	2931.90.00
X.C.VIII.004 .p	Nitrocellulose	9004-70-0	3912.20.19
X.C.VIII.004 .q	Nitroglycerin; NG	55-63-0	2920.90.70
X.C.VIII.004 .r	2,4,6-trinitrotoluene; TNT	118-96-7	2904.20.00
X.C.VIII.004 .s	Ethylenediaminedinitrate; EDDN	20829-66-7	2920.90.70
X.C.VIII.004 .t	Pentaerythritoltetranitrate; PETN	78-11-5	2920.90.70
X.C.VIII.004 .u	Basic lead styphnate	12403-82-6	2908.99.00
X.C.VIII.004 .u	Lead azide	13424-46-9	2850.00.60
X.C.VIII.004 .u	Normal lead styphnate	15245-44-0	2908.99.00

X.C.VIII.004 .x	Diethyldiphenylurea	85-98-3	2924.21.00
X.C.VIII.004 .x	Dimethyldiphenylurea	611-92-7	2924.21.00
X.C.VIII.004 .x	Methylethyldiphenyl urea	N/A	2924.21.00
X.C.VIII.004 .y	N,N-diphenylurea (unsymmetrical diphenylurea)	603-54-3	2924.21.00
X.C.VIII.004 .z	Methyl-N,N-diphenylurea (methyl unsymmetrical diphenylurea)	13114-72-2	2924.21.00
X.C.IX.001.a.1	Ethylene dichloride	107-06-2	2903.15.00
X.C.IX.001.a.2	Nitromethane	75-52-5	2904.20.00
X.C.IX.001.a.3	Picric acid	88-89-1	2908.99.00
X.C.IX.001.a.4	Aluminum chloride	7446-70-0	2827.32.00
X.C.IX.001.a.5	Arsenic	7440-38-2	2804.80.00
X.C.IX.001.a.6	Arsenic trioxide	1327-53-3	2811.29.10
X.C.IX.001.a.7	Bis(2-chloroethyl)ethylamine hydrochloride	3590-07-6	2921.19.99
X.C.IX.001.a.8	Bis(2-chloroethyl)methylamine hydrochloride	55-86-7	2921.19.99
X.C.IX.001.a.9	Tris(2-chloroethyl)amine hydrochloride	817-09-4	2921.19.99
X.C.IX.001.a.10	Tributylphosphite	102-85-2	2920.29.00
X.C.IX.001.a.11	Isocyanatomethane	624-83-9	2929.10.00
X.C.IX.001.a.12	Quinaldine	91-63-4	2933.49.90
X.C.IX.001.a.13	2-bromochloroethane	107-04-0	2903.79.30
X.C.IX.001.a.14	Benzil	134-81-6	2914.39.00
X.C.IX.001.a.15	Diethyl ether	60-29-7	2909.11.00
X.C.IX.001.a.16	Dimethyl ether	115-10-6	2909.19.90
X.C.IX.001.a.17	Dimethylaminoethanol	108-01-0	2922.19.00
X.C.IX.001.a.18	2-methoxyethanol	109-86-4	2909.44.00
X.C.IX.001.a.19	Butyrylcholinesterase; BCHE	N/A	N/A
X.C.IX.001.a.20	Diethylenetriamine	111-40-0	2921.29.00
X.C.IX.001.a.21	Dichloromethane	75-09-2	2903.12.00
X.C.IX.001.a.22	Dimethylaniline	121-69-7	2921.42.00
X.C.IX.001.a.23	Ethyl bromide	74-96-4	2903.69.19

X.C.IX.001.a.24	Ethyl chloride	75-00-3	2903.11.00
X.C.IX.001.a.25	Ethylamine	75-04-7	2921.19.99
X.C.IX.001.a.26	Hexamine	100-97-0	2933.69.40
X.C.IX.001.a.27	Isopropanol	67- 63-0	2905.12.00
X.C.IX.001.a.28	Isopropyl bromide	75-26-3	2903.69.19
X.C.IX.001.a.29	Isopropyl ether	108-20-3	2909.19.90
X.C.IX.001.a.30	Methylamine	74-89-5	2921.11.00
X.C.IX.001.a.31	Methyl bromide	74-83-9	2903.61.00
X.C.IX.001.a.32	Monoisopropylamine	75-31-0	2921.19.99
X.C.IX.001.a.33	Obidoxime chloride	114-90-9	2933.39.99
X.C.IX.001.a.34	Potassium bromide	7758-02-3	2827.51.00
X.C.IX.001.a.35	Pyridine	110-86-1	2933.31.00
X.C.IX.001.a.36	Pyridostigmine bromide	101-26-8	2933.39.10
X.C.IX.001.a.37	Sodium bromide	7647-15-6	2827.51.00
X.C.IX.001.a.38	Sodium metal	7440-23-5	2805.11.00
X.C.IX.001.a.39	Tributylamine	102-82-9	2921.19.99
X.C.IX.001.a.40	Triethylamine	121-44-8	2921.19.99
X.C.IX.001.a.41	Trimethylamine	75-50-3	2921.11.00
X.C.IX.001.b.1	Acetone	67-64-1	2914.11.00
X.C.IX.001.b.2	Acetylene	74-86-2	2901.29.00
X.C.IX.001.b.3	Ammonia	7664-41-7	2814.10.00
X.C.IX.001.b.4	Antimony	7440-36-0	Heading 8110
X.C.IX.001.b.5	Benzaldehyde	100-52-7	2912.21.00
X.C.IX.001.b.6	Benzoin	119-53-9	2914.40.90
X.C.IX.001.b.7	1-Butanol	71-36-3	2905.13.00
X.C.IX.001.b.8	2-Butanol	78-92-2	2905.14.90
X.C.IX.001.b.9	Iso-Butanol	78-83-1	2905.14.90
X.C.IX.001.b.10	tert-Butanol	75-65-0	2905.14.10
X.C.IX.001.b.11	Calcium carbide	75-20-7	2849.10.00

X.C.IX.001.b.12	Carbon monoxide	630-08-0	2811.29.90
X.C.IX.001.b.13	Chlorine	7782-50-5	2801.10.00
X.C.IX.001.b.14	Cyclohexanol	108-93-0	2906.12.00
X.C.IX.001.b.15	Dicyclohexylamine	101-83-7	2921.30.99
X.C.IX.001.b.16	Ethanol	64-17-5	2207.10.00
X.C.IX.001.b.17	Ethylene	74-85-1	2901.21.00
X.C.IX.001.b.18	Ethylene oxide	75-21-8	2910.10.00
X.C.IX.001.b.19	Fluoroapatite	1306-05-4	2835.39.00
X.C.IX.001.b.20	Hydrogen chloride	7647-01-0	2806.10.00
X.C.IX.001.b.21	Hydrogen sulfide	7783-06-4	2811.19.80
X.C.IX.001.b.22	Mandelic acid	90-64-2	2918.19.98
X.C.IX.001.b.23	Methanol	67-56-1	2905.11.00
X.C.IX.001.b.24	Methyl chloride	74-87-3	2903.11.00
X.C.IX.001.b.25	Methyl iodide	74-88-4	2903.69.80
X.C.IX.001.b.26	Methyl mercaptan	74-93-1	2930.90.98
X.C.IX.001.b.27	Monoethyleneglycol	107-21-1	2905.31.00
X.C.IX.001.b.28	Oxalyl chloride	79-37-8	2917.19.80
X.C.IX.001.b.29	Potassium sulphide	1312-73-8	2830.90.85
X.C.IX.001.b.30	Potassium thiocyanate	333-20-0	2842.90.80
X.C.IX.001.b.31	Sodium hypochlorite	7681-52-9	2828.90.00
X.C.IX.001.b.32	Sulphur	7704-34-9	2802.00.00
X.C.IX.001.b.33	Sulphur dioxide	7446-09-5	2811.29.05
X.C.IX.001.b.34	Sulphur trioxide	7446-11-9	2811.29.10
X.C.IX.001.b.35	Thiophosphoryl chloride	3982-91-0	2853.90.90
X.C.IX.001.b.36	Tri-isobutyl phosphite	1606-96-8	2920.29.00
X.C.IX.001.b.37	White phosphorus	12185-10-3	2804.70.90
X.C.IX.001.b.38	Yellow phosphorus	7723-14-0	2804.70.90
X.C.IX.001.b.39	Mercury	7439-97-6	2805.40.00
X.C.IX.001.b.40	Barium chloride	10361-37-2	2827.39.85

X.C.IX.001.b.41	Sulphuric acid	7664-93-9	2807.00.00
X.C.IX.001.b.42	3,3-dimethyl-1-butene	558-37-2	2901.29.00
X.C.IX.001.b.43	2,2-dimethylpropanal	630-19-3	2912.19.00
X.C.IX.001.b.44	2,2-dimethylpropylchloride	753-89-9	2903.19.00
X.C.IX.001.b.45	2-methylbutene	26760-64-5	2901.29.00
X.C.IX.001.b.46	2-chloro-3-methylbutane	631-65-2	2903.19.00
X.C.IX.001.b.47	2,3-dimethyl-2,3-butanediol	76-09-5	2905.39.95
X.C.IX.001.b.48	2-methyl-2-butene	513-35-9	2901.29.00
X.C.IX.001.b.49	Butyl lithium	109-72-8	2931.90.00
X.C.IX.001.b.50	Bromo(methyl)magnesium	75-16-1	2931.90.00
X.C.IX.001.b.51	Formaldehyde	50-00-0	2912.11.00
X.C.IX.001.b.52	Diethanolamine	111-42-2	2922.12.00
X.C.IX.001.b.53	Dimethylcarbonate	616-38-6	2920.90.10
X.C.IX.001.b.54	Methyldiethanolamine hydrochloride	54060-15-0	2922.19.00
X.C.IX.001.b.55	Diethylamine hydrochloride	660-68-4	2921.19.50
X.C.IX.001.b.56	Diisopropylamine hydrochloride	819-79-4	2921.19.99
X.C.IX.001.b.57	3-Quinuclidinone hydrochloride	1193-65-3	2933.39.99
X.C.IX.001.b.58	3-Quinuclidinol hydrochloride	6238-13-7	2933.39.99
X.C.IX.001.b.59	(R)-3-Quinuclidinol hydrochloride	42437-96-7	2933.39.99
X.C.IX.001.b.60	N,N-Diethylaminoethanol hydrochloride	14426-20-1	2922.19.00
X.C.IX.001.b.63	N,N-Methylisopropylacetamidine	1339185-57-7	2925.29.00
X.C.IX.001.b.64	N,N-Methylethylacetamidine	1339632-40-4	2925.29.00
X.C.IX.001.b.65	N,N-Ethylisopropylacetamidine	1344238-28-3	2925.29.00
X.C.IX.001.b.66	N,N-Methylpropylacetamidine	1339737-43-7	2925.29.00
X.C.IX.001.b.67	N,N-Ethylpropylacetamidine	1341389-98-7	2925.29.00
X.C.IX.001.b.68	N,N-Isopropylpropylacetamidine	1341389-98-7	2925.29.00
X.C.IX.001.b.69	N,N-Methylethylpropanamidine	1339424-26-8	2925.29.00
X.C.IX.001.b.70	N,N-Ethylisopropylpropanamidine	1344354-09-1	2925.29.00
X.C.IX.001.b.71	N,N-Methylpropylpropanamidine	1340216-25-2	2925.29.00

X.C.IX.001.b.72	N,N-Ethylpropylpropanamide	1341493-60-4	2925.29.00
X.C.IX.001.b.73	N,N-Isopropylpropylpropanamide	1343225-93-3	2925.29.00
X.C.IX.001.b.74	N,N-Methylisopropylpropanamide	1339042-55-5	2925.29.00
X.C.IX.001.b.75	N,N-Methylethylbutanamide	1341049-51-1	2925.29.00
X.C.IX.001.b.76	N,N-Methylpropylbutanamide	1343721-02-7	2925.29.00
X.C.IX.001.b.77	N,N-Ethylpropylbutanamide	1343806-12-1	2925.29.00
X.C.IX.001.b.78	N,N-Isopropylpropylbutanamide	1343316-02-8	2925.29.00
X.C.IX.001.b.79	N,N-Methylisopropylbutanamide	1340219-94-4	2925.29.00
X.C.IX.001.b.80	N,N-Ethylisopropylbutanamide	1342204-10-7	2925.29.00
X.C.IX.001.b.81	N,N-Methylethylisobutanamide	1342365-47-2	2925.29.00
X.C.IX.001.b.82	N,N-Ethylpropylisobutanamide	1342566-58-8	2925.29.00
X.C.IX.001.b.83	N,N-Methylpropylisobutanamide	1342270-21-6	2925.29.00
X.C.IX.001.b.84	N,N-Isopropylpropylisobutanamide	1342156-11-9	2925.29.00
X.C.IX.001.b.85	N,N-Methylisopropylisobutanamide	1341992-96-8	2925.29.00
X.C.IX.001.b.86	N,N-Ethylisopropylisobutanamide	1339048-76-8	2925.29.00
X.C.IX.001.b.87	N,N-Dimethylacetamide hydrobromide	1801188-12-4	2925.29.00
X.C.IX.001.b.88	N,N-Dimethylacetamide hydrochloride	2909-15-1	2925.29.00
X.C.IX.001.b.89	N,N-Diethylacetamide hydrochloride	91400-32-7	2925.29.00
X.C.IX.001.b.90	N,N-Diethylacetamide hydrobromide	78053-54-0	2925.29.00
X.C.IX.001.b.91	N,N-Dimethylpropanamide dihydrochloride	79972-73-9	2925.29.00
X.C.IX.001.b.92	N,N-Dimethylpropanamide hydrochloride	56776-15-9	2925.29.00
Annex XXIII Part A	Carbon monoxide; CO	630-08-0	2811.29.90
Annex XXIII Part A	Chlorine dioxide; ClO ₂	10049-04-4	2811.29.90
Annex XXIII Part A	Selenium dioxide; SeO ₂	7446-08-4	2811.29.90
Annex XXIII Part A	Silicon monoxide; SiO	10097-28-6	2811.29.90
Annex XXIII Part A	Tellurium dioxide; TeO ₂	7446-07-3	2811.29.90
Annex XXIII Part A	Diphosphorus trioxide; P ₄ O ₆	1314-24-5	2811.29.90
Annex XXIII Part A	Other inorganic oxygen compounds of non-metals	N/A	2811.29.90

Annex XXIII Part A	Carbon disulphide; CS ₂	75-15-0	2813.10.00
Annex XXIII Part A	Ammonia in aqueous solution; NH ₄ OH	1336-21-6	2814.20.00
Annex XXIII Part A	Sodium hydroxide in aqueous solution; NaOH	1310-73-2	2815.12.00
Annex XXIII Part A	Aluminium hydroxide; Al(OH) ₃	21645-51-2	2818.30.00
Annex XXIII Part A	Chromium dioxide; CrO ₂	12018-01-8	2819.90.10
Annex XXIII Part A	Chromic hydroxide; Cr(OH) ₃	1308-14-1	2819.90.90
Annex XXIII Part A	Dichromium trioxide; Cr ₂ O ₃	1308-38-9	2819.90.90
Annex XXIII Part A	Dichromic acid; H ₂ Cr ₂ O ₇	13530-68-2	2819.90.90
Annex XXIII Part A	Acid chromic; H ₂ Cr ₂ O ₄	7738-94-5	2819.90.90
Annex XXIII Part A	C.I. Pigment Green 18	12001-99-9	2819.90.90
Annex XXIII Part A	Chromium oxide; CrO ₃	11118-57-3	2819.90.90
Annex XXIII Part A	Other chromium oxides	N/A	2819.90.90
Annex XXIII Part A	Manganese dioxide; MnO ₂	1313-13-9	2820.10.00
Annex XXIII Part A	Magnesium chloride; MgCl ₂	7786-30-3	2827.31.00
Annex XXIII Part A	Nickel (II) chloride; NiCl ₂	7718-54-9	2827.35.00
Annex XXIII Part A	Lithium hypochlorite; LiClO	13840-33-0	2828.90.00
Annex XXIII Part A	Sodium chlorite; NaClO ₂	7758-19-2	2828.90.00
Annex XXIII Part A	Sodium hypochlorite; NaClO	7681-52-9	2828.90.00
Annex XXIII Part A	Barium hypochlorite; BaClO	13477-10-6	2828.90.00
Annex XXIII Part A	Potassium hypochlorite; KClO	7778-66-7	2828.90.00
Annex XXIII Part A	Other hypochlorites	N/A	2828.90.00
Annex XXIII Part A	Sodium chlorate; NaClO ₃	7775-09-9	2829.11.00
Annex XXIII Part A	Ammonium hydrogensulfite	10192-30-0	2832.20.00
Annex XXIII Part A	Ammonium sulfite; NH ₄ SO ₃	10196-04-0	2832.20.00
Annex XXIII Part A	Barium sulfite; BaSO ₃	7787-39-5	2832.20.00
Annex XXIII Part A	Cadmium sulfite; CdSO ₃	13477-23-1	2832.20.00
Annex XXIII Part A	Calcium hydrogensulfite	13780-03-5	2832.20.00
Annex XXIII Part A	Calcium sulfite; CaSO ₃	10257-55-3	2832.20.00
Annex XXIII Part A	Iron sulfite;	54343-62-3	2832.20.00

Annex XXIII Part A	Lead sulfite	7446-10-8	2832.20.00
Annex XXIII Part A	Magnesium sulfite; MgSO ₃	7757-88-2	2832.20.00
Annex XXIII Part A	Zinc sulfite; ZnSO ₃	13597-44-9	2832.20.00
Annex XXIII Part A	C.I. Pigment White 35	113959-07-2	2832.20.00
Annex XXIII Part A	Hydrogen sulfite	15181-46-1	2832.20.00
Annex XXIII Part A	Calcium sulfite dihydrate	10035-03-7	2832.20.00
Annex XXIII Part A	Other sulphites	N/A	2832.20.00
Annex XXIII Part A	Nickel sulphate; NiSO ₄	7786-81-4	2833.24.00
Annex XXIII Part A	Aluminium potassium sulphate	10043-67-1	2833.30.00
Annex XXIII Part A	Ammonium nitrite	13446-48-5	2834.10.00
Annex XXIII Part A	Barium nitrite	13465-94-6	2834.10.00
Annex XXIII Part A	Calcium nitrite	13780-06-8	2834.10.00
Annex XXIII Part A	Copper nitrite;	14984-71-5	2834.10.00
Annex XXIII Part A	Magnesium nitrite	15070-34-5	2834.10.00
Annex XXIII Part A	Potassium nitrite	7758-09-0	2834.10.00
Annex XXIII Part A	Sodium nitrite	7632-00-0	2834.10.00
Annex XXIII Part A	Other nitrites	N/A	2834.10.00
Annex XXIII Part A	Sodium hydrogencarbonate: NaHCO ₃	144-55-8	2836.30.00
Annex XXIII Part A	Calcium carbonate: CaCO ₃	471-34-1	2836.50.00
Annex XXIII Part A	Calcium silicate	1344-95-2	2839.90.00
Annex XXIII Part A	Copper silicate	1344-72-5	2839.90.00
Annex XXIII Part A	Magnesium silicate	1343-88-0	2839.90.00
Annex XXIII Part A	Potassium silicate	1312-76-1	2839.90.00
Annex XXIII Part A	Other silicates	N/A	2839.90.00
Annex XXIII Part A	Calcium peroxoborate	54630-47-6	2840.30.00
Annex XXIII Part A	Magnesium peroxoborate	17097-11-9	2840.30.00
Annex XXIII Part A	Potassium perborate	13769-41-0	2840.30.00
Annex XXIII Part A	Sodium perborate	11138-47-9	2840.30.00
Annex XXIII Part A	Other peroxoborates	N/A	2840.30.00

Annex XXIII Part A	Alluminium chromate	54991-58-1	2841.50.00
Annex XXIII Part A	Calcium chromate	13765-19-0	2841.50.00
Annex XXIII Part A	Lead chromate	7758-97-6	2841.50.00
Annex XXIII Part A	Magnesium chromate	13423-61-5	2841.50.00
Annex XXIII Part A	Magnesium dichromate	14104-85-9	2841.50.00
Annex XXIII Part A	Ammonium chromate	7788-98-9	2841.50.00
Annex XXIII Part A	Aluminium dichromate	74144-51-7	2841.50.00
Annex XXIII Part A	Other chromates	N/A	2841.50.00
Annex XXIII Part A	Magnesium wolframate	13573-11-0	2841.80.00
Annex XXIII Part A	Copper wolframate	13587-35-4	2841.80.00
Annex XXIII Part A	Calcium wolframate	7790-75-2	2841.80.00
Annex XXIII Part A	Dipotassium wolframate	7790-60-5	2841.80.00
Annex XXIII Part A	Other tungstates (wolframates)	N/A	2841.80.00
Annex XXIII Part A	Silver colloidal	9007-35-6	2843.10.10
Annex XXIII Part A	Gold colloidal	7440-57-5	2843.10.90
Annex XXIII Part A	Platinum colloidal	7440-06-4	2843.10.90
Annex XXIII Part A	Other colloidal precious metals	N/A	2843.10.90
Annex XXIII Part A	Silver nitrate	7761-88-8	2843.21.00
Annex XXIII Part A	Silver acetate	563-63-3	2843.29.00
Annex XXIII Part A	Silver bromide	7785-23-1	2843.29.00
Annex XXIII Part A	Silver carbonate	534-16-7	2843.29.00
Annex XXIII Part A	Silver chloride	7783-90-6	2843.29.00
Annex XXIII Part A	Silver chromate	7784-01-2	2843.29.00
Annex XXIII Part A	Silver cyanide	506-64-9	2843.29.00
Annex XXIII Part A	Other silver compounds	N/A	2843.29.00
Annex XXIII Part A	Digold trioxide; Au ₂ O ₃	1303-58-8	2843.30.00
Annex XXIII Part A	Gold trichloride; AuCl ₃	13453-07-1	2843.30.00
Annex XXIII Part A	Digold sulfide; Au ₂ S	1303-60-2	2843.30.00
Annex XXIII Part A	Gold monochloride; AuCl	10294-29-8	2843.30.00

Annex XXIII Part A	Other gold compounds	N/A	2843.30.00
Annex XXIII Part A	Hydrogen peroxide; H ₂ O ₂	7722-84-1	2847.00.00
Annex XXIII Part A	1-butene	106-98-9	2901.23.00
Annex XXIII Part A	(Z)-2-butene	590-18-1	2901.23.00
Annex XXIII Part A	(E)-2-butene	624-64-6	2901.23.00
Annex XXIII Part A	2-methylpropene	115-11-7	2901.23.00
Annex XXIII Part A	1,3,-butadiene	106-99-0	2901.24.00
Annex XXIII Part A	2-methyl-1,3,-butadiene	78-79-5	2901.24.00
Annex XXIII Part A	Acetylene	74-86-2	2901.29.00
Annex XXIII Part A	Allene	463-49-0	2901.29.00
Annex XXIII Part A	1,2-butadiene	590-19-2	2901.29.00
Annex XXIII Part A	1-butyne	107-00-6	2901.29.00
Annex XXIII Part A	2-butyne	503-17-3	2901.29.00
Annex XXIII Part A	2,3-dimethyl-1,3-butadiene	513-81-5	2901.29.00
Annex XXIII Part A	Other unsaturated hydrocarbons	N/A	2901.29.00
Annex XXIII Part A	Cyclohexane	110-82-7	2902.11.00
Annex XXIII Part A	Toluene	108-88-3	2902.30.00
Annex XXIII Part A	o-Xylene	95-47-6	2902.41.00
Annex XXIII Part A	p-Xylene	106-42-3	2902.43.00
Annex XXIII Part A	Mixed xylene isomers	1330-20-7	2902.44.00
Annex XXIII Part A	Styrene	100-42-5	2902.50.00
Annex XXIII Part A	Chloromethane	74-87-3	2903.11.00
Annex XXIII Part A	Chloroethane	75-00-3	2903.11.00
Annex XXIII Part A	Dichloromethane	75-09-2	2903.12.00
Annex XXIII Part A	Vinyl chloride	75-01-4	2903.21.00
Annex XXIII Part A	Tetrachloroethylene	127-18-4	2903.23.00
Annex XXIII Part A	Other unsaturated chlorinated derivatives of acyclic hydrocarbons	N/A	2903.29.00
Annex XXIII Part A	3-chloropropene	107-05-1	2903.29.00

Annex XXIII Part A	1-chlorobut-1-ene	4461-42-1	2903.29.00
Annex XXIII Part A	1-chloropropene	590-21-6	2903.29.00
Annex XXIII Part A	2-chloropropene	557-98-2	2903.29.00
Annex XXIII Part A	3-chloropropyne	624-65-7	2903.29.00
Annex XXIII Part A	1,2-dichloroethylene	540-59-0	2903.29.00
Annex XXIII Part A	hexachloropropene	1888-71-7	2903.29.00
Annex XXIII Part A	Bromochlorodifluoromethane; Halon-1211	353-59-3	2903.76.10
Annex XXIII Part A	Bromotrifluoromethane; Halon-1301	75-63-8	2903.76.20
Annex XXIII Part A	1,2,3,4,5,6-Hexachlorocyclohexane	608-73-1	2903.81.00
Annex XXIII Part A	Lindane	58-89-9	2903.81.00
Annex XXIII Part A	Chlorobenzene	108-90-7	2903.91.00
Annex XXIII Part A	1,2-dichlorobenzene	95-50-1	2903.91.00
Annex XXIII Part A	1,4-dichlorobenzene	106-46-7	2903.91.00
Annex XXIII Part A	Derivatives containing only sulpho groups, their salts and ethyl esters	N/A	2904.10.00
Annex XXIII Part A	Dodecylbenzenesulfonic acid	27176-87-0	2904.10.00
Annex XXIII Part A	Ethanesulfonic acid	594-45-6	2904.10.00
Annex XXIII Part A	Methanesulfonic acid	75-75-2	2904.10.00
Annex XXIII Part A	Derivatives containing only nitro or only nitroso groups	N/A	2904.20.00
Annex XXIII Part A	1,2-dinitrobenzene	528-29-0	2904.20.00
Annex XXIII Part A	2,4-dinitrotoluene	121-14-2	2904.20.00
Annex XXIII Part A	9-nitroanthracene	602-60-8	2904.20.00
Annex XXIII Part A	Perfluorooctane sulphonic acid	1763-23-1	2904.31.00
Annex XXIII Part A	Butan-1-ol	71-36-3	2905.13.00
Annex XXIII Part A	Octan-2-ol	123-96-6	2905.16.20
Annex XXIII Part A	Octanol (octyl alcohol) and isomers thereof	N/A	2905.16.85
Annex XXIII Part A	Octan-1-ol	111-87-5	2905.16.85
Annex XXIII Part A	Octan-3-ol	589-98-0	2905.16.85
Annex XXIII Part A	Octan-4-ol	589-62-8	2905.16.85

Annex XXIII Part A	Other saturated monohydric alcohols	N/A	2905.19.00
Annex XXIII Part A	Nonanol	28473-21-4	2905.19.00
Annex XXIII Part A	Pentanol	30899-19-5	2905.19.00
Annex XXIII Part A	Trimethylolpropane	77-99-6	2905.41.00
Annex XXIII Part A	2,2-Bis(bromomethyl)propanediol	3296-90-0	2905.59.91
Annex XXIII Part A	Other halogenated, sulphonated, nitrated or nitrosated derivatives of acyclic alcohols	N/A	2905.59.98
Annex XXIII Part A	Bronopol	52-51-7	2905.59.98
Annex XXIII Part A	2-bromoethanol	540-51-2	2905.59.98
Annex XXIII Part A	Chlorobutanol	57-15-8	2905.59.98
Annex XXIII Part A	Sterols	N/A	2906.13.10
Annex XXIII Part A	Cholesterol	57-88-5	2906.13.10
Annex XXIII Part A	Lanosterol	79-63-0	2906.13.10
Annex XXIII Part A	Stigmastane- 3β -ol	19466-47-8	2906.13.10
Annex XXIII Part A	Inositols	N/A	2906.13.90
Annex XXIII Part A	Inositol	87-89-8	2906.13.90
Annex XXIII Part A	allo-inositol	643-10-7	2906.13.90
Annex XXIII Part A	Other cyclanic, cyclenic or cycloterpenic alcohols	N/A	2906.19.00
Annex XXIII Part A	Cyclopentanol	96-41-3	2906.19.00
Annex XXIII Part A	Cedran-8-ol	16230-29-8	2906.19.00
Annex XXIII Part A	4-tert-butylcyclohexanol	98-52-2	2906.19.00
Annex XXIII Part A	Phenol (hydroxybenzene) and its salts	N/A	2907.11.00
Annex XXIII Part A	Phenol	108-95-2	2907.11.00
Annex XXIII Part A	Potassium phenoxide	100-67-4	2907.11.00
Annex XXIII Part A	Octylphenol, nonylphenol and their isomers; salts thereof	N/A	2907.13.00
Annex XXIII Part A	4-nonylphenol	104-40-5	2907.13.00
Annex XXIII Part A	3-nonylphenol	139-84-4	2907.13.00
Annex XXIII Part A	4-octylphenol	1806-26-4	2907.13.00

Annex XXIII Part A	Xylenols and their salts	N/A	2907.19.10
Annex XXIII Part A	2,3-xyleneol	526-75-0	2907.19.10
Annex XXIII Part A	3,4-xyleneol	95-65-8	2907.19.10
Annex XXIII Part A	Other phenols; phenol-alcohols	N/A	2907.19.90
Annex XXIII Part A	2-allylphenol	1745-81-9	2907.19.90
Annex XXIII Part A	4-tert-butylphenol	98-54-4	2907.19.90
Annex XXIII Part A	Hydroquinone and its salts	123-31-9	2907.22.00
Annex XXIII Part A	Diethyl ether	60-29-7	2909.11.00
Annex XXIII Part A	Cyclanic, cyclenic or cycloterpenic ethers and their halogenated, sulphonated, nitrated or nitrosated derivatives	N/A	2909.20.00
Annex XXIII Part A	Aliflurane	56689-41-9	2909.20.00
Annex XXIII Part A	Cedryl methyl ether	67874-81-1	2909.20.00
Annex XXIII Part A	2,2' -Oxydiethanol; diethylene glycol	111-46-6	2909.41.00
Annex XXIII Part A	Monobutyl ethers of ethylene glycol or of diethylene glycol	N/A	2909.43.00
Annex XXIII Part A	2-butoxyethanol	111-76-2	2909.43.00
Annex XXIII Part A	Diethylene glycol monobutyl ether; butyl diglycol	112-34-5	2909.43.00
Annex XXIII Part A	2-(2-Chloroethoxy)ethanol	628-89-7	2909.49.11
Annex XXIII Part A	Other ether-alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives	N/A	2909.49.80
Annex XXIII Part A	Methoxypropanol	1320-67-8	2909.49.80
Annex XXIII Part A	Oxydipropanol	25265-71-8	2909.49.80
Annex XXIII Part A	Chlorphenesin	104-29-0	2909.49.80
Annex XXIII Part A	Oxirane (ethylene oxide)	75-21-8	2910.10.00
Annex XXIII Part A	Methyloxirane; propylene oxide	75-56-9	2910.20.00
Annex XXIII Part A	Acetals and hemiacetals	N/A	2911.00.00
Annex XXIII Part A	1,1-diethoxyethane	105-57-7	2911.00.00
Annex XXIII Part A	diethoxymethane	462-95-3	2911.00.00
Annex XXIII Part A	1,1-diethoxynonane	54815-13-3	2911.00.00

Annex XXIII Part A	Ethanal; acetaldehyde	75-07-0	2912.12.00
Annex XXIII Part A	Other aldehyde-alcohols, aldehyde-ethers, aldehyde-phenols and aldehydes with other oxygen function	N/A	2912.49.00
Annex XXIII Part A	Glycolaldehyde	141-46-8	2912.49.00
Annex XXIII Part A	3-Hydroxybutanal	107-89-1	2912.49.00
Annex XXIII Part A	2-ethoxybenzaldehyde	613-69-4	2912.49.00
Annex XXIII Part A	Paraformaldehyde	30525-89-4	2912.60.00
Annex XXIII Part A	Acetone	67-64-1	2914.11.00
Annex XXIII Part A	Anthraquinone	84-65-1	2914.61.00
Annex XXIII Part A	Esters of formic acid	N/A	2915.13.00
Annex XXIII Part A	Benzyl formate	104-57-4	2915.13.00
Annex XXIII Part A	Methyl formate	107-31-3	2915.13.00
Annex XXIII Part A	Ethyl formate	109-94-4	2915.13.00
Annex XXIII Part A	Lauric acid and its salts and esters	N/A	2915.90.30
Annex XXIII Part A	Butyl laurate	106-18-3	2915.90.30
Annex XXIII Part A	Ethyl laurate	106-33-2	2915.90.30
Annex XXIII Part A	Other saturated acyclic monocarboxylic acids and their anhydrides	N/A	2915.90.70
Annex XXIII Part A	Acetyl chloride	75-36-5	2915.90.70
Annex XXIII Part A	Acetyl bromide	506-96-7	2915.90.70
Annex XXIII Part A	Diacetyl peroxide	110-22-5	2915.90.70
Annex XXIII Part A	Esters of acrylic acid	N/A	2916.12.00
Annex XXIII Part A	Ethyl acrylate	140-88-5	2916.12.00
Annex XXIII Part A	Butyl acrylate	141-32-2	2916.12.00
Annex XXIII Part A	Methacrylic acid and its salts	N/A	2916.13.00
Annex XXIII Part A	Methacrylic acid	79-41-4	2916.13.00
Annex XXIII Part A	Sodium methacrylate	5536-61-8	2916.13.00
Annex XXIII Part A	Esters of methacrylic acid	N/A	2916.14.00
Annex XXIII Part A	Methyl methacrylate	80-62-6	2916.14.00

Annex XXIII Part A	Ethylene dimethacrylate	97-90-5	2916.14.00
Annex XXIII Part A	Oleic, linoleic or linolenic acids, their salts and esters	N/A	2916.15.00
Annex XXIII Part A	Dinonyl or didecyl orthophthalates	N/A	2917.33.00
Annex XXIII Part A	Parathion	56-38-2	2920.11.00
Annex XXIII Part A	Parathion-methyl	298-00-0	2920.11.00
Annex XXIII Part A	Hexamethylenediamine and its salts	N/A	2921.22.00
Annex XXIII Part A	Hexamethylenediamine	124-09-4	2921.22.00
Annex XXIII Part A	Aniline and its salts	N/A	2921.41.00
Annex XXIII Part A	Aniline	62-53-3	2921.41.00
Annex XXIII Part A	Monoethanolamine and its salts	N/A	2922.11.00
Annex XXIII Part A	Monoethanolamine	141-43-5	2922.11.00
Annex XXIII Part A	Anthranilic acid and its salts	N/A	2922.43.00
Annex XXIII Part A	Anthranilic acid	118-92-3	2922.43.00
Annex XXIII Part A	Lecithins and other phosphoaminolipids	N/A	2923.20.00
Annex XXIII Part A	Lecithin	8002-43-5	2923.20.00
Annex XXIII Part A	Methionine	63-68-3	2930.40.10
Annex XXIII Part A	Other organo-sulphur compounds	N/A	2930.40.90
Annex XXIII Part A	Other derivatives of malonylurea (barbituric acid); salts thereof	N/A	2933.54.00
Annex XXIII Part A	6-Hexanelactam; epsilon-caprolactam	105-60-2	2933.71.00

**in bold new chemicals and new CN codes*

2.7 Explosives precursors

Since 2014, EU-wide rules on the marketing and use of explosives precursors were in place under Regulation (EU) No 98/2013⁽³⁹⁾. However, the threat from homemade explosives remained high and continued to evolve. It was therefore necessary to further strengthen and harmonise the system for preventing the illicit manufacture of homemade explosives. Regulation (EU) No 2019/1148⁽⁴⁰⁾ of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors was thus adopted, repealing Regulation (EU) No 2019/1148 with effect from 1 February 2021.

Although export controls are not explicitly mentioned in this regulation, it is restricted the access to, and the use of explosives precursors by, members of the general public. Notwithstanding that restriction, Member States were, however, able to decide to grant members of the general public access to those substances through a system of licences and registration.

The European Commission has developed guidelines⁽⁴¹⁾ intended to assist Member States' national authorities, economic operators, and online marketplaces in the application of Regulation.

The regulation establishes two type of explosive precursors, those included in the Annex I and others in Annex II (see table 14 below).

Table 14. Description of the annexes to the Regulation (EU) No 2019/1148

Annex	Description
Annex I	Substances which shall not be made available to members of the general public on their own, or in mixtures or substances including them, except if the concentration is equal to or lower than the limit values set out below
Annex II	Substances on their own or in mixtures or in substances for which suspicious transactions shall be reported

⁽³⁹⁾ Regulation (EU) No 98/2013 of the European Parliament and the Council of 15 January 2013 on the marketing and use of explosives precursors.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02013R0098-20170301>

⁽⁴⁰⁾ Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019R1148>

⁽⁴¹⁾ Commission Notice Guidelines for the implementation of Regulation (EU) 2019/1148 on the marketing and use of explosives precursors (2020/C 210/01)

[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020XC0624\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020XC0624(01))

Table 15. Chemicals subject to the regulation on explosive precursors, (EU) No 2019/1148

Reference	Chemical name	CAS number	CN code
Annex I	Nitric acid; HNO ₃	7697-37-2	2808.00.00
Annex I	Hydrogen peroxide; H ₂ O ₂	7722-84-1	2847.00.00
Annex I	Sulphuric acid; H ₂ SO ₄	7664-93-9	2807.00.00
Annex I	Nitromethane	75-52-5	2904.20.00
Annex I	Ammonium nitrate; NH ₄ NO ₃	6484-52-2	3102.30 (subheading)
Annex I	Potassium chlorate; KClO ₃	3811-04-9	2829.19.00
Annex I	Potassium perchlorate; KClO ₄	7778-74-7	2829.90.10
Annex I	Sodium chlorate; NaClO ₃	7775-09-9	2829.11.00
Annex I	Sodium perchlorate; NaClO ₄	7601-89-0	2829.90.10
Annex I	Hexamethylenetetramine; Hexamine	100-97-0	2933.69.40
Annex II	Acetone	67-64-1	2914.11.00
Annex II	Potassium nitrate; KNO ₃	7757-79-1	2834.21.00
Annex II	Sodium nitrate; NaNO ₃	7631-99-4	3102.50.00
Annex II	Calcium nitrate; Ca(NO ₃) ₂	10124-37-5	2834.29.80
Annex II	Calcium ammonium nitrate	15245-12-2	3102.60.00
Annex II	Magnesium powder	7439-95-4	8104.30.00
Annex II	Magnesium nitrate hexahydrate; Mg(NO ₃) ₂ ·6H ₂ O	13446-18-9	2834.29.80
Annex II	Aluminium powder	7429-90-5	7603.10.00

2.8 Psychotropic and narcotic precursors (drug precursors)

The United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances adopted in Vienna on 19 December 1988 is part of the worldwide effort to combat illegal drugs.

In the EU the implementation of the UN convention is governed by the regulation (EC) No 111/2005 ⁽⁴²⁾ and its amendments, which lays down rules for the monitoring of trade between the Union and third countries in certain substances frequently used for the illicit manufacture of narcotic drugs and psychotropic substances (drug precursors) for the purpose of preventing the diversion of such substances.

Recently, new chemical precursors have been added in the annexes of this regulation, by means the amendment (EU) No 2020/1737 ⁽⁴³⁾.

Drug precursors are scheduled in three categories as follows:

Table 16. Description of the annexes to the Regulation (EC) No 111/2005

Annex	Description
Category 1	It covers the most sensitive substances, from which illicit drugs can be produced most easily. Exports involving scheduled substances listed in Category 1 of the Annex, shall hold an export licence and also submit a pre-export notification to the competent authority.
Category 2	It covers less sensitive substances. Exports involving scheduled substances listed in Category 2 of the Annex, require a registration from EU authorities and, for certain destinations, require to submit a pre-export notification to the competent authority.
Category 3	It covers bulk chemicals that can have different types of uses in the manufacturing process. Exports involving scheduled substances listed in Category 3 of the Annex, require a registration from EU authorities and, for certain destinations, require to submit a pre-export notification to the competent authority.

⁽⁴²⁾ Council Regulation (EC) No 111/2005 of 22 December 2004 laying down rules for the monitoring of trade between the Union and third countries in drug precursors
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02005R0111-20210113&qid=1610958098123>

⁽⁴³⁾ Commission Delegated Regulation (EU) No 2020/1737 of 14 July 2020 amending Regulation (EC) No 273/2004 of the European Parliament and of the Council and Council Regulation (EC) No 111/2005 as regards the inclusion of certain drug precursors in the list of scheduled substances. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32020R1737>

Table 17. Chemicals subject to the regulation on drug precursors, (EC) No 111/2005

(*in bold new chemicals or new CN codes)

Reference	Chemical name	CAS number	CN code
Annex I CAT. 1	1-Phenyl-2-propanone	103-79-7	2914.31.00
Annex I CAT. 1	Methyl α -phenylacetoacetate; MAPA	16648-44-5	2918.30.00
Annex I CAT. 1	Ethyl α -phenylacetoacetate; EAPA	5413-05-8	2918.30.00
Annex I CAT. 1	BMK methyl glycidate	80532-66-7	2918.99.90
Annex I CAT. 1	BMK glycidic acid	25547-51-7	2918.99.90
Annex I CAT. 1	N-Acetylanthranilic acid	89-52-1	2924.23.00
Annex I CAT. 1	α -phenylacetoacetamide; APAA	4433-77-6	2924.29.70
Annex I CAT. 1	α -phenylacetoacetonitrile; APAAN	4468-48-8	2926.40.00
Annex I CAT. 1	Isosafrole	120-58-1	2932.91.00
Annex I CAT. 1	3,4-Methylenedioxyphenyl-2-propanone; MDP2P	4676-39-5	2932.92.00
Annex I CAT. 1	Piperonal	120-57-0	2932.93.00
Annex I CAT. 1	Safrole	94-59-7	2932.94.00
Annex I CAT. 1	PMK methyl glycidate	13605-48-6	2932.99.00
Annex I CAT. 1	Methyl 3-oxo-2-(3,4-methylenedioxyphenyl)butanoate; MAMDPA	1369021-80-6	2932.99.00
Annex I CAT. 1	PMK glycidic acid	2167189-50-4	2932.99.00
Annex I CAT. 1	4-Anilino-N-phenethylpiperidine; ANPP	21409-26-7	2933.36.00
Annex I CAT. 1	N-Phenethyl-4-piperidone; NPP	39742-60-4	2933.37.00
Annex I CAT. 1	Ephedrine	299-42-3	2939.41.00
Annex I CAT. 1	Pseudoephedrine	90-82-4	2939.42.00
Annex I CAT. 1	Norephedrine	14838-15-4	2939.44.00
Annex I CAT. 1	Ergometrine	60-79-7	2939.61.00
Annex I CAT. 1	Ergotamine	113-15-5	2939.62.00
Annex I CAT. 1	Lysergic acid	82-58-6	2939.63.00
Annex I CAT. 1	(1R,2S)-(-)-chloroephedrine	110925-64-9	2939.79.90
Annex I CAT. 1	(1S,2R)-(+)-chloroephedrine	1384199-95-4	2939.79.90

Annex I CAT. 1	(1S,2S)-(+)-chloropseudoephedrine	73393-61-0	2939.79.90
Annex I CAT. 1	(1R,2R)-(-)-chloropseudoephedrine	771434-80-1	2939.79.90
Annex I CAT. 2	Red phosphorus	7723-14-0	2804.70.10
Annex I CAT. 2	Acetic anhydride	108-24-7	2915.24.00
Annex I CAT. 2	Phenylacetic acid	103-82-2	2916.34.00
Annex I CAT. 2	Anthranilic acid	118-92-3	2922.43.00
Annex I CAT. 2	Piperidine	110-89-4	2933.32.00
Annex I CAT. 2	Potassium permanganate; $KMnO_4$	7722-64-7	2841.61.00
Annex I CAT. 3	Hydrogen chloride; HCl	7647-01-0	2806.10.00
Annex I CAT. 3	Sulphuric acid; H_2SO_4	7664-93-9	2807.00.00
Annex I CAT. 3	Toluene	108-88-3	2902.30.00
Annex I CAT. 3	Diethyl ether	60-29-7	2909.11.00
Annex I CAT. 3	Acetone	67-64-1	2914.11.00
Annex I CAT. 3	Methyl ethyl ketone; MEK	78-93-3	2914.12.00

**in bold new chemicals and new CN codes*

3 Conclusions

Chemicals play a key role in our lives but if mishandled may also pose threats to health and security of the citizens. Many chemicals of daily industrial or personal use are also precursors of chemical weapons, or explosives.

For these reasons their use, transportation and of course export – object of this handbook - are controlled by a number of EU regulations, as well as treaties that all EU member states need to comply with.

The Handbook (2023 edition) follows the two previous editions of 2019 and 2021 which were met by a high interest by the public. The handbook has been downloaded thousands of times; requests came also to get the actual database, which we made available separately in the JRC Data Catalogue: <https://data.jrc.ec.europa.eu/collection/id-00344>

This third revision incorporates around 2000 chemicals, adding to the previous two more chemicals and references linked the restrictive measures against Russia amended in 2022 and 2023 as consequence of the invasion of Ukraine, plus, plus some dual-use chemicals not expressly mentioned in the control list, as well as changes on the Combined Nomenclature due to the entry into force of the 2022 Harmonized System.

All together, we are confident that the handbook helps the users to improve their export compliance by limiting the risk of mistakes and penalties by orienting themselves within the following collection of export regulations in force:

- Dual-use regulation, (EU) No 2021/821
- The Chemical Weapons Convention (International treaty)
- Chemicals with military applications, 2008/944/CFSP
- Hazardous chemicals, (EU) No 649/2012
- Chemicals included in the anti-torture regulation, (EU) No 2019/125
- Chemicals subject to sanctions for certain countries (Russia, Syria, DPRK and Iran)
- Chemical precursors of explosives, (EU) No 2019/1148
- Chemical precursors of psychotropic and narcotic substances, (EC) No 111/2005

We believe that this list of legislative references is comprehensive, but of course we are open to suggestions to include more relevant ones, as well as improve the handbook's readability and format. Contact email: jrc-strike@ec.europa.eu

As final disclaimer, we would like to underline that although this handbook contains around 2000 chemicals in the most comprehensive overview that we could provide, the fact that a chemical is not present in this handbook does not imply that is not under the scope of any export regulations. The handbook is meant to be a helpful guide, but its users are always due to consult the primary legislation and follow its requirements.

Tables

All data included in this handbook are available on the JRC Data Catalogue in Excel format for each year data set: <https://data.jrc.ec.europa.eu/collection/id-00344>

References

Regulation (EU) 2021/821 of the European Parliament and of the Council of 20 May 2021 setting up a Union regime for the control of exports, brokering, technical assistance, transit and transfer of dual-use items (recast); <https://eur-lex.europa.eu/eli/reg/2021/821/oj>

The Australia Group; <https://www.dfat.gov.au/publications/minisite/theaustraliagroupnet/site/en/index.html>

Commission Recommendation (EU) No 2019/1318 of 30 July 2019 on internal compliance programmes for dual-use trade controls under Council Regulation (EC) No 428/2009
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019H1318>

Commission Recommendation (EU) 2021/1700 of 15 September 2021 on internal compliance programmes for controls of research involving dual-use items under Regulation (EU) 2021/821 of the European Parliament and of the Council setting up a Union regime for the control of exports, brokering, technical assistance, transit and transfer of dual-use items
<https://eur-lex.europa.eu/eli/reco/2021/1700/oj>

Regulation (EU) 2019/452 of the European Parliament and of the Council of 19 March 2019 establishing a framework for the screening of foreign direct investments into the Union, fully operational as of 11 October 2020.
<https://eur-lex.europa.eu/eli/reg/2019/452/oj>

European Customs Inventory of Chemical Substances (ECICS);
https://ec.europa.eu/taxation_customs/dds2/ecics/chemicalsubstance_consultation.jsp?Lang=en

Commission Delegated Regulation (EU) 2023/66 of 21 October 2022 amending Regulation (EU) 2021/821 of the European Parliament and of the Council as regards the list of dual-use items.
http://data.europa.eu/eli/reg_del/2023/66/oj

Commission Recommendation (EU) No 2019/1318 of 30 July 2019 on internal compliance programmes for dual-use trade controls under Council Regulation (EC) No 428/2009.
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019H1318>

Commission Implementing Regulation (EU) 2022/1998 of 20 September 2022 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff
http://data.europa.eu/eli/reg_impl/2022/1998/oj

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Schedule 1 of the Chemical Weapons Convention.
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<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32020R1737>

List of abbreviations and definitions

AG	Australia Group
CAS	Chemical Abstract Service
CFSP	Common Foreign and Security Policy
CN	Combined Nomenclature
CWC	Chemical Weapons Convention
DNSS	Directorate of Nuclear Safety and Security
DPRK	Democratic Popular Republic of Korea
DU	Dual Use
EC	European Council
ECHA	European Chemicals Agency
ECN	Export Control Number
EU	European Union
HS	Harmonized System
MTCR	Missile Technology Control Regime
NSG	Nuclear Suppliers Group
OPCW	Organization for the prohibition of the Chemical Weapons
PIC	Prior Informed Consent
STC	Strategic Trade Controls
UN	United Nations
WA	Wassenaar Arrangement
WCO	World Customs Organization
WMD	Weapons of Mass Destruction

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