at 0.01 ppm; and Eggs at 0.01 ppm. In addition, DuPont is proposing pursuant to section 408(d) of the Federal Food, Drug and cosmetic Act, 21 U.S.C. 346a(d), to amend 40 CFR part 180 to establish indirect or inadvertent tolerances for residues of fluazaindolizine, including its metabolites and their conjugates, expressed as the stoichiometric equivalent of fluazaindolizine, in or on the following commodity: Grass, forage, fodder and hay, group 17, straw at 0.15 ppm. The LC/MS/MS system operating with an electrospray interface (ESI) operating in both positive and negative polarities is used to measure and evaluate the chemical fluazaindolizine. Contact: RD.

11. *PP 0F8872.* (EPA–HQ–OPP–2021–0355). Makhteshim Agan of North America, Inc. (d/b/a ADAMA), 3120 Highwoods Boulevard, Suite 100, Raleigh, NC 27604, requests to establish a tolerance for residues of the insecticide novaluron in or on Tree nuts, nutmeat (Crop Group 14–12) at 0.07 parts per million (ppm) and, Almond, hulls at 15.0 ppm. The samples were analyzed using a working method very similar to the reference method, ''Magnitude of the Residue on Novaluron in Pome Fruit Raw Agricultural and Processed Commodities'', PTRL Study #991W. Samples were homogenized with dry ice using a Robot Coupe chopper. Ten-gram subsamples were extracted in methanol/water using two rounds of blending with an Omni mixer. The extract was filtered to remove the solids from solution. An aliquot of the extract was evaporated to remove the methanol. Aqueous sodium chloride was added to the remaining aqueous fraction, and the aqueous fraction was extracted three times against ethyl acetate. The ethyl acetate fractions were combined and evaporated just to dryness on a nitrogen evaporator. The sample residue was re-dissolved in ethyl acetate and taken for clean-up on an amino (NH_2) solid phase extraction cartridge. The eluate was evaporated on a nitrogen evaporator and then brought to a known volume with ethyl acetate. The extracts were analyzed using a gas chromatograph with a micro electron capture detector (μECD). Method suitability was evaluated both prior to sample analysis and concurrently with sample analysis. Recoveries were in the range 82–118%. The lowest level of method validation (LLMV) for pea (dry) was approximately 0.05 ppm for novaluron. Contact: RD.

12. *PP 0F8883 and PP 0F8884.* (EPA–HQ–OPP–2016–0013). ISK Biosciences Corporation, 7470 Auburn Road, Suite A, Concord, OH 44077, requests to establish a tolerance for residues of the insecticide flonicamid in or on Small fruit, vine climbing (except fuzzy kiwifruit) (crop group 13–07F) at 3.0 parts per million (ppm) and to amend the existing tolerance in or on alfalfa, hay at 7.0 ppm. Analytical methodology has been developed to determine the residues of flonicamid and its three major plant metabolites, TFNA, TFNG, and TFNA–AM in various crops. The residue analytical method for the majority of crops includes an initial extraction with acetonitrile (ACN)/deionized (DI) water, followed by a liquid-liquid partition with ethyl acetate. The residue method for wheat straw is similar, except that a C18 solid phase extraction (SPE) is added prior to the liquid-liquid partition. The final sample solution is quantitated using a liquid chromatograph (LC) equipped with a reverse phase column and a triple quadruple mass spectrometer (MS/MS). Contact: RD.

Authority: 21 U.S.C. 346a.

Dated: June 8, 2021.

Delores Barber,

Director, Information Technology and Resources Management Division, Office of Program Support.

[FR Doc. 2021–13702 Filed 6–25–21; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 705

[EPA–HQ–OPPT–2020–0549; FRL–10017–78]

RIN 2070–AK67

TSCA Section 8(a)(7) Reporting and Recordkeeping Requirements for Perfluoroalkyl and Polyfluoroalkyl Substances

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing reporting and recordkeeping requirements for Per- and Polyfluoroalkyl Substances (PFAS) under the Toxic Substances Control Act (TSCA). In accordance with obligations under TSCA, as amended by the National Defense Authorization Act for Fiscal Year 2020, EPA proposes to require certain persons that manufacture (including import) or have manufactured these chemical substances in any year since January 1, 2011, to electronically report information regarding PFAS uses, production volumes, disposal, exposures, and hazards. EPA is requesting public comment on all aspects of this proposed rule and has also identified items of particular interest for public input. In addition to fulfilling statutory obligations under TSCA, this document will enable EPA to better characterize the sources and quantities of manufactured PFAS in the United States.

DATES: Comments must be received on or before August 27, 2021. Under the Paperwork Reduction Act, comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before July 28, 2021.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPPT–2020–0549, using the Federal eRulemaking Portal at *http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

Due to the public health concerns related to COVID–19, the EPA Docket Center (EPA/DC) and Reading Room is closed to visitors with limited exceptions. The staff continues to provide remote customer service via email, phone, and webform. For the latest status information on EPA/DC services and docket access, visit *https://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT:

For technical information contact: Stephanie Griffin, Data Gathering and Analysis Division (7401M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460–0001; telephone number: (202) 564–1463; email address: *griffin.stephanie@epa.gov.*

For general information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554–1404; email address: *TSCA-Hotline@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Executive Summary

A. Does this action apply to me?

You may be potentially affected by this action if you currently or have previously manufactured (defined by statute at 15 U.S.C. 2602(9) to include import) a chemical substance that is a PFAS between January 1, 2011 and the effective date of the final rule. Note that this rule is limited to manufacturers

(including importers) of PFAS that are covered as a ''chemical substance'' under TSCA section 3(2). This rule does not require reporting on substances that are excluded from the definition of ''chemical substance'' in TSCA section 3(2)(B). Those exclusions include, but are not limited to: Any pesticide (as defined by the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide; any food, food additive, drug, cosmetic, or device, as defined by the Federal Food, Drug, and Cosmetic Act, when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic or device; tobacco or any tobacco product; any source material, special nuclear material, or byproduct material as such terms are defined in the Atomic Energy Act of 1954; and, any article the sale of which is subject to the tax imposed by Section 4181 of the Internal Revenue Code of 1954. Substances which have been manufactured or imported for intended use as any food, food additive, drug, cosmetic, or device, regulated by the Food and Drug Administration, are not chemical substances under TSCA.

The manufacture of PFAS as a byproduct is not exempt for the purpose of this proposed rule. Unlike TSCA section 8(a)(1), which specifically provides an exemption for small manufacturers and processors, TSCA section 8(a)(7) provides no such exemption. Therefore, this proposed rule under TSCA section 8(a)(7) does not exempt small manufacturers from reporting and recordkeeping requirements. See the discussion under Unit II.D. for further discussion of the inclusion of small manufacturers in this proposed rule. The Agency's previous experience with TSCA section 8(a)(1) collections, as well as the Agency's understanding of disposal and other waste management methods involving PFAS, suggests that most respondents affected by this collection activity may be from the following North American Industrial Classification System (NAICS) code categories:

- NAICS 324—Petroleum and Coal Product Manufacturing;
- NAICS 325—Chemical Manufacturing;
- NAICS 326113—Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing;
- NAICS 327910—Abrasive Product Manufacturing;
- NAICS 333999—All Other Miscellaneous General Purpose Machinery Manufacturing;
- NAICS 334511—Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing;
- NAICS 336111—Automobile Manufacturing;
- NAICS 423510—Metal Service Centers and Other Metal Merchant Wholesalers;
- NAICS 424690—Other Chemical and Allied Products Merchant Wholesalers;
- NAICS 447190—Other Gasoline Stations;
- NAICS 551112—Offices of Other Holding Companies;
- NAICS 562—Waste Management and Remediation Services.

Since other entities may also be affected, the Agency has not attempted to describe all the specific entities and corresponding NAICS codes for entities that may be interested in or affected by this action, but rather has provided a guide to help readers determine whether this document applies to them. If you have any questions regarding the applicability of this action to a particular entity, consult the technical contact person listed under **FOR FURTHER INFORMATION CONTACT**.

In addition, please note that any use of the term ''manufacture'' in this document will encompass ''import'' and the term ''manufacturer'' will encompass ''importer.''

B. What is the Agency's authority for taking this action?

EPA is proposing this rule pursuant to its authority in TSCA section 8(a)(7) (15 U.S.C. 2607(a)(7)). The National Defense Authorization Act for Fiscal Year 2020 (Pub. L. 116–92, section 7351) amended TSCA section 8(a) in December 2019, adding section 8(a)(7), titled *PFAS Data.* TSCA section 8(a)(7) requires EPA to promulgate a rule ''requiring each person who has manufactured a chemical substance that is a [PFAS] in any year since January 1, 2011'' to report information described in TSCA section 8(a)(2)(A) through (G). This includes a broad range of information, such as information related to chemical identity and structure, production, use, exposure, disposal, and health and environmental effects.

TSCA section 14 imposes requirements for the assertion, substantiation, and review of information that is claimed as confidential (also known as confidential business information (CBI)).

C. What action is the Agency taking?

EPA is proposing reporting and recordkeeping requirements under TSCA section 8(a)(7) for PFAS manufactured in any year since January 1, 2011. EPA is providing a comment period during which the public will have the opportunity to comment on this proposed action and its proposed requirements. Commenters are encouraged to provide comments and feedback related to the proposed reporting and recordkeeping requirements presented in this Notification of Proposed Rulemaking (NPRM), including the scope of PFAS covered by the rule (see Unit V. for more discussion on specific items for which the Agency is requesting comments). EPA is providing a comment period of 60 days from the publication date of this NPRM.

D. Why is the Agency taking this action?

The Agency is proposing this action pursuant to TSCA section 8(a)(7) to obtain certain information known to or reasonably ascertainable by manufacturers of PFAS. TSCA section 8(a)(7) requires the Agency to publish a final rule not later than January 1, 2023.

E. What are the incremental economic impacts?

EPA has prepared an economic analysis of the potential impacts associated with this proposed rule (Ref. 13). The primary purpose of this proposed rule is the collection of detailed data on PFAS, as required under TSCA section (8)(a)(7). One potential benefit of this action is the information collected may serve as a basis to better understand potential routes of exposure to PFAS and potential human health and environmental impacts of certain PFAS, among other research needs listed in the Agency's PFAS Action Plan.

The industry is expected to incur one-time burdens and costs associated with rule familiarization, form completion, CBI claim substantiation, recordkeeping, and electronic reporting activities. Under the proposed rule, EPA estimates a total industry burden of approximately 122,104 hours, with a cost of approximately $9.8 million. The affected small businesses subject to the proposed rule are expected to incur $1,788,506 in costs for this one-time reporting, with per-firm costs estimated to range from $16,864 to $92,390. The Agency is expected to incur a burden of approximately 7,361 hours and a cost of $948,078. The total social burden and cost are therefore estimated to be approximately 129,465 hours and $10.8 million, respectively (Ref. 13).

F. What should I consider as I prepare my comments for EPA?

1. *Submitting CBI.* Do not submit this information to EPA through *regulations.gov* or email (see the above

ADDRESSES section for submitting comments either by mail or hand delivery). Clearly mark the part or all of the information that you claim to be CBI. For confidential information in a disk or CD–ROM that you mail to EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for preparing your comments.* When preparing and submitting your comments, see the commenting tips at *http://www.epa.gov/dockets/comments.html.*

II. Background

A. What is TSCA Section 8(a)?

TSCA section 8(a)(1) authorizes EPA to promulgate rules which require entities, that are not considered small manufacturers or processors, who manufacture, process, or propose to manufacture or process a chemical substance, to maintain such records and submit such reports as the EPA Administrator may reasonably require. Similarly, under those rules, entities who manufacture, process, or propose to manufacture or process a mixture or a chemical substance in small quantities (subject to limitations) must maintain records and submit reports to the extent necessary for the effective enforcement of TSCA.

Under TSCA section 8(a)(2), EPA may require recordkeeping and reporting of the following information:

- The covered common or trade name, chemical identity and molecular structure of each chemical substance or mixture;
- Categories or proposed categories of use for each substance or mixture;
- Total amount of each substance or mixture manufactured or processed, the amounts manufactured or processed for each category of use, and reasonable estimates of the respective proposed amounts;
- Descriptions of byproducts resulting from the manufacture, processing, use, or disposal of each substance or mixture;
- All existing information concerning the environmental and health effects of each substance or mixture;
- The number of individuals exposed, and reasonable estimates on the number of individuals who will be exposed, to each substance or mixture in their places of work and the duration of their exposure, and;
- The manner or method of disposal of each substance or mixture, and any change in such manner or method.

Under TSCA section 8(a)(7), EPA must promulgate a rule to require each person who has manufactured PFAS in any year since 2011 to report the data described in TSCA section 8(a)(2)(A) through (G) to EPA.

B. What are PFAS?

PFAS are synthetic organic compounds that do not occur naturally in the environment. PFAS contain an alkyl carbon on which the hydrogen atoms have been partially or completely replaced by fluorine atoms. The strong carbon-fluorine bonds of PFAS make some of them resistant to degradation and thus highly persistent in the environment (Refs. 1 and 2). Some of these chemicals have been used for decades in a wide variety of consumer and industrial products (Ref. 1). Some PFAS have been detected in wildlife, including higher trophic organisms, indicating that at least some PFAS have the ability to bioaccumulate (Ref. 2). Some PFAS can accumulate in humans and remain in the human body for long periods of time (*e.g.,* months to years) (Refs. 1, 2, and 3). As noted in EPA's PFAS Action Plan (Ref. 1), because of the widespread use of PFAS in commerce and their tendency to persist in the environment, most people in the United States have been exposed to PFAS. As a result, several PFAS have been detected in human blood serum (Refs. 1, 2, 3, and 4).

Under TSCA section 8(b), EPA maintains the TSCA Chemical Substance Inventory (''Inventory''), which contains all existing chemical substances manufactured, processed, or imported in the United States that do not qualify for an exemption or exclusion under TSCA (Ref. 5). EPA has identified 1,346 PFAS on the Inventory as of April 2021, 669 of which are on the active Inventory (*i.e.,* in U.S. commerce). The list of active chemicals includes those known to be in commerce after June 2006.

C. What would be the reporting standard?

EPA is proposing that manufacturers will report information to the extent that the information is known to or reasonably ascertainable by the manufacturer (see TSCA section 8(b)(2)). ''Known to or reasonably ascertainable by'' would be defined to include ''all information in a person's possession or control, plus all information that a reasonable person similarly situated might be expected to possess, control, or know.'' This reporting standard would require reporting entities to evaluate their current level of knowledge of their manufactured products (including imports), as well as evaluate whether there is additional information that a reasonable person, similarly situated, would be expected to know, possess, or control. This standard carries with it an exercise of due diligence, and the information-gathering activities that may be necessary for manufacturers to achieve this reporting standard may vary from case-to-case.

This standard would require that submitters conduct a reasonable inquiry within the full scope of their organization (not just the information known to managerial or supervisory employees). This standard may also entail inquiries outside the organization to fill gaps in the submitter's knowledge. Such activities may, though not necessarily, include phone calls or email inquiries to upstream suppliers or downstream users or employees or other agents of the manufacturer, including persons involved in the research and development, import or production, or marketing of the PFAS. Examples of types of information that are considered to be in a manufacturer's possession or control, or that a reasonable person similarly situated might be expected to possess, control, or know include: Files maintained by the manufacturer such as marketing studies, sales reports, or customer surveys; information contained in standard references showing use information or concentrations of chemical substances in mixtures, such as a Safety Data Sheet or a supplier notification; and information from the Chemical Abstracts Service (CAS) or from Dun & Bradstreet (D–U–N–S). This information may also include knowledge gained through discussions, conferences, and technical publications. This definition is identical to the definition of the same term at 40 CFR 704.3. In addition, this is the same reporting standard employed in the TSCA section 8(a) Chemical Data Reporting (CDR) rule (*see* 40 CFR 711.15). EPA has also provided CDR reporting guidance materials on this reporting standard, including hypothetical examples of applying the ''known to or reasonably ascertainable by'' reporting standard in the context of collecting processing and use data for CDR (Ref. 6, pages 45–47). Therefore, EPA anticipates many reporters under this proposed rule will be familiar with this reporting standard, and resources

are available to support those reporters who may not be familiar with the standard. EPA acknowledges that it is possible that an importer, particularly an importer of articles containing PFAS, may not have knowledge that they have imported PFAS and thus not report under this rule, even after they have conducted their due diligence under this reporting standard as described in this paragraph. Such an importer should document its activities to support any claims it might need to make related to due diligence.

In the event that a manufacturer does not have actual data (*e.g.,* measurements or monitoring data) to report to EPA, the manufacturer would be required to make ''reasonable estimates'' of such information. ''Reasonable estimates'' may rely, for example, on approaches such as mass balance calculations, emissions factors, or best engineering judgment.

D. Why are small businesses not excluded from reporting similar to Chemical Data Reporting (CDR) and other section 8(a) reporting?

Unlike TSCA section 8(a)(1), which provides an express exemption for small manufacturers and processors, TSCA section 8(a)(7) specifically states that ''each person who has manufactured a chemical substance that is a perfluoroalkyl or polyfluoroalkyl substance'' shall be subject to the rule. Rather than amend TSCA section 8(a)(1), Congress chose to add an entirely new, standalone subsection to TSCA section 8(a). This indicates an intent for TSCA section 8(a)(7) to constitute separate, freestanding rulemaking authority; therefore, it is not constrained by requirements and provisions in TSCA section 8(a)(1).

However, in carrying out TSCA section 8, EPA shall, to the extent feasible: (A) Not require reporting which is unnecessary or duplicative; (B) Minimize the cost of compliance with TSCA section 8 and the rules issued thereunder on small manufacturers and processors; and (C) Apply any reporting obligations to those persons likely to have information relevant to the effective implementation of this subchapter (TSCA section 8(a)(5)).

E. How will EPA use the information?

TSCA section 8(a)(7) is silent on how the information collected under the TSCA section 8(a)(7) rule is to be used. However, collecting information on PFAS identities, uses, production volumes by category of use, byproducts, environmental and health effects, workers exposure, and disposal supports the Agency's mission in the PFAS Action Plan to identify and better understand these chemicals and to increase scientific research on them.

EPA intends to use information on these chemicals to support assessments of new and existing chemicals under TSCA. For instance, information collected under this proposed rule will help inform future assessments of potential exposure to these PFAS. The Agency would also benefit from receiving all existing information related to human health and environmental effects of such substances, in order to fulfill additional environmental protection mandates beyond the TSCA program. For instance, information on PFAS use, exposure, and effects may be used to inform regulatory activities under the Safe Drinking Water Act (42 U.S.C. 300f *et seq.*), the Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*), and the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601 *et seq.*), while data on PFAS manufacturing sites and disposal methods may support contaminants characterizations conducted to support contaminated site work and solid waste management programs.

Additionally, TSCA section 9(e) requires the EPA Administrator to make information related to exposure or releases available to other EPA offices or federal agencies if such exposures may be prevented or reduced under another law. EPA may share such information collected under this proposed rule as appropriate.

III. Summary of Proposed Reporting and Recordkeeping Requirements

EPA is proposing reporting and recordkeeping requirements for manufacturers of PFAS pursuant to TSCA section 8(a)(7).

A. What chemical substances would be reportable under this rule?

1. *Reportable chemicals substances.* Under TSCA section 8(a)(7), EPA must collect information on chemical substances that are ''perfluoroalkyl or polyfluoroalkyl'' substances or PFAS. EPA has determined that any PFAS that fall within the structural definition, described below, are the PFAS referred to in TSCA section 8(a)(7). For this proposed rule, EPA has identified at least 1,364 chemical substances and mixtures that are PFAS and would potentially be subject to reporting under the final rule, if they have been manufactured in any year since January 1, 2011.

For the purposes of this proposed action, the structural definition of PFAS includes per- and polyfluorinated substances that structurally contain the unit R-(CF2)-C(F)(R′)R″. Both the CF2 and CF moieties are saturated carbons and none of the R groups (R, R′ or R″) can be hydrogen. It should be noted that this structural definition of PFAS is a working definition which has been used by EPA's Office of Pollution Prevention and Toxics when identifying PFAS on the TSCA Inventory. This definition may not be identical to other definitions of PFAS used within EPA and/or other organizations. To assist potential reporters with determining whether certain substances may be covered under this structural definition, EPA has identified specific PFAS covered by this proposed rule. These will be included as non-exhaustive examples in the rule where it is possible to do so without divulging information claimed as CBI. The scope of PFAS examples listed in this proposal includes:

- All PFAS listed as active on the TSCA Inventory. This includes PFAS that are identified by CAS number; confidential chemicals whose generic names contain ''fluor'' and are identified by Accession number; and confidential chemicals whose generic names do not contain ''fluor'', and therefore, are not listed by CASRNs, Accession numbers, or low-volume exemptions (LVE) case numbers (see note on structural diagram examples below).
- All PFAS that are subject to TSCA section 5 (new chemicals) LVE applications per 40 CFR 723.50 that have been granted by EPA. This includes the PFAS that were subject to granted LVE applications that have since been withdrawn by the LVE application submitter. Additional discussion on LVEs is below.

Under TSCA section 5, any person who intends to manufacture a chemical not on the TSCA Inventory must first notify EPA. Typically, this is done by submission of a premanufacture notice (PMN) (Ref. 8). However, for low-volume chemical substances (*i.e.,* chemical substances manufactured at no more than 10,000 kg per year) companies can submit a LVE application to EPA per 40 CFR 723.50. EPA may either grant or deny an LVE submission after review, but LVEs that are granted are not listed on the Inventory, unlike PMN chemical substances. Therefore, EPA is also providing a list of PFAS chemicals for which EPA granted an LVE notice.

LVE submitters may choose to withdraw their granted LVE application. In order to compile a comprehensive dataset as authorized under TSCA section 8(a)(7), EPA is including these

withdrawn LVE submissions in the list of examples subject to this proposed rule if they were submitted since 2011.

- This proposed rule will also include structural diagrams to capture any PFAS whose CAS or Accession numbers could not be divulged due to CBI claims, whose identity is not listed on the TSCA Inventory because it is subject to an LVE, or which is a byproduct not listed on the Inventory and not subject to an LVE, yet meets the structural definition. The list of identified PFAS and structural diagrams can also be found in the docket (Ref. 7). The PFAS included in the list and identified by the structural diagrams are examples of substances that meet this rule's definition of PFAS; it is not a comprehensive list of all substances within this rule's scope.

EPA is providing these examples of PFAS for the purpose of assisting manufacturers in determining whether a chemical substance they have manufactured in any year since 2011 meets this proposed rule's definition of PFAS. Because the Inventory's active designation dates back to June 2006, it is possible for a firm to have manufactured one of these listed PFAS yet not be required to report under this proposed rule, if they have manufactured it only in the period prior to January 1, 2011.

This list was developed as of April 2021. EPA anticipates updating this list prior to promulgating the final rule, both in response to public comment, and as a result of PMNs added to the Inventory and LVEs granted by EPA between April 2021 and the date of publication of the final rule.

For the purposes of this proposed rule, articles containing PFAS, including imported articles containing PFAS (such as articles containing PFAS as part of surface coatings), are included in the scope of reportable chemical substances. TSCA does not define articles, nor does the statute define articles as a category of substances exclusive of chemical substances. EPA therefore considers its ability to regulate chemical substances to encompass authority to regulate articles containing such chemical substances. Additionally, the Agency would benefit from collecting the requested information on PFAS-containing articles (including articles containing PFAS as part of surface coatings) because the information would improve the Agency's knowledge of various products which may contain PFAS, their categories of use, production volumes, and exposure data. Such data are not currently known to EPA. However, EPA acknowledges that some article manufacturers, including article importers, may not have such information known to or reasonably ascertainable by them and may not meet the reporting standard as described in Unit II.C. To this end, information that helps EPA better understand data gaps is useful information for EPA to have. Therefore, articles are within the scope of reportable substances under this proposed rule, though EPA is requesting comments on whether imported articles containing PFAS should be within scope (see Unit IV.1).

2. *Proposed exceptions to reporting for duplicative reporting.* TSCA section 8(a)(5) requires EPA, to the extent feasible when carrying out TSCA section 8, to avoid requiring unnecessary or duplicative reporting. The Agency seeks to avoid collecting data on PFAS that would duplicate information already reported to the Agency. While developing this rule EPA reviewed the data elements submitted under the Chemical Data Reporting Rule and determined that there may be some overlap with the information requested under the proposed rule. EPA is proposing to allow reporting entities to indicate in the reporting tool that they have previously provided such information to EPA through CDR for certain data elements. The Agency has identified the following data elements which the reporter may be able to indicate has already been submitted to EPA:

- Physical state of the chemical or mixture;
- Industrial processing and use type, sector(s), functional category(ies), and percent of production volume for each use;
- Consumer and/or commercial indicator, product category(ies), functional category(ies), percent of production volume for each use, indicator for use in products intended for children, and maximum concentration in the product, and;
- Number of workers reasonably likely to be exposed for each combination of industrial processing or use operation, sector, and function, and the number of commercial workers reasonably likely to be exposed if the PFAS is contained in a commercial product.

If a manufacturer covered under this proposed rule has previously submitted required information to EPA for some years since 2011, but not for all years, EPA is proposing that the manufacturer may indicate in the reporting tool the year(s) for which the manufacturer has already submitted that data to EPA as part of CDR. For instance, CDR reporters are required to submit the total annual domestically manufactured production volume and the total annual imported volume separately, only for the principal reporting year (*e.g.,* 2019 for the 2020 reporting cycle), but reporting only the combined total annual production volume is required for the intervening years. In this case, a reporter under this proposed rule would be able to indicate that the two different production volumes have been previously submitted to EPA for the CDR reporting year(s), but would still need to report for the intervening year(s) not previously submitted under CDR. Additionally, there are some data elements for which CDR reporters may have previously reported information to EPA, although these data elements were only added to the CDR reporting requirements in 2020. Therefore, some manufacturers under this proposed rule may have submitted the following information to CDR for some years covered by this proposed rule, but not all, and would still be required to report this information for the missing year(s):

- Domestically manufactured production volume;
- Imported production volume;
- Volume directly exported; and
- Indicator for imported but never physically at site.

EPA welcomes public comment on concerns related to duplicative reporting (see Unit V.).

B. When would reporting be required?

EPA proposes that persons who have manufactured a PFAS at any time since January 1, 2011, would report to EPA during a six-month submission period, which would begin six months following the effective date of the final rule. Therefore, manufacturers would ultimately have one year following the effective date of the final rule to collect and submit all required information to EPA. EPA believes by providing six months between the effective date of the rule and the start of the submission period, this would allow sufficient time for both the Agency to finalize the reporting tool and for reporters to familiarize themselves with the rule and compile the required information. Since this section 8(a)(7) reporting rule will be collecting similar information as CDR, EPA anticipates many reporters will be familiar with the types of information requested and how to report. The CDR submission period is four months, every four years. Since this proposed rule spans a longer time than the four-year CDR reporting cycle, EPA acknowledges additional time may be needed in the PFAS submission period. EPA believes that six months is adequate time for submissions, in addition to the six-

month period between the effective date and the start of the submission period.

EPA is also asking for public comment on the submission period start date and duration (see Unit V.).

C. What information would be reported?

TSCA section 8(a)(7) specifies that, under the final rule, manufacturers would report on ''information described in subparagraphs (A) through (G) of paragraph (2) [of section 8].'' Therefore, this TSCA section 8(a)(7) rule proposes one-time reporting of the information described in section 8(a)(2)(A) through (G), which includes specific chemical identity, categories of use, production volume, byproducts, environmental and health effects, number of persons exposed and duration of exposure, and disposal.

Specifically, EPA is proposing to request the following information:

1. Chemical name (multiple if mixture), or the generic name(s) if the chemical name(s) is CBI.
2. Chemical ID(s) (CASRN, TSCA Accession Number, or LVE case number).
3. Trade name or common name.
4. Representative molecular structure.
5. Physical form of chemical or mixture.
6. Industrial processing and use:
a. Type of process or use;
b. Sector(s);
c. Functional use category(ies);
d. Percent of production volume for each use.
7. Consumer and commercial use:
a. Indicator for whether this is a consumer and/or commercial product;
b. Product category; functional use category(ies);
c. Percent production volume for each use; maximum concentration in any product;
d. Indicator for use in products intended for children.
8. Production volumes:
a. Domestically manufactured;
b. Imported;
c. Directly exported;
d. Maximum first 12 months production volume;
e. Maximum yearly production volume in any 3 years.
9. Indicator for imported but never physically at site.
10. Indicator for site-limited.
11. Maximum quantity stored on-site at any time.
12. Total volume recycled (on-site).
13. For byproducts produced during the manufacture, processing, use, or disposal of each PFAS:
a. Chemical name(s) or description (if identity is unknown), or the generic name(s) if the byproduct name(s) is CBI;
b. Chemical ID(s) (CASRN, TSCA Accession Number, or LVE case number);
c. Indicator for whether the byproduct(s) production resulted from manufacture, process, use, or disposal; and
d. Indicator for whether the byproduct(s) is released to the environment; if so, volume of byproduct(s) released and to which environmental media.
14. Worker exposure: Description of worker activity(ies) at manufacturing site.
15. Worker exposure at the manufacturing site:
a. Number of workers reasonably likely to be exposed at the manufacturing site, for each worker activity;
b. Maximum duration of exposure for any worker, for each worker activity (both hours per day and days per year).
16. Worker exposure for each industrial process and use:
a. Number of workers reasonably likely to be exposed for each industrial process and use;
b. Maximum duration of exposure for any worker for each industrial process and use (both hours per day and days per year).
17. Worker exposure for each commercial use:
a. Number of workers reasonably likely to be exposed for each commercial use;
b. Maximum duration of exposure for any worker for each commercial use (both hours per day and days per year).
18. Description of disposal process(es), and description of any changes to the disposal process or methods since 2011.
19. Total volume released:
a. Land disposal;
b. Water releases;
c. Air releases.
20. Total volume incinerated (on-site) and incineration temperature.
21. All existing information related to health and environmental effects, using the Organization of Economic Cooperation and Development (OECD) harmonized template relevant to the existing study, as well as full study reports and any other supporting information (for additional information on the use of the OECD harmonized templates, see the discussion in the following section, Unit III.D.).
22. Other data relevant to health and environmental effects (*e.g.,* range-finding studies, preliminary studies, OSHA medical screening or surveillance standards reports, adverse effects reports).

A list of the proposed reporting requirements is available in the docket for public review (Ref. 10).

EPA developed an information reporting platform for CDR (Ref. 9) and intends to modify it for purposes of this proposed rule. Certain information that is requested in the CDR that falls under TSCA section 8(a)(2)(A) through (G) would be required by this proposed rule, such as information on specific chemical identity, categories of use, production volume, byproducts, and number of persons exposed and duration of exposure (see Unit III.A.2. for the discussion on duplicative reporting). In instances where PFAS manufacturers under this proposed rule have already reported the requested information to EPA, they will not be required to re-report. As discussed in Unit III.A.2, EPA is proposing the reporters simply indicate they have already submitted such information to EPA.

Additionally, any person required to report under this proposed rule would supply the information identified in the form to the extent it is known to or reasonably ascertainable by them, or a reasonable estimate when actual data are not available (*i.e.,* known or reasonably ascertainable), as explained in more detail in Unit II.D.

D. What type of environmental and health effects information is the Agency requesting?

EPA is requesting ''all existing information concerning the environmental and health effects'' of the PFAS chemicals covered by this rule. It is intended that ''environmental and health effects information'' be interpreted broadly. This information would include but is not limited to:

- Toxicity information (*e.g.,* in silico, in vitro, animal test results, human data); and
- Other data relevant to environmental and health effects including range-finding studies, preliminary studies, OSHA medical screening or surveillance standards reports, adverse effects reports.

Chemical identity is always part of a health and safety study, and TSCA section 14(b) limits the extent to which health and safety studies and information from studies may be withheld from the public as confidential.

EPA is proposing to require all existing information concerning health and environmental effects be submitted in the format of OECD harmonized templates, where such templates exist for the type of data, in addition to submitting full study reports. OECD

templates are accessible to the public online at *https://www.oecd.org/ehs/templates/harmonised-templates.htm* (Ref. 11). A standardized format such as the OECD templates will improve the efficiency of review and organization of the submitted data. EPA believes that some of the data will already be in the OECD template if the company had already submitted the studies under the European Union's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation. In addition to the required template format, those subject to this rulemaking must submit any associated full study reports or underlying data as support documents. The full study reports and support documents are necessary for EPA to understand the full context and evaluate the quality of the data, which is necessary for the Agency to review if data were to be used for any future Agency actions.

EPA is requesting comments on what environmental and health effects information should be within the scope of this rule. EPA is also requesting comment on whether any information proposed to be requested is duplicative of information collected by EPA under other federal statutes and, thus, should be excluded. Please identify the information that you believe is duplicative and the statute under which it is submitted.

E. How would information be submitted to EPA?

EPA is proposing to require electronic reporting similar to the requirements established in 2013 for submitting other information under TSCA (see 40 CFR 704.20(e)). EPA is proposing to require submitters to use EPA's CDX, the Agency's electronic reporting portal, for all reporting under this rule. In 2013, EPA finalized a rule to require electronic reporting of certain information submitted to the Agency under TSCA sections 4, 5, 8(a) and 8(d) (Ref. 12, page 72818). The final rule followed two previous rules requiring similar electronic reporting of information submitted to EPA for TSCA CDR and for PMNs. In proposing to require similar electronic reporting under this rule, EPA intends to save time, improve data quality and increase efficiencies for both the submitters and the Agency.

EPA developed the Chemical Information Submission System (CISS) for use in submitting data electronically to the Agency for TSCA sections 4, 5, 6, 8(a), 8(b), 8(d), 8(e), and Title VI. CISS, a web-based reporting tool housed within the CDX environment, provides submitters with user-friendly applications to build and submit data packages to EPA within a secure, encrypted environment. CISS applications provide for the capture of both fielded data as well as the attachment of additional information using a wide variety of file types. Submitted information is rendered into PDF and XML formats, which are provided to submitters in the form of a Copy of Record.

EPA is proposing to require submitters to follow the same submission procedures used for other TSCA submissions, *i.e.,* to register with EPA's CDX and use CISS to prepare a data file for submission. Registration enables CDX to authenticate user identity. To submit electronically to EPA via CDX, individuals must first register with CDX at *http://cdx.epa.gov/* . To register in CDX, the CDX registrant (also referred to as ''Electronic Signature Holder'' or ''Public/Private Key Holder'') agrees to the Terms and Conditions, provides information about the submitter and organization, selects a user name and password, and follows the procedures outlined in the guidance document for CDX available at *https://cdx.epa.gov/FAQ#CSPP.*

Within CDX, CISS is available under the ''Submission for Chemical Safety and Pesticide Program (CSPP)'' CDX flow. Users who have previously submitted under TSCA through CDX, including submitting information under sections 4 and 5, CDR, or reporting under the TSCA Inventory Notification (Active-Inactive) Requirements rule (82 FR 37520, Aug. 11, 2017) (FRL–9964–22), will already have the CSPP flow linked to their account. Users reporting to EPA using other CDX housed applications, including the Toxics Release Inventory TRI–MEweb, would be able to add the CSPP flow to their existing CDX accounts.

All submitters would be required to use CISS to prepare their submissions. CISS guides users through a ''hands-on'' process of creating an electronic submission. Once a user completes the relevant data fields and attaches appropriate PDF files, or other file types, such as XML files, the web-based tool validates the submission by performing a basic error check and makes sure all the required fields and attachments are provided and complete. Further instructions for uploading PDF attachments or other file types, such as XML, and completing metadata information would be available through CISS reporting guidance.

CISS, a web-based reporting tool, also allows the user to choose to ''Preview,'' ''Save,'' or ''Submit'' the data package. Once the submission process is initiated, the user is asked to certify the information and provide requested information to complete the submission process. The data package is then sent, in an encrypted state, to the Agency. The user can login to the application and check the submission status of their data package. Upon successful receipt of the submission by EPA, the submission status of the submissions will be flagged as ''Completed'' and a confirmation email will be sent to the submitter's CDX inbox. The CDX inbox is used to notify the users when submissions are received by EPA or to notify users when a submission-specific communication has been received and how to locate and access the communication. Information on accessing the CDX user inbox is provided in the guidance document for CDX at *https://cdx.epa.gov/FAQ#CSPP.* To access CISS log into CDX using the link: *https://cdx.epa.gov/* and click on the appropriate user role associated with the CSPP data flow. For further instructions, visit *https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/electronic-reporting-requirements-certain-information* (Ref. 12). Procedures for reporting chemical substances under this proposed rule would be similar.

EPA believes that electronic reporting reduces the reporting burden for submitters by reducing the cost and time required to review, edit, and transmit data to the Agency. It also allows submitters to share a draft submission within their organization, and more easily save a copy for their records or future use. Additionally, EPA believes that many of the anticipated reporters under this proposed rule have experience with reporting electronically to EPA through CDX. The resource and time requirements to review and process data by the Agency will also be reduced and document storage and retrieval will require fewer resources. EPA expects to benefit from receiving electronic submissions and communicating electronically with submitters.

F. What can a submitter claim as confidential?

The 2016 amendments to TSCA included new procedural requirements for the submission and Agency management of CBI claims, including new substantiation requirements, generic name requirements, a certification requirement, and a requirement for Agency review of specified CBI claims within 90 days after receipt of the claim, 15 U.S.C. 2613. The Agency recently finalized a rule amending the CDR reporting requirements that implemented the new requirements for confidentiality claims

in CDR submissions (Ref. 13). EPA is similarly proposing that a person submitting a reporting form under this action may claim portions of the form as confidential, consistent with TSCA section 14. TSCA requires that the submitter make several statements relating to the treatment of the information as confidential and competitive harm of disclosure, and to certify that these statements and any substantiation provided are true and correct. Consistent with the format of other TSCA reporting forms, the statements and certification would be combined into a single certification statement. There is also a requirement that when a chemical identity is claimed as CBI, a non-CBI structurally descriptive generic name be provided. To help reporters, EPA's reporting platform can auto-populate generic names on the Inventory using EPA's Substance Registry Services (SRS).

TSCA section 14 further requires that substantiation be provided when a confidentiality claim is asserted. However, TSCA section 14(c)(2) exempts certain information from the substantiation requirements (*e.g.,* specific production volume). Under the proposed rule, specific production or import volumes of the manufacturer, as well as the percent production volume for each consumer or commercial use, need not be substantiated. All other information submitted under this proposed rule would not be exempt from substantiation requirements.

Any information which is claimed as confidential will be disclosed by EPA only in accordance with the procedures and requirements of TSCA section 14 and 40 CFR part 2. TSCA limits confidentiality protections for health and safety studies, information from health and safety studies (except to the extent such studies or information reveals ''information that discloses processes used in the manufacturing or processing of a chemical substance or mixture or, in the case of a mixture, the portion of the mixture comprised by any of the chemical substances in the mixture''), and certain other information. Submitters asserting a confidentiality claim for such information in health and safety studies will be required to submit a sanitized copy of the study, removing only that information which is claimed as confidential and that discloses the process or portion of mixture information described in TSCA section 14(b).

G. What are the recordkeeping requirements?

EPA proposes that each person who is subject to the reporting requirements must retain records that document any information reported to EPA. Consistent with the CDR rule, EPA is proposing a five-year recordkeeping period, beginning on the last date of the submission period. The five-year retention requirement corresponds with the statute of limitations for violations and is necessary to preserve records to support future regulatory activities that would be informed by this information collection. Further, EPA believes the burden of retaining these records, which are likely electronic, is minimal.

IV. Request for Comments

EPA is seeking public comment on all aspects of this proposed rule and the Economic Analysis prepared in support of this proposed rule (Ref. 14). In addition to specific requests for comment included throughout this document, EPA is interested in comments pertaining to the specific issues discussed in this unit. EPA encourages all interested persons to submit comments on the issues identified in this Notification and to identify any other relevant issues as well. This input will assist the Agency in developing a final rule that successfully addresses information needs while minimizing potential reporting burdens associated with the rule. EPA requests that commenters making specific recommendations include supporting documentation where appropriate.

1. *Identifying the chemical substances that would be subject to reporting.* EPA has provided a structural definition of PFAS for the purposes of this proposed rule's scope. To assist reporting entities with determining whether a chemical substance or mixture falls within this scope, EPA has also provided a list of PFAS (identified by CASRN, TSCA Accession Number, or LVE case number) and structural diagrams to include any PFAS whose chemical identity is not specifically listed due to CBI protections. EPA is soliciting comment on this approach for defining or identifying PFAS. Additionally, EPA is interested in comments identifying specific substances of interest and the rationale for the interest, that may be outside the scope of this proposed definition. EPA is also interested in public comments related to including imported articles containing PFAS within the scope of this proposed rule.

2. *Considerations for the Agency's economic analysis.* EPA has evaluated the potential costs for PFAS manufacturers for this proposed rule (Ref. 14). EPA is specifically seeking additional information and data that EPA could consider in developing the final economic analysis. In particular, EPA is seeking data that could facilitate the Agency's further evaluation of the potentially affected industry and firms, including data related to potential impacts for those small businesses and importers that would be subject to reporting. The agency is specifically interested in available data on small entity importers of articles containing PFAS for its impact analysis for small entities. EPA is also especially interested in available data or other measures of the number of facilities or firms that might manufacture such materials, including importing PFAS in articles.

3. *Submission period.* EPA is proposing a six-month submission period for reporting entities, which will begin six months following the effective date of the final rule. Thus, PFAS manufacturers will have one year following the effective date of the final rule to submit all required information to EPA. Since many of the reporters under this proposed rule have reported under CDR, EPA is basing the proposed submission period, in part, on the CDR submission period. Given the four-month submission period for the CDR reporting cycle every four years, the Agency believes six months is sufficient time for manufacturers to report the required information under this proposed rule, noting that the scope of this rule covers more years than a CDR reporting cycle. Reporters will also have the additional six months between the effective date of the rule and the start of the submission period for rule familiarization and data gathering. Additionally, the six months between the effective date of the final rule and the beginning of the submission period allows the Agency time to finalize the reporting software. Congress required EPA to promulgate the rule no later than January 1, 2023; therefore, EPA anticipates the reporting period for this proposed rule will precede the reporting period for the 2024 CDR reporting cycle (June–September 2024). EPA is specifically asking for comment on additional considerations related to the start date and duration of the submission period.

4. *Duplicative reporting.* EPA has identified the data elements in this proposed rule for which information may have been submitted to EPA previously under CDR (see Unit III.D.), which the Agency is proposing to allow manufacturers to indicate through the

reporting tool has already been submitted rather than re-submit the information. EPA is requesting comment on whether any additional data elements may be duplicative of information collected by EPA under TSCA or other federal statutes. Please identify the information that you believe is duplicative and the statute under which it is submitted, as well as the precision of the information if appropriate (for example, whether the data are submitted as a range or as an integer to the nearest significant digits).

5. *Scope of environmental and health effects information collected.* EPA is requesting comment on what existing environmental and health effects information should be within the scope of this rule. EPA is proposing to require such information be submitted in the form of OECD harmonized templates, to the extent they are available, and as full study reports and any supporting documents. The Agency is requesting comments on the scope of existing environmental and health information that may be requested from PFAS manufacturers. The Agency is also interested in comments on the proposed format of these submissions.

6. *Additional information or data elements.* EPA has provided the list of proposed data elements for this rule in Unit III.C (Ref. 10), which EPA is authorized to request under section 8(a)(7). EPA is interested in public comment on the scope of these proposed data elements, including whether there are additional data elements EPA should collect under the authority of section 8(a)(7). Specifically, EPA is interested in comments on whether the final rule should include a data field allowing reporters to provide generic names or descriptions in the event a manufacturer is aware they have produced or imported a PFAS but are not able to reasonably ascertain the specific PFAS identity. The Agency is also requesting comments on additional data elements such as composition information if a PFAS has a variable composition, analytical methods, and whether occupational exposure information should distinguish occupational non-users (*i.e.,* those nearby but not in direct contact with the chemical) from workers (*i.e.,* those who are in direct contact with the chemical).

7. *EPA's use and publication of certain non-CBI data.* EPA is requesting public comment on how the Agency may consider using the data received under this reporting rule, beyond those activities previously mentioned in Unit II.E. Additionally, the Agency is interested in comment on the extent to which non-CBI data submitted under this rule should be provided to the general public.

8. *Joint submissions.* EPA is requesting public comment on whether the Agency should enable the use of joint submissions in specific circumstances, similar to CDR joint submissions. Joint submissions may be necessary under circumstances when: (1) A company imports a chemical or a mixture under a trade name and the substance identity, or individual components, are not known to the importer, or (2) a manufacturer cannot provide the entire chemical identity of a chemical substance it manufactures because the chemical substance is manufactured using a reactant having an identity that the reactant supplier claims as confidential. In these circumstances, the supplier has identified that it will not disclose to the manufacturer (or importer) or does not, itself, know the chemical identity.

9. *Small manufacturers.* EPA is requesting public comment on how the Agency may assist small manufacturers with compliance with this proposed rule. The Agency appreciates comments related to both regulatory and non-regulatory assistance, such as different reporting timelines and outreach.

V. References

The following is a list of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the technical person listed under **FOR FURTHER INFORMATION CONTACT.**

1. EPA (2019). EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan, EPA–823R–18–004. February 14, 2019. Available at *https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf.*
2. EPA (2017). Technical Fact Sheet—Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA), EPA 505–F–17–001. November 2017. Available at *https://www.epa.gov/sites/production/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf.*
3. EPA (2009). Long-Chain Perfluorinated Chemicals (PFCs) Action Plan. December 30, 2009. Available at *https://www.epa.gov/sites/production/files/2016-01/documents/pfcs_action_plan1230_09.pdf.*
4. ATSDR (2018). Toxicology Profile for Perfluoroalkyls. June 2018. Available at *https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf.*
5. EPA. TSCA Chemical Substance Inventory. (No date). Available at *https://www.epa.gov/tsca-inventory.* [Accessed November 12, 2020].
6. EPA. Instructions for Reporting: 2020 TSCA Chemical Data Reporting. November 2020. Available at *https://www.epa.gov/sites/production/files/2020-12/documents/instructions_for_reporting_2020_tsca_cdr_2020-11-25.pdf.*
7. EPA. Examples of PFAS and Structural Diagrams included in the Proposed Rule for Reporting and Recordkeeping Requirements for PFAS. October 2020.
8. EPA. Filing a Pre-manufacture Notice with EPA. (No date). Available at *https://www.epa.gov/reviewing-new-chemicals-under-toxic-substances-control-act-tsca/filing-pre-manufacture-notice-epa.* [Accessed November 12, 2020].
9. EPA (2020). CDX Chemical Safety and Pesticide Programs (CSPP) Registration User Guide; Version 3.02. March 6, 2020. Available at *https://www.epa.gov/chemical-data-reporting/cspp-cdx-registration-guide.*
10. EPA. Data Elements included in the Proposed Rule for Reporting and Recordkeeping Requirements for PFAS. October 2020.
11. OECD. OECD Harmonised Templates. (No date). Available at *https://www.oecd.org/ehs/templates/harmonised-templates.htm.* [Accessed November 12, 2020].
12. EPA (2013). Electronic Reporting under the Toxic Substances Control Act; Final Rule. (78 FR 72818, December 4, 2013) (FRL–9394–6).
13. EPA (2020). TSCA Chemical Data Reporting Revisions Under TSCA Section 8(a); Final Rule. (85 FR 20122, April 9, 2020) (FRL–10005–56).
14. EPA (2020). Economic Analysis for the Proposed Rule for Reporting and Recordkeeping Requirements for PFAS. November 2020.
15. EPA (2020). Information Collection Request Supporting Statement. Proposed Rule ICR: Reporting and Recordkeeping Requirements for PFAS. EPA ICR No. 2682.01. November 2020.

VII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders.*

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011). EPA prepared an analysis of the estimated costs and benefits associated

with this action (Ref. 13), which is available in the docket and is summarized in Unit I.E. Any changes made in response to OMB recommendations have been documented in the docket for this action as required by section 6(a)(3)(E) of Executive Order 12866.

B. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document that EPA prepared has been assigned EPA ICR number 2682.01 (Ref. 15). You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

The reporting requirements identified in the proposed rule would enable EPA to meet the statutory obligations required by TSCA section 8(a)(7) and collect data related to the identities, manufacture, use, exposure, and disposal of PFAS manufactured in the United States since 2011. These proposed reporting requirements would also help the Agency to collect existing information on the health and environmental effects of PFAS. EPA intends to use information collected under the rule to assist in chemical assessments under TSCA, and to inform any additional work necessary under environmental protection mandates beyond TSCA. Respondents may claim some of the information reported to EPA under the proposed rule as CBI under TSCA section 14. TSCA section 14(c) requires a supporting statement and certification for confidentiality claims asserted after June 22, 2016.

Respondents/affected entities: Manufacturers (including importers) of PFAS since January 1, 2011.

Respondent's obligation to respond: Mandatory (15 U.S.C. 2607(a)(7)).

Estimated number of respondents: 234.

Frequency of response: Once.

Total estimated burden: 122,104 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $9,820,813 (per year), includes no annualized capital or operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to *oira_submissions@omb.eop.gov,* Attention: Desk Officer for the EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than July 28, 2021. The EPA will respond to any ICR-related comments in the final rule.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA (5 U.S.C. 601 *et seq.*). The small entities subject to the requirements of this action are manufacturers (including importers) of PFAS. EPA estimates that 59 small firms would be affected by the proposed rule. Of those small firms, 46% would have cost impacts of less than 1% of annual revenues, 19% would have impacts between 1–3%, and 35% would have impacts of more than 3% of annual revenues. The affected small businesses subject to the proposed rule are expected to incur $1,788,506 in costs for this one-time reporting, with per-firm costs estimated to range from $16,864 to $92,390. However, EPA is unable to estimate the number of small entity importers of articles that are subject to this proposed rule due to a lack of available data on importers of articles containing PFAS. Imported articles are exempt from the CDR Rule under 40 CFR 711.10(b). Similarly, under TRI reporting, listed toxic chemicals contained in articles that are processed or otherwise used at a covered facility are exempt from reporting threshold determinations and release and other waste management calculations. EPA is unaware of publicly available data that provides the information on the article importers needed to develop the estimates. Without available data, EPA does not have a representative subset of firms to reference as a basis for estimates and thus cannot estimate the number of importers of articles that will be affected.

However, EPA expects that article importers may incur a range of costs depending on the number of articles they import, their level of knowledge of their imported articles, the complexity of supply chains, and whether PFAS is present in their articles. Importers of articles that contain PFAS may incur costs for rule familiarization ($69.79 per firm); identifying the type of imported articles that potentially use PFAS ($1,641–$1,932 per firm); identifying suppliers involved ($1,185 per firm); collecting data from suppliers ($0–644 per article); and recordkeeping ($12 per firm). Details of this analysis are presented in the Economic Analysis of the proposed rule (Ref. 14), which is available in the docket.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The requirements of this action would primarily affect manufacturers (including importers) of PFAS. The total quantified one-time costs of the proposed rule are approximately $9.8 million.

E. Executive Order 13132: Federalism

This action does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. Thus, E.O. 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern environmental health or safety risks that the Agency has reason to believe may disproportionately affect children, per the definition of ''covered regulatory action'' in section 2–202 of the Executive Order. This action is not a covered regulatory action because it is not ''economically significant'' under Executive Order 12866 and it does not concern an environmental health risk or safety risk. Although this action would not establish an environmental standard

intended to mitigate health or safety risks, the information that would be submitted to EPA in accordance with this proposed rule would be used to inform the Agency's decision-making process regarding chemical substances to which children may be disproportionately exposed. This information may also assist the Agency and others in determining whether the chemical substances covered in this proposed rule present potential risks, which would allow the Agency and others to take appropriate action to investigate and mitigate those risks.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy and has not otherwise been designated by the Administrator of OMB's Office of Information and Regulatory Affairs as a ''significant energy action.''

I. National Technology Transfer and Advancement Act (NTTAA)

Because this action does not involve any technical standards, NTTAA section 12(d), 15 U.S.C. 272 note, does not apply to this action.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The requirements of the proposed rule are directed at manufacturers (including importers) of PFAS chemicals for which basic production, use, and toxicity information is currently unavailable. The costs and the benefits of the proposed rule would not be disproportionately distributed across different geographic regions or among different categories of individuals. Consumers of these chemical products, workers who come into contact with these chemical substances, and communities neighboring PFAS manufacturing sites could benefit from EPA's assessment of information required under the proposed rule. The Agency believes that the information collected under this proposed rule, if finalized, will assist EPA and others in determining the potential hazards and risks associated with PFAS chemicals. Although not directly impacting environmental justice-related concerns, this information will enable the Agency to better protect human health and the environment, including in low-income and minority communities.

List of Subjects in 40 CFR Part 705

Chemicals, Environmental protection, Hazardous Materials, Recordkeeping, and Reporting Requirements.

Dated: June 10, 2021.

Michal Freedhoff,

Principal Deputy Assistant Administrator, Office of Chemical Safety and Pollution Prevention.

Therefore, for the reasons stated in the preamble, the Environmental Protection Agency proposes to amend 40 CFR chapter I by adding part 705 to read as follows:

PART 705—REPORTING AND RECORDKEEPING REQUIREMENTS FOR CERTAIN PER- AND POLYFLUOROALKYL SUBSTANCES

Sec.

Authority: 15 U.S.C. 2607(a)(7).

§ 705.1 Scope.

This part specifies reporting and recordkeeping procedures for manufacturers (including importers) of certain per- and polyfluoroalkyl substances (hereafter referred to as PFAS) under section 8(a)(7) of the Toxic Substances Control Act (TSCA).

§ 705.3 Definitions.

Central Data Exchange or *CDX* means EPA's centralized electronic submission receiving system.

Chemical Information Submission System or *CISS* means EPA's electronic, web-based reporting tool for the completion and submission of data, reports, and other information, or its successors.

Commercial use means the use of a chemical substance or a mixture containing a chemical substance (including as part of an article) in a commercial enterprise providing saleable goods or services.

Consumer use means the use of a chemical substance or a mixture containing a chemical substance (including as part of an article) when sold to or made available to consumers for their use.

Environmental or health effects information means any information of any effect of a chemical substance or mixture on health or the environment or on both. This includes all health and safety studies.

(1) Not only is information which arises as a result of a formal, disciplined study included, but other information relating to the effects of a chemical substance or mixture on health or the environment is also included. Any information that bears on the effects of a chemical substance on health or the environment would be included.

(2) Examples are:

(i) Long- and short-term tests of mutagenicity, carcinogenicity, or teratogenicity; data on behavioral disorders; dermatoxicity; pharmacological effects; mammalian absorption, distribution, metabolism, and excretion; cumulative, additive, and synergistic effects; and acute, subchronic, and chronic effects.

(ii) Tests for ecological or other environmental effects on invertebrates, fish, or other animals, and plants, including: Acute toxicity tests, chronic toxicity tests, critical life-stage tests, behavioral tests, algal growth tests, seed germination tests, plant growth or damage tests, microbial function tests, bioconcentration or bioaccumulation tests, and model ecosystem (microcosm) studies.

(iii) Assessments of human and environmental exposure, including workplace exposure, and impacts of a particular chemical substance or mixture on the environment, including surveys, tests, and studies of: Biological, photochemical, and chemical degradation; structure/activity relationships; air, water, and soil transport; biomagnification and bioconcentration; and chemical and physical properties, *e.g.,* boiling point, vapor pressure, evaporation rates from soil and water, octanol/water partition coefficient, and water solubility.

(iv) Monitoring data, when they have been aggregated and analyzed to measure the exposure of humans or the environment to a chemical substance or mixture.

Health and safety studies means any study of any effect of a chemical substance or mixture on health or the environment or on both, including underlying information and epidemiological studies, studies of occupational exposure to a chemical substance or mixture, toxicological, clinical, and ecological studies of a

chemical substance or mixture, and any test performed pursuant to this Act.

Known to or reasonably ascertainable by means all information in a person's possession or control, plus all information that a reasonable person similarly situated might be expected to possess, control, or know.

Industrial function means the intended physical or chemical characteristic for which a chemical substance or mixture is consumed as a reactant; incorporated into a formulation, mixture, reaction product, or article; repackaged; or used.

Industrial use means use at a site at which one or more chemical substances or mixtures are manufactured (including imported) or processed.

Intended for use by children means the chemical substance or mixture is used in or on a product that is specifically intended for use by children age 14 or younger. A chemical substance or mixture is intended for use by children when the submitter answers ''yes'' to at least one of the following questions for the product into which the submitter's chemical substance or mixture is incorporated:

(1) Is the product commonly recognized (*i.e.,* by a reasonable person) as being intended for children age 14 or younger?

(2) Does the manufacturer of the product state through product labeling or other written materials that the product is intended for or will be used by children age 14 or younger?

(3) Is the advertising, promotion, or marketing of the product aimed at children age 14 or younger?

Manufacture means to manufacture for commercial purposes.

Manufacture for commercial purposes means: (1) To import, produce, or manufacture with the purpose of obtaining an immediate or eventual commercial advantage for the manufacturer, and includes among other things, such ''manufacture'' of any amount of a chemical substance or mixture:

(i) For commercial distribution, including for test marketing.

(ii) For use by the manufacturer, including use for product research and development, or as an intermediate.

(2) Manufacture for commercial purposes also applies to substances that are produced coincidentally during the manufacture, processing, use, or disposal of another substance or mixture, including both byproducts that are separated from that other substance or mixture and impurities that remain in that substance or mixture. Such byproducts and impurities may, or may not, in themselves have commercial value. They are nonetheless produced for the purpose of obtaining a commercial advantage since they are part of the manufacture of a chemical product for a commercial purpose.

Manufacturer means a person who manufactures a chemical substance.

Per- and polyfluoroalkyl substances or *PFAS, for the purpose of this part,* means any chemical substance or mixture that structurally contains the unit R-(CF2)-C(F)(R′)R″. Both the CF2 and CF moieties are saturated carbons. None of the R groups (R, R′ or R″) can be hydrogen.

Site-limited means a chemical substance is manufactured and processed only within a site and is not distributed as a chemical substance or as part of a mixture or article outside the site. Imported chemical substances are never site-limited.

Worker means someone at a site of manufacture, import, or processing who performs work activities near sources of a chemical substance or mixture or directly handles the chemical substance or mixture during the performance of work activities.

§ 705.5 Substances for which reports must be submitted.

The requirements of this part apply to all chemical substances and mixtures that are PFAS, consistent with the definition of PFAS at § 705.3. This includes, but is not limited to, all PFAS listed or otherwise described in this section. This section contains 5 listings of examples of chemical substances or mixtures that meet this definition. Paragraph (a) of this section is a list of chemical substances on the TSCA Inventory that have an associated Chemical Abstract Services (CAS) Registry Number. Paragraph (b) of this section is a list of chemical substances that have an associated TSCA Accession Number. Paragraph (c) of this section is a list of chemical substances that have both an associated low-volume exemption (LVE) case number and a non-confidential CASRN. Paragraph (d) of this section is a list of chemical substances with an LVE case number but no CASRN. Paragraph (e) of this section is a list of structural diagram examples of PFAS and those CASRNs.

(a) Examples of PFAS by CAS Registry Number.

CASRN	Chemical name
76–14–2	Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro-.
76–15–3	Ethane, 1-chloro-1,1,2,2,2-pentafluoro-.
76–16–4	Ethane, 1,1,1,2,2,2-hexafluoro-.
76–19–7	Propane, 1,1,1,2,2,3,3,3-octafluoro-.
115–25–3	Cyclobutane, 1,1,2,2,3,3,4,4-octafluoro-.
124–73–2	Ethane, 1,2-dibromo-1,1,2,2-tetrafluoro-.
306–91–2	Phenanthrene, 1,1,2,2,3,3,4,4,4a,4b,5,5,6,6,7,7,8,8,8a,9,9,10,10,10a-tetracosafluorotetradecahydro-.
306–94–5	Naphthalene, 1,1,2,2,3,3,4,4,4a,5,5,6,6,7,7,8,8,8a-octadecafluorodecahydro-.
307–24–4	Hexanoic acid, 2,2,3,3,4,4,5,5,6,6,6-undecafluoro-.
307–30–2	1-Octanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-.
307–34–6	Octane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-octadecafluoro-.
307–35–7	1-Octanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-.
307–55–1	Dodecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-tricosafluoro-.
307–60–8	Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-pentacosafluoro-12-iodo-.
307–63–1	Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-nonacosafluoro-14-iodo-.
307–70–0	1-Undecanol, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoro-.
307–98–2	2-Propenoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl ester.
311–89–7	1-Butanamine, 1,1,2,2,3,3,4,4,4-nonafluoro-N,N-bis(1,1,2,2,3,3,4,4,4-nonafluorobutyl)-.
335–27–3	Cyclohexane, 1,1,2,2,3,3,4,5,5,6-decafluoro-4,6-bis(trifluoromethyl)-.
335–36–4	Furan, 2,2,3,3,4,4,5-heptafluorotetrahydro-5-(1,1,2,2,3,3,4,4,4-nonafluorobutyl)-.
335–42–2	Butanoyl fluoride, 2,2,3,3,4,4,4-heptafluoro-.
335–57–9	Heptane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-hexadecafluoro-.
335–66–0	Octanoyl fluoride, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-.
335–67–1	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-.
335–71–7	1-Heptanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-.

CASRN	Chemical name
335–76–2	Decanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-nonadecafluoro-.
335–95-5	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, sodium salt (1:1).
336–08–3	Hexanedioic acid, 2,2,3,3,4,4,5,5-octafluoro-.
336–59–4	Butanoic acid, 2,2,3,3,4,4,4-heptafluoro-, 1,1′-anhydride.
338–83–0	1-Propanamine, 1,1,2,2,3,3,3-heptafluoro-N,N-bis(1,1,2,2,3,3,3-heptafluoropropyl)-.
338–84–1	1-Pentanamine, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-N,N-bis(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)-.
354–64–3	Ethane, 1,1,1,2,2-pentafluoro-2-iodo-.
354–87–0	Ethanesulfonyl fluoride, 1,1,2,2,2-pentafluoro-.
355–02–2	Cyclohexane, 1,1,2,2,3,3,4,4,5,5,6-undecafluoro-6-(trifluoromethyl)-.
355–25–9	Butane, 1,1,1,2,2,3,3,4,4,4-decafluoro-.
355–38–4	Hexanoyl fluoride, 2,2,3,3,4,4,5,5,6,6,6-undecafluoro-.
355–42–0	Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,6,6-tetradecafluoro-.
355–43–1	Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-6-iodo-.
355–46–4	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-.
355–50–0	Hexadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16-tritriacontafluoro-16-iodo-.
355–80–6	1-Pentanol, 2,2,3,3,4,4,5,5-octafluoro-.
356–24–1	Butanoic acid, 2,2,3,3,4,4,4-heptafluoro-, methyl ester.
356–27–4	Butanoic acid, 2,2,3,3,4,4,4-heptafluoro-, ethyl ester.
356–42–3	Propanoic acid, 2,2,3,3,3-pentafluoro-, 1,1′-anhydride.
375–00–8	Butanenitrile, 2,2,3,3,4,4,4-heptafluoro-.
375–01–9	1-Butanol, 2,2,3,3,4,4,4-heptafluoro-.
375–03–1	Propane, 1,1,1,2,2,3,3-heptafluoro-3-methoxy-.
375–16–6	Butanoyl chloride, 2,2,3,3,4,4,4-heptafluoro-.
375–22–4	Butanoic acid, 2,2,3,3,4,4,4-heptafluoro-.
375–62–2	Pentanoyl fluoride, 2,2,3,3,4,4,5,5,5-nonafluoro-.
375–72–4	1-Butanesulfonyl fluoride, 1,1,2,2,3,3,4,4,4-nonafluoro-.
375–73–5	1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-.
375–84–8	Heptanoyl fluoride, 2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoro-.
375–85–9	Heptanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoro-.
375–88–2	Heptane, 1-bromo-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-.
375–95–1	Nonanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluoro-.
376–06–7	Tetradecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-heptacosafluoro-.
376–14–7	2-Propenoic acid, 2-methyl-, 2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]ethyl ester.
376–27–2	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, methyl ester.
376–73–8	Pentanedioic acid, 2,2,3,3,4,4-hexafluoro-.
376–90–9	1,5-Pentanediol, 2,2,3,3,4,4-hexafluoro-.
377–38–8	Butanedioic acid, 2,2,3,3-tetrafluoro-.
378–76–7	Propanoic acid, 2,2,3,3,3-pentafluoro-, potassium salt (1:1).
382–28–5	Morpholine, 2,2,3,3,5,5,6,6-octafluoro-4-(trifluoromethyl)-.
383–07–3	2-Propenoic acid, 2-[butyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]ethyl ester.
421–73–8	Propane, 2-chloro-1,1,1,2-tetrafluoro-.
422–05–9	1-Propanol, 2,2,3,3,3-pentafluoro-.
422–56–0	Propane, 3,3-dichloro-1,1,1,2,2-pentafluoro-.
422–61–7	Propanoyl fluoride, 2,2,3,3,3-pentafluoro-.
422–63–9	1,1-Propanediol, 2,2,3,3,3-pentafluoro-.
422–64–0	Propanoic acid, 2,2,3,3,3-pentafluoro-.
423–39–2	Butane, 1,1,1,2,2,3,3,4,4-nonafluoro-4-iodo-.
423–62–1	Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heneicosafluoro-10-iodo-.
423–82–5	2-Propenoic acid, 2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]ethyl ester.
425–38–7	Propanoyl fluoride, 2,2,3,3-tetrafluoro-3-(trifluoromethoxy)-.
428–59–1	Oxirane, 2,2,3-trifluoro-3-(trifluoromethyl)-.
507–55–1	Propane, 1,3-dichloro-1,1,2,2,3-pentafluoro-.
507–63–1	Octane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-8-iodo-.
559–40–0	Cyclopentene, 1,2,3,3,4,4,5,5-octafluoro-.
647–42–7	1-Octanol, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-.
678–26–2	Pentane, 1,1,1,2,2,3,3,4,4,5,5,5-dodecafluoro-.
678–39–7	1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-.
697–18–7	1,2-Oxathietane, 3,3,4,4-tetrafluoro-, 2,2-dioxide.
699–30–9	2,5-Furandione, 3,3,4,4-tetrafluorodihydro-.
754–34–7	Propane, 1,1,1,2,2,3,3-heptafluoro-3-iodo-.
755–73–7	Propanoic acid, 2,2,3,3-tetrafluoro-3-methoxy-, methyl ester.
756–12–7	2-Butanone, 1,1,1,3,4,4,4-heptafluoro-3-(trifluoromethyl)-.
756–13–8	3-Pentanone, 1,1,1,2,2,4,5,5,5-nonafluoro-4-(trifluoromethyl)-.
773–14–8	Furan, 2,2,3,3,4,4,5,5-octafluorotetrahydro-.
813–44–5	3-Pentanone, 1,1,1,2,4,5,5,5-octafluoro-2,4-bis(trifluoromethyl)-.
813–45–6	3-Hexanone, 1,1,1,2,4,4,5,5,6,6,6-undecafluoro-2-(trifluoromethyl)-.
865–86–1	1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-.
1547–26–8	1-Pentene, 2,3,3,4,4,5,5-heptafluoro-.
1623–05–8	Propane, 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]-.
1652–63–7	1-Propanaminium, 3-[[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-, iodide (1:1).
1682–78–6	Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-(1,1,2,2,2-pentafluoroethoxy)-.
1691–99–2	1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-.
1763–23–1	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-.
1892–03–1	Cyclopentene, 1,3,3,4,4,5,5-heptafluoro-.

CASRN	Chemical name
1996–88–9	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester.
2043–47–2	1-Hexanol, 3,3,4,4,5,5,6,6,6-nonafluoro-.
2043–53–0	Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptadecafluoro-10-iodo-.
2043–54–1	Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heneicosafluoro-12-iodo-.
2043–55–2	Hexane, 1,1,1,2,2,3,3,4,4-nonafluoro-6-iodo-.
2043–57–4	Octane, 1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-8-iodo-.
2062–98–8	Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-.
2144–53–8	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester.
2144–54–9	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl ester.
2218–54–4	Butanoic acid, 2,2,3,3,4,4,4-heptafluoro-, sodium salt (1:1).
2263–09–4	1-Octanesulfonamide, N-butyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-.
2641–34–1	Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propoxy]-.
2706–90–3	Pentanoic acid, 2,2,3,3,4,4,5,5,5-nonafluoro-.
2795–39–3	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, potassium salt (1:1).
2923–93–5	Hexanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[4-[(2,2,3,3,4,4,4-heptafluoro-1-oxobutyl)amino]-3-hydroxyphenyl]-.
2991–51–7	Glycine, N-ethyl-N-[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]-, potassium salt (1:1).
2994–71–0	Cyclobutane, 1,1,2,2,3,4-hexafluoro-3,4-bis(trifluoromethyl)-.
3107–18–4	Cyclohexanesulfonic acid, 1,2,2,3,3,4,4,5,5,6,6-undecafluoro-, potassium salt (1:1).
3330–14–1	Propane, 1-[1-[difluoro(1,2,2,2-tetrafluoroethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2,3,3,3-heptafluoro-.
3794–64–7	Butanoic acid, 2,2,3,3,4,4,4-heptafluoro-, silver(1+) salt (1:1).
3825–26–1	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, ammonium salt (1:1).
3871–99–6	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, potassium salt (1:1).
3872–25–1	1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-, potassium salt (1:1).
3934–23–4	2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl ester.
4089–58–1	Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[1,1,2,2-tetrafluoro-2-(fluorosulfonyl)ethoxy]propoxy]-.
4151–50–2	1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-.
4980–53–4	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-nonacosafluorohexadecyl ester.
6014–75–1	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl ester.
6130–43–4	Heptanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoro-, ammonium salt (1:1).
6588–63–2	Cyclohexanecarbonyl fluoride, 1,2,2,3,3,4,4,5,5,6,6-undecafluoro-.
10493–43–3	Ethene, 1,1,2-trifluoro-2-(1,1,2,2,2-pentafluoroethoxy)-.
13252–13–6	Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-.
13429–24–8	1-Propene, 1,1,2,3,3,3-hexafluoro-, dimer.
13695–31–3	2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,4-heptafluorobutyl ester.
15290–77–4	Cyclopentane, 1,1,2,2,3,3,4-heptafluoro-.
16090–14–5	Ethanesulfonyl fluoride, 2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-.
16517–11–6	Octadecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,18,18,18-pentatriacontafluoro-.
17202–41–4	1-Nonanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-nonadecafluoro-, ammonium salt (1:1).
17527–29–6	2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester.
17631–68–4	Europium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato-.kappa.O3,.kappa.O5)-.
17741–60–5	2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl ester.
17978–77–7	Praseodymium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato-.kappa.O3,.kappa.O5)-.
18599–20–7	Butane, 1,4-dibromo-1,1,2,2-tetrafluoro-.
18599–22–9	1-Butene, 4-bromo-3,3,4,4-tetrafluoro-.
19430–93–4	1-Hexene, 3,3,4,4,5,5,6,6,6-nonafluoro-.
21615–47–4	Hexanoic acid, 2,2,3,3,4,4,5,5,6,6,6-undecafluoro-, ammonium salt (1:1).
21652–58–4	1-Decene, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-.
24448–09–7	1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-N-methyl-.
25268–77–3	2-Propenoic acid, 2-[[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester.
25291–17–2	1-Octene, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-.
25398–32–7	Ethene, 1,1,2,2-tetrafluoro-, telomer with 1,1,1,2,2-pentafluoro-2-iodoethane.
26650–09–9	Thiocyanic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester.
26654–97–7	Ethanesulfonyl fluoride, 2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-, polymer with 1,1,2,2-tetrafluoroethene.
26655–00–5	Propane, 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]-, polymer with 1,1,2,2-tetrafluoroethene.
26738–51–2	3,6,9,12-Tetraoxapentadecane, 1,1,1,2,4,4,5,7,7,8,10,10,11,13,13,14,14,15,15,15-eicosafluoro-5,8,11-tris(trifluoromethyl)-.
27619–88–1	1-Hexanesulfonyl chloride, 3,3,4,4,5,5,6,6,6-nonafluoro-.
27619–89–2	1-Octanesulfonyl chloride, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-.
27619–90–5	1-Decanesulfonyl chloride, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-.
27619–91–6	1-Dodecanesulfonyl chloride, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-.
27619–97–2	1-Octanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-.
27905–45–9	2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester.
29081–56–9	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt (1:1).
29117–08–6	Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
29420–49–3	1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, potassium salt (1:1).
29457–72–5	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, lithium salt (1:1).
29809–34–5	Eicosane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,18,18,19,19,20,20-hentetracontafluoro-20-iodo-.
29809–35–6	Octadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,18,18-heptatriacontafluoro-18-iodo-.
30046–31–2	Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-pentacosafluoro-14-iodo-.

CASRN	Chemical name
31175–20–9	Ethanesulfonic acid, 2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-, polymer with 1,1,2,2-tetrafluoroethene.
31506–32–8	1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl-.
34362–49–7	2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-nonacosafluorohexadecyl ester.
34395–24–9	2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl ester.
34454–97–2	1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl-.
34455–29–3	1-Propanaminium, N-(carboxymethyl)-N,N-dimethyl-3-[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulfonyl]amino]-, inner salt.
34788–82–4	Europium, tris[3-[2,2,3,3,4,4,4-heptafluoro-1-(oxo-.kappa.O)butyl]-1,7,7-trimethylbicyclo[2.2.1]heptan-2-onato-.kappa.O]-.
35397–13–8	Propane, 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]-, polymer with 1-chloro-1,2,2-trifluoroethene and ethene.
37338–48–0	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
37486–69–4	3,6,9,12,15-Pentaoxaoctadecane, 1,1,1,2,4,4,5,7,7,8,10,10,11,13,13,14,16,16,17,17,18,18,18-tricosafluoro-5,8,11,14-tetrakis(trifluoromethyl)-.
38006–74–5	1-Propanaminium, 3-[[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-, chloride (1:1).
38565–52–5	Oxirane, 2-(2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoroheptyl)-.
39239–77–5	1-Tetradecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluoro-.
42532–60–5	Propanenitrile, 2,3,3,3-tetrafluoro-2-(trifluoromethyl)-.
51851–37–7	Silane, triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)-.
52166–82–2	1-Propanaminium, N,N,N-trimethyl-3-[[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]amino]-, chloride (1:1).
52591–27–2	2-Propenoic acid, 3,3,4,4,5,5,6,6,6-nonafluorohexyl ester.
53518–00–6	1-Propanaminium, N,N,N-trimethyl-3-[[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]-, chloride (1:1).
54950–05–9	Butanedioic acid, 2-sulfo-, 1,4-bis(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl) ester, sodium salt (1:1).
55716–11–5	Morpholine, 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,2,2,2-pentafluoroethyl)-.
55910–10–6	Glycine, N-[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]-N-propyl-, potassium salt (1:1).
56372–23–7	Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
56467–05–1	Poly(oxy-1,2-ethanediyl), .alpha.-(tridecafluorohexyl)-.omega.-hydroxy-.
56773–42–3	Ethanaminium, N,N,N-triethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1).
57570–64–6	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene, 1,1,2,2-tetrafluoroethene and 1,1,2-trifluoro-2-(trifluoromethoxy)ethene.
58194–00–6	Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-[1,1,2,2,3,3-hexafluoro-3-(trifluoromethoxy)propoxy]-.
59071–10–2	2-Propenoic acid, 2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl ester.
60164–51–4	Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.-(1,1,2,2,2-pentafluoroethyl)-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-.
60270–55–5	1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, potassium salt (1:1).
60699–51–6	1-Hexadecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-nonacosafluoro-.
61660–12–6	1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[3-(trimethoxysilyl)propyl]-.
61798–68–3	Pyridinium, 1-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)-, 4-methylbenzenesulfonate (1:1).
62037–80–3	Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-, ammonium salt (1:1).
63654–41–1	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]propane and 1,1,2,2-tetrafluoroethene.
63863–43–4	Propanoic acid, 3-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro-, methyl ester.
63863–44–5	Propanoic acid, 3-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro-, methyl ester, polymer with 1,1,2,2-tetrafluoroethene.
65059–79–2	1-Butene, 4-bromo-3,3,4,4-tetrafluoro-, polymer with 1,1-difluoroethene, 1,1,2,2-tetrafluoroethene and 1,1,2-trifluoro-2-(trifluoromethoxy)ethene.
65104–45–2	2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl 2-methyl-2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl 2-methyl-2-propenoate.
65104–65–6	1-Eicosanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,18,18,19,19,20,20,20-heptatriacontafluoro-.
65104–67–8	1-Octadecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,18,18,18-tritriacontafluoro-.
65510–55–6	Hexadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-nonacosafluoro-16-iodo-.
65530–59–8	Poly(difluoromethylene), .alpha.-fluoro-.omega.-(2-hydroxyethyl)-, 2-hydroxy-1,2,3-propanetricarboxylate (3:1).
65530–61–2	Poly(difluoromethylene), .alpha.-fluoro-.omega.-[2-(phosphonooxy)ethyl]-.
65530–62–3	Poly(difluoromethylene), .alpha.,.alpha.′-[phosphinicobis(oxy-2,1-ethanediyl)]bis[.omega.-fluoro-.
65530–63–4	Ethanol, 2,2′-iminobis-, compd. with .alpha.-fluoro-.omega.-[2-(phosphonooxy)ethyl]poly(difluoromethylene) (2:1).
65530–64–5	Ethanol, 2,2′-iminobis-, compd. with .alpha.,.alpha.′-[phosphinicobis(oxy-2,1-ethanediyl)]bis[.omega.-fluoropoly(difluoromethylene)] (1:1).
65530–65–6	Poly(difluoromethylene), .alpha.-fluoro-.omega.-[2-[(1-oxooctadecyl)oxy]ethyl]-.
65530–66–7	Poly(difluoromethylene), .alpha.-fluoro-.omega.-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]-.
65530–69–0	Poly(difluoromethylene), .alpha.-[2-[(2-carboxyethyl)thio]ethyl]-.omega.-fluoro-, lithium salt (1:1).
65530–70–3	Poly(difluoromethylene), .alpha.,.alpha.′-[phosphinicobis(oxy-2,1-ethanediyl)]bis[.omega.-fluoro-, ammonium salt (1:1).
65530–71–4	Poly(difluoromethylene), .alpha.-fluoro-.omega.-[2-(phosphonooxy)ethyl]-, ammonium salt (1:1).
65530–72–5	Poly(difluoromethylene), .alpha.-fluoro-.omega.-[2-(phosphonooxy)ethyl]-, ammonium salt (1:2).
65530–74–7	Ethanol, 2,2′-iminobis-, compd. with .alpha.-fluoro-.omega.-[2-(phosphonooxy)ethyl]poly(difluoromethylene) (1:1).
65530–82–7	Poly(difluoromethylene), .alpha.,.omega.-difluoro-.
65530–83–8	Poly(difluoromethylene), .alpha.-[2-[(2-carboxyethyl)thio]ethyl]-.omega.-fluoro-.
65530–85–0	Poly(difluoromethylene), .alpha.-(cyclohexylmethyl)-.omega.-hydro-.
65545–80–4	Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ether with .alpha.-fluoro-.omega.-(2-hydroxyethyl)poly(difluoromethylene) (1:1).
65605–56–3	Poly(difluoromethylene), .alpha.-fluoro-.omega.-(2-hydroxyethyl)-, dihydrogen 2-hydroxy-1,2,3-propanetricarboxylate.
65605–57–4	Poly(difluoromethylene), .alpha.-fluoro-.omega.-(2-hydroxyethyl)-, hydrogen 2-hydroxy-1,2,3-propanetricarboxylate.

CASRN	Chemical name
65605–58–5	2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with .alpha.-fluoro-.omega.-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]poly(difluoromethylene).
65605–59–6	2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with .alpha.-fluoro-.omega.-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]poly(difluoromethylene) and N-(hydroxymethyl)-2-propenamide.
65605–73–4	Poly(difluoromethylene), .alpha.-fluoro-.omega.-[2-[(1-oxo-2-propen-1-yl)oxy]ethyl]-, homopolymer.
65636–35–3	Ethanaminium, N,N-diethyl-N-methyl-2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]-, methyl sulfate (1:1), polymer with 2-ethylhexyl 2-methyl-2-propenoate, .alpha.-fluoro-.omega.-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]poly(difluoromethylene), 2-hydroxyethyl 2-methyl-2-propenoate and N-(hydroxymethyl)-2-propenamide.
67584–42–3	Cyclohexanesulfonic acid, decafluoro(pentafluoroethyl)-, potassium salt (1:1).
67584–51–4	Glycine, N-ethyl-N-[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]-, potassium salt (1:1).
67584–52–5	Glycine, N-ethyl-N-[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]-, potassium salt (1:1).
67584–53–6	Glycine, N-ethyl-N-[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]-, potassium salt (1:1).
67584–55–8	2-Propenoic acid, 2-[methyl[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]ethyl ester.
67584–56–9	2-Propenoic acid, 2-[methyl[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]amino]ethyl ester.
67584–57–0	2-Propenoic acid, 2-[methyl[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]amino]ethyl ester.
67584–58–1	1-Propanaminium, N,N,N-trimethyl-3-[[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]-, iodide (1:1).
67584–59–2	2-Propenoic acid, 2-methyl-, 2-[methyl[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]ethyl ester.
67584–62–7	Glycine, N-ethyl-N-[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]-, potassium salt (1:1).
67905–19–5	Hexadecanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-hentriacontafluoro-.
67906–42–7	1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafluoro-, ammonium salt (1:1).
67939–95–1	1-Propanaminium, N,N,N-trimethyl-3-[[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]-, iodide (1:1).
67969–69–1	1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[2-(phosphonooxy)ethyl]-, ammonium salt (1:2).
68084–62–8	2-Propenoic acid, 2-[methyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl ester.
68140–18–1	Thiols, C4-10, .gamma.-.omega.-perfluoro.
68140–20–5	Thiols, C6-12, .gamma.-.omega.-perfluoro.
68140–21–6	Thiols, C10-20, .gamma.-.omega.-perfluoro.
68141–02–6	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+) salt (3:1).
68156–01–4	Cyclohexanesulfonic acid, nonafluorobis(trifluoromethyl)-, potassium salt (1:1).
68156–07–0	Cyclohexanesulfonic acid, decafluoro(trifluoromethyl)-, potassium salt (1:1).
68182–34–3	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene, 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]propane and 1,1,2,2-tetrafluoroethene.
68187–25–7	Butanoic acid, 4-[[3-(dimethylamino)propyl]amino]-4-oxo-, 2(or 3)-[(.gamma.-.omega.-perfluoro-C6-20-alkyl)thio] derivs.
68187–47–3	1-Propanesulfonic acid, 2-methyl-, 2-[[1-oxo-3-[(.gamma.-.omega.-perfluoro-C4-16-alkyl)thio]propyl]amino] derivs., sodium salts.
68188–12–5	Alkyl iodides, C4-20, .gamma.-.omega.-perfluoro.
68227–96–3	2-Propenoic acid, butyl ester, telomer with 2-[[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, 2-[methyl[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, .alpha.-(2-methyl-1-oxo-2-propen-1-yl)-.omega.-hydroxypoly(oxy-1,4-butanediyl), .alpha.-(2-methyl-1-oxo-2-propen-1-yl)-.omega.-[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,4-butanediyl), 2-[methyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate and 1-octanethiol.
68239–43–0	2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester, polymer with .alpha.-fluoro-.omega.-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]poly(difluoromethylene), 2-hydroxyethyl 2-methyl-2-propenoate and N-(hydroxymethyl)-2-propenamide.
68258–85–5	1-Hexene, 3,3,4,4,5,5,6,6,6-nonafluoro-, polymer with ethene and 1,1,2,2-tetrafluoroethene.
68259–07–4	1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, ammonium salt (1:1).
68259–08–5	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, ammonium salt (1:1).
68259–09–6	1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-, ammonium salt (1:1).
68259–10–9	1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, ammonium salt (1:1).
68259–11–0	Pentanoic acid, 2,2,3,3,4,4,5,5,5-nonafluoro-, ammonium salt (1:1).
68259–38–1	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
68259–39–2	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
68298–12–4	1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-.
68298–62–4	2-Propenoic acid, 2-[butyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]ethyl ester, telomer with 2-[butyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-methyloxirane polymer with oxirane di-2-propenoate, 2-methyloxirane polymer with oxirane mono-2-propenoate and 1-octanethiol.
68298–79–3	Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
68298–80–6	Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
68298–81–7	Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
68310–17–8	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
68310–18–9	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]ethyl]-.omega.-hydroxy-.
68391–08–2	Alcohols, C8-14, .gamma.-.omega.-perfluoro.
68412–68–0	Phosphonic acid, perfluoro-C6-12-alkyl derivs.
68412–69–1	Phosphinic acid, bis(perfluoro-C6-12-alkyl) derivs.
68515–62–8	1,4-Benzenedicarboxylic acid, dimethyl ester, reaction products with bis(2-hydroxyethyl) terephthalate, ethylene glycol, .alpha.-fluoro-.omega.-(2-hydroxyethyl)poly(difluoromethylene), hexakis(methoxymethyl)melamine and polyethylene glycol.
68555–74–8	1-Pentanesulfonamide, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-N-(2-hydroxyethyl)-N-methyl-.
68555–75–9	1-Hexanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-N-(2-hydroxyethyl)-N-methyl-.
68555–76–0	1-Heptanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-N-(2-hydroxyethyl)-N-methyl-.
68555–77–1	1-Butanesulfonamide, N-[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,4-nonafluoro-.

CASRN	Chemical name
68555–81–7	1-Propanaminium, N,N,N-trimethyl-3-[[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]-, chloride (1:1).
68555–91–9	2-Propenoic acid, 2-methyl-, 2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2-[ethyl[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate.
68758–57–6	1-Tetradecanesulfonyl chloride, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluoro-.
68867–60–7	2-Propenoic acid, 2-[[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(1,1,2,2,3,3,4,4,4-nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate and .alpha.-(1-oxo-2-propen-1-yl)-.omega.-methoxypoly(oxy-1,2-ethanediyl).
68891–05–4	Ethene, tetrafluoro-, homopolymer, .alpha.-fluoro-.omega.-(2-hydroxyethyl)-, citrate, reaction products with 1,6-diisocyanatohexane.
68957–55–1	1-Propanaminium, N,N,N-trimethyl-3-[[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]amino]-, chloride (1:1).
68957–57–3	1-Propanaminium, N,N,N-trimethyl-3-[[(1,1,2,2,3,3,4,4,5,5,5-undecafluoropentyl)sulfonyl]amino]-, iodide (1:1).
68957–58–4	1-Propanaminium, N,N,N-trimethyl-3-[[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]amino]-, iodide (1:1).
68957–62–0	1-Heptanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-.
68958–60–1	Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-methoxy-.
68958–61–2	Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctyl)sulfonyl]amino]ethyl]-.omega.-methoxy-.
69087–47–4	Propanoic acid, 3-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro-, polymer with 1,1,2,2-tetrafluoroethene.
69116–73–0	Propanoic acid, 3-[1-[difluoro[1,2,2,2-tetrafluoro-1-(fluorocarbonyl)ethoxy]methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro-, methyl ester.
69804–19–9	Propanenitrile, 3-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro-.
69991–61–3	Ethene, 1,1,2,2-tetrafluoro-, oxidized, polymd..
69991–62–4	Ethene, 1,1,2,2-tetrafluoro-, oxidized, polymd., reduced.
69991–67–9	1-Propene, 1,1,2,3,3,3-hexafluoro-, oxidized, polymd.
70225–14–8	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with 2,2′-iminobis[ethanol] (1:1).
70225–15–9	1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, compd. with 2,2′-iminobis[ethanol] (1:1).
70225–16–0	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with 2,2′-iminobis[ethanol] (1:1).
70225–17–1	1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-, compd. with 2,2′-iminobis[ethanol] (1:1).
70225–18–2	1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, compd. with 2,2′-iminobis[ethanol] (1:1).
70969–47–0	Thiols, C8-20, .gamma.-.omega.-perfluoro, telomers with acrylamide.
70983–59–4	Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-hydroxy-, 2-hydroxy-3-[(.gamma.-.omega.-perfluoro-C6-20-alkyl)thio]propyl ethers.
70983–60–7	1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-, 3-[(.gamma.-.omega.-perfluoro-C6-20-alkyl)thio] derivs., chlorides.
71608–60–1	Pentanoic acid, 4,4-bis[(.gamma.-.omega.-perfluoro-C8-20-alkyl)thio] derivs.
71832–66–1	Propanenitrile, 3-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro-, polymer with 1,1,2,2-tetrafluoroethene and 1,1,2-trifluoro-2-(trifluoromethoxy)ethene.
72623–77–9	Fatty acids, C6-18, perfluoro, ammonium salts.
72968–38–8	Fatty acids, C7-13, perfluoro, ammonium salts.
74398–72–4	1-Butene, 4-bromo-3,3,4,4-tetrafluoro-, polymer with 1,1-difluoroethene, 1,1,2,3,3,3-hexafluoro-1-propene and 1,1,2,2-tetrafluoroethene.
74499–44–8	Phosphoric acid, .gamma.-.omega.-perfluoro-C8-16-alkyl esters, compds. with diethanolamine.
74499–68–6	Propane, 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]-, polymer with 1,1-difluoroethene and 1,1,2,2-tetrafluoroethene.
74499–71–1	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with ethene, 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]propane and 1,1,2,2-tetrafluoroethene.
78560–44–8	Silane, trichloro(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)-.
79070–11–4	Poly(difluoromethylene), .alpha.-chloro-.omega.-(2,2-dichloro-1,1,2-trifluoroethyl)-.
80010–37–3	Poly(difluoromethylene), .alpha.-fluoro-.omega.-(2-sulfoethyl)-.
83048–65–1	Silane, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)trimethoxy-.
86508–42–1	Perfluoro compounds, C5-18.
88645–29–8	Ethene, 1,1,2,2-tetrafluoro-, oxidized, polymd., reduced, Me esters, reduced.
95144–12–0	Poly(difluoromethylene), .alpha.-fluoro-.omega.-[2-(phosphonooxy)ethyl]-, ammonium salt (1:?).
97553–95–2	Thiocyanic acid, .gamma.-.omega.-perfluoro-C4-20-alkyl esters.
97659–47–7	Alkenes, C8-14 .alpha.-, .delta.-.omega.-perfluoro.
101316–90–9	Ethene, 1,1,2,2-tetrafluoro-, oxidized, polymd., reduced, Me esters, reduced, acrylates.
118400–71–8	Disulfides, bis(.gamma.-.omega.-perfluoro-C6-20-alkyl).
123171–68–6	Poly(difluoromethylene), .alpha.-[2-(acetyloxy)-3-[(carboxymethyl)dimethylammonio]propyl]-.omega.-fluoro-, inner salt.
125061–94–1	Naphthalene, [difluoro(1,2,2,3,3,4,4,5,5,6,6–undecafluorocyclohexyl)methyl]heptadecafluorodecahydro-.
125476–71–3	Silicic acid (H4SiO4), sodium salt (1:2), reaction products with chlorotrimethylsilane and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10–heptadecafluoro-1-decanol.
126066–30–6	Poly[oxy[trifluoro(trifluoromethyl)–1,2-ethanediyl]], .alpha.-[1,2,2,2-tetrafluoro-1-(hydroxymethyl)ethyl]-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-.
132182–92–4	Pentane, 1,1,1,2,2,3,4,5,5,5–decafluoro-3-methoxy-4-(trifluoromethyl)-.
132843–44–8	Ethanesulfonamide, 1,1,2,2,2–pentafluoro-N-[(1,1,2,2,2-pentafluoroethyl)sulfonyl]-, lithium salt (1:1).
134035–61–3	Poly[oxy[trifluoro(trifluoromethyl)–1,2-ethanediyl]], .alpha.-[1,2,2,2-tetrafluoro-1-(methoxycarbonyl)ethyl]-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-.
135228–60–3	Hexane, 1,6-diisocyanato-, homopolymer, .gamma.-.omega.-perfluoro-C6-20-alc.-blocked.
138495–42–8	Pentane, 1,1,1,2,2,3,4,5,5,5–decafluoro-.

CASRN	Chemical name
142636–88–2	2–Propenoic acid, 2-methyl-, octadecyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluorododecyl 2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafluorotetradecyl 2-propenoate.
143372–54–7	Siloxanes and Silicones, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10–heptadecafluorodecyl)oxy Me, hydroxy Me, Me octyl, ethers with polyethylene glycol mono-Me ether.
147545–41–3	1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methyl-, phosphate (ester).
148240–85–1	1,3–Propanediol, 2,2-bis[[(.gamma.-.omega.-perfluoro-C4-10-alkyl)thio]methyl] derivs., phosphates, ammonium salts.
148240–87–3	1,3–Propanediol, 2,2-bis[[(.gamma.-.omega.-perfluoro-C6-12-alkyl)thio]methyl] derivs., phosphates, ammonium salts.
148240–89–5	1,3–Propanediol, 2,2-bis[[(.gamma.-.omega.-perfluoro-C10-20-alkyl)thio]methyl] derivs., phosphates, ammonium salts.
149935–01–3	1–Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene, ethene, 1,1,2,2-tetrafluoroethene and 1,1,2-trifluoro-2-(trifluoromethoxy)ethene.
150135–57–2	2–Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymers with Bu acrylate, .gamma.-.omega.-perfluoro-C8-14-alkyl acrylate and polyethylene glycol monomethacrylate, 2,2′-(1,2-diazenediyl)bis[2,4-dimethylpentanenitrile]-initiated.
156559–18–1	2–Oxiranemethanol, polymers with reduced Me esters of reduced polymd. oxidized tetrafluoroethylene.
161075–12–3	Ethene, tetrafluoro-, oxidized, polymd., reduced, Me esters.
162492–15–1	Ethene, 1,1,2,2–tetrafluoro-, oxidized, polymd., reduced, Me esters, reduced, ethoxylated.
163702–05–4	Butane, 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro-.
163702–06–5	Propane, 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoro-.
163702–07–6	Butane, 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-.
163702–08–7	Propane, 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoro-.
165178–32–5	Propane, 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]-, polymer with 1,1,2,2-tetrafluoroethene and 1,1,2-trifluoro-2-(trifluoromethoxy)ethene.
177484–43–4	Propanenitrile, 2,3,3,3-tetrafluoro-2-[1,1,2,2,3,3-hexafluoro-3-[(1,2,2-trifluoroethenyl)oxy]propoxy]-, polymer with 1,1,2,2-tetrafluoroethene and 1,1,2-trifluoro-2-(trifluoromethoxy)ethene.
178094–69–4	1-Octanesulfonamide, N-[3-(dimethyloxidoamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, potassium salt (1:1).
178535–23–4	Fatty acids, linseed-oil, .gamma.-.omega.-perfluoro-C8-14-alkyl esters.
180582–79–0	Sulfonic acids, C6-12-alkane, .gamma.-.omega.-perfluoro, ammonium salts.
182176–52–9	Ethaneperoxoic acid, reaction products with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl thiocyanate and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl thiocyanate.
185701–88–6	Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propoxy]-, polymer with 2,2,3-trifluoro-3-(trifluoromethyl)oxirane, reaction products with 3-(ethenyldimethylsilyl)-N-methylbenzenamine.
196316–34–4	2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymers with .gamma.-.omega.-perfluoro-C10-16-alkyl acrylate and vinyl acetate, acetates.
200013–65–6	Diphosphoric acid, polymers with ethoxylated reduced Me esters of reduced polymd. oxidized tetrafluoroethylene.
200513–42–4	2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate.
212335–64–3	2-Propenoic acid, reaction products with N-[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonamide.
220075–01–4	Propanedioic acid, 2-(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)-, 1,3-dimethyl ester.
220182–27–4	1-Propene, 1,1,2,3,3,3-hexafluoro-, telomer with chlorotrifluoroethene, oxidized, reduced, Et ester, hydrolyzed.
220459–70–1	Glycine, N,N-bis[2-hydroxy-3-(2-propen-1-yloxy)propyl]-, sodium salt (1:1), reaction products with ammonium hydroxide and 1,1,1,2,2-pentafluoro-2-iodoethane-tetrafluoroethylene telomer.
220689–12–3	Phosphonium, tetrabutyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1).
226409–30–9	Propanedioic acid, 2-(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)-, 1,3-bis[4-(ethenyloxy)butyl] ester.
238420–68–3	Propanedioic acid, mono(.gamma.-.omega.-perfluoro-C8-12-alkyl) derivs., di-me esters.
238420–80–9	Propanedioic acid, mono(.gamma.-.omega.-perfluoro-C8-12-alkyl) derivs., bis[4-(ethenyloxy)butyl] esters.
274917–93–0	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C3 fraction.
274917–94–1	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C4 fraction.
274917–95–2	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C5 fraction.
274917–96–3	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C6 fraction.
274917–97–4	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C7 fraction.
274918–01–3	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C8 fraction.
274918–02–4	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C9 fraction.
274918–03–5	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C10 fraction.
274918–09–1	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C11 fraction.
274918–10–4	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C12 fraction.
274918–12–6	Ethene, tetrafluoro-, oxidized, polymd., reduced, decarboxylated, C13 fraction.
297730–93–9	Hexane, 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)-.
328389–90–8	1,2-Propanediol, 3-(diethylamino)-, polymers with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, propylene glycol and reduced Me esters of reduced polymd. oxidized tetrafluoroethylene, 2-ethyl-1-hexanol-blocked, acetates (salts).
332350–90–0	Phosphonium, tributyl(2-methoxypropyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1).
332350–93–3	Phosphonium, triphenyl(phenylmethyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-butanesulfonamide (1:1).
421595–49–5	2-Propenoic acid, 2-hydroxyethyl ester, adduct with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (1:1), reaction products with ethoxylated reduced Me esters of reduced polymd. oxidized tetrafluoroethylene.
449177–94–0	Oxetane, 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]-.
452080–67–0	Boron, trifluoro(tetrahydrofuran)-, (T-4)-, polymer with 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]oxetane, ether with 2,2-dimethyl-1,3-propanediol (2:1), bis(hydrogen sulfate), diammonium salt.
475678–78–5	Oxetane, 3-methyl-3-[[(3,3,4,4,5,5,6,6,6-nonafluorohexyl)oxy]methyl]-.
484024–67–1	1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-, ammonium salt (1:1).
502164–17–2	Ethene, 1,1,2,2-tetrafluoro-, oxidized, polymd., reduced, Et esters.
753501–40–5	Boron, trifluoro(tetrahydrofuran)-, (T-4)-, polymer with 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]oxetane, ether with 2,2-dimethyl-1,3-propanediol (2:1).
753501–43–8	Boron, trifluoro(tetrahydrofuran)-, (T-4)-, polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl) and 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]oxetane.

CASRN	Chemical name
864910–70–3	Boron, trifluoro(tetrahydrofuran)-, (T-4)-, polymer with 2-methyloxirane, 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]oxetane, oxirane and tetrahydrofuran.
874290–13–8	Ethene, 1-[difluoro(trifluoromethoxy)methoxy]-1,2,2-trifluoro-, polymer with 1,1-difluoroethene.
878545–84–7	1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1,2,2-tetrafluoroethene, 1,1,2-trifluoro-2-(1,1,2,2,2-pentafluoroethoxy)ethene and 1,1,2-trifluoro-2-(trifluoromethoxy)ethene.
957209–18–6	Furan, 2,3,3,4,4-pentafluorotetrahydro-5-methoxy-2,5-bis[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-.
1029089–63–1 ..	Boron, trifluoro(tetrahydrofuran)-, (T-4)-, polymer with 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]oxetane, ether with 2,2-dimethyl-1,3-propanediol (2:1), polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl) and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane.
1033385–42–0 ..	Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.-[1,2,2,2-tetrafluoro-1-[[(2-hydroxyethyl)amino]carbonyl]ethyl]-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-, ether with .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (2:1).
1078142–10–5 ..	1,3-Propanediol, 2,2-bis[[(.gamma.-.omega.-perfluoro-C6-12-alkyl)thio]methyl] derivs., polymers with 2,2-bis[[(.gamma.-.omega.-perfluoro-C10-20-alkyl)thio]methyl]-1,3-propanediol, 1,6-diisocyanato-2,2,4(or 2,4,4)-trimethylhexane, 2-heptyl-3,4-bis(9-isocyanatononyl)-1-pentylcyclohexane and 2,2′-(methylimino)bis[ethanol].
1078712–88–5 ..	Thiols, C4-20, .gamma.-.omega.-perfluoro, telomers with acrylamide and acrylic acid, sodium salts.
1078715–61–3 ..	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-[2-[(.gamma.-.omega.-perfluoro-C4-20-alkyl)thio]acetyl] derivs., inner salts.
1092822–31–5 ..	2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with 2-hydroxyethyl 2-propenoate, .alpha.-(2-methyl-1-oxo-2-propen-1-yl)-.omega.-methoxypoly(oxy-1,2-ethanediyl) and 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]oxetane polymer with tetrahydrofuran mono[[(1-oxo-2-propen-1-yl)oxy]ethyl] ether.
1214752–87–0 ..	Borate(1-), tetrahydro-, sodium (1:1), reaction products with reduced polymd. oxidized tetrafluoroethylene, hydrolyzed, diallyl ethers, polymers with 2,4,6,8-tetramethylcyclotetrasiloxane, Si-(8,13-dioxo-4,7,12-trioxa-9-azapentadec-14-en-1-yl) derivs..
1215851–50–5 ..	Sulfonium, [1,1′-biphenyl]-4-yl[4-([1,1′-biphenyl]-4-ylthio)phenyl]phenyl-, (OC-6-21)-trifluorotris(1,1,2,2,2-pentafluoroethyl)phosphate(1-) (1:1).
1224429–82–6 ..	Phosphoric acid, mixed esters with polyethylene glycol and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-1-octanol, ammonium salts.
1269217–82–4 ..	Thieno[3,4-b]thiophene, homopolymer, 2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoroethanesulfonic acid-tetrafluoroethylene polymer-doped.
1279108–20–1 ..	Hexane, 1,6-diisocyanato-, homopolymer, .alpha.-[1-[[[3-[[3-(dimethylamino)propyl]amino]propyl]amino]carbonyl]-1,2,2,2-tetrafluoroethyl]-.omega.-(1,1,2,2,3,3,3-heptafluoropropoxy)poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]]-blocked.
1378928–76–7 ..	Ethanesulfonyl fluoride, 2-[1-[difluoro][(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-, polymer with 1,1,2,2-tetrafluoroethene, hydrolyzed, potassium salts.
1378930–04–1 ..	Ethanesulfonyl fluoride, 2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-, polymer with 1,1,2,2-tetrafluoroethene, hydrolyzed.
1378930–30–3 ..	Propanoic acid, 3-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro-, methyl ester, polymer with 1,1,2,2-tetrafluoroethene, hydrolyzed, potassium salts.
1564254–27–8 ..	Ethene, 1,1,2,2-tetrafluoro-, oxidized, polymd., reduced, Me esters, reduced, N-(3-isocyanatomethylphenyl)carbamates.
1627515–87–0 ..	Hexanedioic acid, polymers with 1,3-butanediol, 1,4-butanediol, di-Et malonate, 1,6-diisocyanatohexane, ethoxylated reduced Me esters of reduced polymd. oxidized tetrafluoroethylene, 1,6-hexanediol, 1,1′-methylenebis[isocyanatobenzene], propylene glycol and tripropylene glycol.
1687740–67–5 ..	Ethanesulfonyl fluoride, 1,1,2,2-tetrafluoro-2-[(1,2,2-trifluoroethenyl)oxy]-, polymer with 1,1,2,2-tetrafluoroethene, hydrolyzed, lithium salts.
1708962–18–8 ..	Methanol, reaction products with 1,1,1,2,2,3,4,5,5,6,6,7,7,7-tetradecafluoro-3-heptene.
1708962–19–9 ..	Methanol, reaction products with 1,1,1,2,3,4,4,5,5,6,6,7,7,7-tetradecafluoro-2-heptene.
1807944–82–6 ..	1-Octanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-, barium salt (2:1).

(b) Examples of PFAS by TSCA Accession Number.

TSCA accession No.	Chemical name
44305	Perfluoroalkyl ethanol and methyl alcohol adducts of toluene diisocyanate.
46641	Siloxanes and silicones, dimethyl, methylfluoroalkyl (PROVISIONAL).
60710	Modified ethylene-tetrafluoro ethylene copolymer (PROVISIONAL).
62625	Disubstituted tetrafluoroalkane.
67993	Substituted tetrafluoroalkene.
68101	Disubstituted tetrafluoroalkane.
70907	Perfluoroalkyl acrylate copolymer latex (PROVISIONAL).
71217	Polyfluoroalkyl betaine (PROVISIONAL).
71273	Fluorinated alkyl silane (PROVISIONAL).
73940	2-Oxepanone, polymer with n-decanol and heptadecafluorodecanol, reaction product with benzene, diisocyanatomethyl (PROVISIONAL).
74465	Fluoroalkylsiloxane hydrolyzate (PROVISIONAL).
82623	Perfluoroalkyl polyether (PROVISIONAL).
87639	Fluoro elastomer (PROVISIONAL).
89419	Modified fluoroalkyl urethane (PROVISIONAL).
91748	Fluoro alkyl siloxane polymer (PROVISIONAL).
99333	Siloxanes and silicones, dimethyl, methylfluoroalkyl (PROVISIONAL).
100700	2-Propenoic acid, 2-methyl-, methyl ester, polymer with poly(difluoromethylene), .omega.-(2-((1-oxo-2-propenyl)oxy)ethyl)-(PROVISIONAL).
102659	Perfluoroelastomer (PROVISIONAL).
103129	Perfluoroalkenyltrialkylammonium salt (PROVISIONAL).

TSCA accession No.	Chemical name
104984	Fluorosiloxane polymer (PROVISIONAL).
105590	Salt of perfluoro fatty acids (PROVISIONAL).
107734	Fluorinated acrylic ester polymer (PROVISIONAL).
109649	Perfluoroelastomer (PROVISIONAL).
113758	Fluorocarbon polymer (PROVISIONAL).
114795	Copolymers of fluoroolefin and vinyl ethers (PROVISIONAL).
114831	Copolymers of fluoroolefin and vinyl ethers (PROVISIONAL).
115118	Fluorinated acrylic ester copolymer (PROVISIONAL).
115776	Reaction product of a fluorinated alcohol, epichlorohydrin, an alkyl glycol and an isocyanate (PROVISIONAL).
117727	Fluorinated substituted urethane (PROVISIONAL).
118219	Perfluoroalkylacrylate (PROVISIONAL).
118322	Perfluoroalkylsulfonamide salt (PROVISIONAL).
118708	Reaction product of a fluorinated alcohol, epichlorohydrin, a diol and an isocyanate (PROVISIONAL).
122453	Substituted perfluoroalkenyl ammonium salt (PROVISIONAL).
125601	Copolymers of fluoroolefin and vinyl ethers (PROVISIONAL).
127765	Quaternary ammonium perfluoroalkyl carboxylate (PROVISIONAL).
128677	Perfluoroalkyl ethylacrylate oligomer (PROVISIONAL).
129103	Modified perfluoropolyoxyalkane (PROVISIONAL).
131987	Fluorinated phosphate (PROVISIONAL).
132957	Polyfluoroacyl chloride (PROVISIONAL).
134748	Perfluoropolyamphiphile (PROVISIONAL).
135058	Perfluoroalkylethylacrylate copolymer (PROVISIONAL).
136415	Copolymer of fluoroolefin (PROVISIONAL).
137587	Perfluoroalkylethylacrylate copolymer (PROVISIONAL).
137667	Perfluoroalkylethylacrylate copolymer (PROVISIONAL).
137678	Fluoroelastomer (PROVISIONAL).
138648	Fluorinated acrylic copolymer (PROVISIONAL).
142008	Fluorinated polyalkyl alkoxy siloxanes (PROVISIONAL).
144582	Perfluoroalkylethyl ester (PROVISIONAL).
146282	Aromatic fluoroalkyl mixture complex.
150755	Perfluorinated alcohol (PROVISIONAL).
152137	Aryl phosphonate ester of a perfluoropolyether (PROVISIONAL).
152411	Perfluoroalkylethylacrylate copolymer (PROVISIONAL).
153209	Perfluoroalkylacrylate copolymer (PROVISIONAL).
153345	Betaines, dimethyl (polyfluoro-hydro-alkyl) (PROVISIONAL).
155567	Fluorinated silane (PROVISIONAL).
158022	Perfluoroalkylacrylate copolymer (PROVISIONAL).
159707	Fluoroelastomer (PROVISIONAL).
160339	Modified fluorinated acrylic resin (PROVISIONAL).
160680	Polyfluoro alkylether (PROVISIONAL).
163214	Fluoroethylene-vinylether copolymer (PROVISIONAL).
164148	Perfluoroalkylacrylate copolymer (PROVISIONAL).
166973	Modified perfluoropolyether salt (PROVISIONAL).
167410	Copolymer of tetrafluoroethylene and perfluoroalkoxy ethene (PROVISIONAL).
168833	Perfluoroalkylethyl amine (PROVISIONAL).
169347	Perfluoroalkylethyl ester (PROVISIONAL).
169698	Hydrofluorocarbon ethers (PROVISIONAL).
171790	Perfluoroalkylethyl acrylate copolymer (PROVISIONAL).
172851	Perfluoroalkylphosphate ammonium salt (PROVISIONAL).
174993	Poly-.beta.-fluoroalkylethyl acrylate and alkyl acrylate (PROVISIONAL).
176740	Poly-.beta.-fluoroalkylethyl acrylate and polyoxyalkyl methacrylate (PROVISIONAL).
178008	Siloxane grafted fluoroelastomer.
193578	Alkyl perfluorinated acryloyl ester (PROVISIONAL).
194662	Alkenoic acid, polymer with alkyl alkenoate, alkylalkylalkenoate, alkenoic acid and tridecafluoro alkylalkenoate, compds. with alkylaminoalcanol.
196704	Fluorinated acrylic copolymer (PROVISIONAL).
199350	Fluoroalkyl acrylate copolymer.
200818	Perfluoropolyether modified organosilane (PROVISIONAL).
204230	Polyfluoroalkyl phosphoric acid salt (PROVISIONAL).
205302	Hydrofluoroolefin polymer with 1,1-difluoroethene (PROVISIONAL).
205313	Polyfluoroacyl peroxide (PROVISIONAL).
217095	Alkylpolycarboxylic acid, derivative, tris(fluorinatedalkoxy)alkyl ester salt.
218985	Fluorinated organopolysilazane.
221637	Polyfluoroalkyl phosphoric acid salt (PROVISIONAL).
225004	Siloxanes and Silicones, alkyl, alkyl propoxy ethyl, methyl octyl, alkyl polyfluorooctyl.
227884	Fluorinated acrylate, polymer with alkyloxirane homopolymer monether with alkanediol mono(2-methyl-2-propenoate), tert-Bu 2-ethylhexaneperoxoate-initiated.
230194	Fluoropolymer (PROVISIONAL).
231255	Fluoroalkyl methacrylate copolymer.
231642	Fluoroethylene vinyl copolymer (PROVISIONAL).
231937	Perfluoroalkylethyl methacrylate copolymer (PROVISIONAL).
231993	Polyfluorinated alkyl thiol.
232269	Fluorinated ester.

TSCA accession No.	Chemical name
234050	Fluorosilicone polymer (PROVISIONAL).
234152	Alkylene diisocyanate homopolymer, reaction product with substituted polyethylene glycol, perfluoroalkyl alcohol, methyl ethyl ketoxime and perfluoroalkylene glycol (PROVISIONAL).
234389	Copolymer of tetrafluoroethene and perfluorosulfonylvinylether (PROVISIONAL).
234458	Polyfluorinated alkyl thiol.
234981	Fluoroalkyl acrylate copolymer (PROVISIONAL).
235586	Fluoroalkyl acrylate copolymer (PROVISIONAL).
235724	Perfluoroalkylethylmethacrylate copolymer (PROVISIONAL).
236181	Fluorinated oligomer alcohol (PROVISIONAL).
236238	Fluoroalkyl acrylate copolymer.
236750	Polyfluorinated alkyl halide.
238052	Perfluoropolyether compound (PROVISIONAL).
238096	Alkyl methacrylates, polymer with substituted carbomonocycle, hydroxymethyl acrylamide and fluorinatedalkyl acrylate (PROVISIONAL).
238427	Fluoroacrylate modified urethane (PROVISIONAL).
239191	Fluoroalkyl methylacrylate copolymer.
239260	Fluorinated alkylsulfonamidol urethane polymer (PROVISIONAL).
240052	Perfluoropolyether ally ether (PROVISIONAL).
240392	Fluoroalkyl methacrylate co-polymer (PROVISIONAL).
241099	Perfluorobutanesulfonamide and polyoxyalkylene containing polyurethane.
241271	Perfluoropolyether methoxysilane (PROVISIONAL).
242207	Siloxanes and Silicones, aminoalkyl fluorooctyl, hydroxy-terminatedsalt.
242467	Polyperfluoro alkylene glycol, perfluoroalkoxy-and hydroxy alkyl amido perfluoroalkyl terminated (PROVISIONAL).
243266	Perfluoroalkylethyl methacrylate copolymer (PROVISIONAL).
243562	Fluoro modified, polyether modified, and alkyl modified polymethylsiloxane (PROVISIONAL).
244076	Fluoroalkyl substituted siloxanes (PROVISIONAL).
244441	Fluoroalkyl acrylate copolymer modified with polysiloxanes.
244781	Fluoropolymeric sulfonic acid (PROVISIONAL).
245397	Fluoroalkyl methacrylate copolymer (PROVISIONAL).
245535	Polyfluorinated alkyl thio polyacrylic acid-acrylamide.
245820	Fluoroalkyl sulfonamide (PROVISIONAL).
245831	Polymer of perfluoroalkylethylmethacrylate, alkylacrylate, chloroethene, and urethane methacrylate.
246118	Perfluoroalkylated polyamino acid (PROVISIONAL).
246287	Fluoroalkyl acrylate copolymer (PROVISIONAL).
247111	Fluorinated aliphatic isocyanate polymer (PROVISIONAL).
248023	Tetrafluoro acrylates copolymer with polyoxy methyl derivatives (PROVISIONAL).
248192	Perfluoroalkylethyl methacrylate copolymer, salt (PROVISIONAL).
248567	Perfluoroalkyl ethylmethacrylate copolymer.
248589	Partially fluorinated alkyl betaine (PROVISIONAL).
248647	Modified fluorinated acrylate.
249220	Partially fluorinated borate ester (PROVISIONAL).
249311	Fluoro-modified acrylic copolymer.
249399	Fluoralkyl acrylate copolymer.
249559	Diethylene glycol, polymer with diisocyanatoalkane, polyethylene glycol monomethyl ether- and fluorinatedalkanol-blocked (PROVISIONAL).
249640	Fluoropolymeric sulfonic acid salt (PROVISIONAL).
249720	Fluoroacrylate copolymer (PROVISIONAL).
251300	Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5) (PROVISIONAL).
251662	Fluoroalkyl acrylate co-polymer (PROVISIONAL).
251797	Fluoroalkyl methacrylate copolymer (PROVISIONAL).
252290	Urethane polymer modified with perfluoroalkylsulfonamide (PROVISIONAL).
253884	Fluoroalkyl sulfonamide derivative.
253975	Fluoroalkyl acrylate copolymer (PROVISIONAL).
254116	Alkyl acid fluoride (PROVISIONAL).
254456	Perfluoroalkylsulfonamidoalkyl acrylate, polymer with acrylic acid derivatives (PROVISIONAL).
254649	Polyfluoroalkyl phosphoric acid salt (PROVISIONAL).
255653	Fluoroalkyl acrylate copolymer.
255700	Fluorinated acrylic copolymer (PROVISIONAL).
255846	Fluorinated acrylic copolymer (PROVISIONAL).
255993	Hexafluoropropylene-perfluoro (alkyl vinyl ether)-tetrafluoroethylene copolymer (PROVISIONAL).
256372	Fluoro modified, polyether modified polyacrylate (PROVISIONAL).
256394	Fluorinated copolymer (PROVISIONAL).
256452	Perfluorinated organic peroxide (PROVISIONAL).
256678	Perfluoroalkyl acrylate copolymer (PROVISIONAL).
257171	Polymer of perfluoroalkylethylacrylate, alkylaminomethacrylate, hydroxyalkylmethacrylate, organic acid salt.
257444	Phosphoric acid, mixed esters with partially fluorinated alcohol, ammonium salts (PROVISIONAL).
257580	Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), amine salts.
257911	Perfluoroalkylethyl methacrylate copolymer (PROVISIONAL).
257922	Alkane carboxylic acids esters with long chain fatty alcohol and fluorinated alkylsulfonamidoalkyl alcohol (PROVISIONAL).
257966	Perfluoropolyether compound (PROVISIONAL).
258072	Perfluorinated difunctional acid flouride (PROVISIONAL).
258174	Polyfluoralkyl ether.
258196	Perfluoroalkylethyl methacrylate copolymer (PROVISIONAL).

TSCA accession No.	Chemical name
258981	Ethylene-tetrafluoroethylene-fluorinated alkene copolymer.
259360	Copolymer of perfluoroalkylsulfonamidoalkyl acrylate and alkyl acrylate modified fatty acid dimers (PROVISIONAL).
259633	Polyfluorinated alkyl polyamide.
259655	Perfluoroalkyl substituted alkyl sulfonate.
260196	Polyfluorinated alkyl amine.
260958	Fluoroalkyl sulfonamide derivative.
261428	Perfluoroalkyl acrylate (PROVISIONAL).
261462	Partially fluorinated amphiphilic condensation polymer (PROVISIONAL).
261826	Fluoroalkyl methacrylate co-polymer (PROVISIONAL).
262169	Fluoroalkyl acrylate copolymer modified with polysiloxanes.
262341	Copolymer of perfluorinated and alkyl methacrylates.
262545	Polyfluorinated alkyl thio polyacrylamide.
262885	Fluoro modified, polyether modified polyacrylate (PROVISIONAL).
263093	Polyfluorinated alkyl thio polyacrylamide.
263208	Pefluoroalkylethylmethacrylate copolymer (PROVISIONAL).
263435	Polyfluorinated alkyl quaternary ammonium chloride.
264165	Ammonium salt of fluorinated alkoxyfluoropropanoic acid.
264621	Fluoroethylene-vinylether copolymer (PROVISIONAL).
264687	Fluoroalkyl acrylate copolymer (PROVISIONAL).
264916	Fluorinated vinyl ether polymer (PROVISIONAL).
264949	Fluorochemical ester (PROVISIONAL).
265453	Polyfluoroalkylproponic acid ethyl ester (PROVISIONAL).
265599	Fluorinated acrylic copolymer (PROVISIONAL).
266423	Perfluoropolyether modified silane (PROVISIONAL).
267095	2-Propenoic acid, 2-methyl-, 2-hydroxyethyl esters, telomers with C18–26-alkyl acrylate, 1-dodecanethiol, N-(hydroxymethyl)-2-methyl-2-propenamide, polyfluorooctyl methacrylate, 2,2′-[1,2-diazenediylbis(1-methylethylidene)]bis[4,5-dihydro-1H-imidazole]hydrochloride (1:2)-initiated (PROVISIONAL).
267948	Fluorinated alkylsulfonamido acrylate copolymer (PROVISIONAL).
268781	Fluoroalkyl methacrylate copolymer (PROVISIONAL).
268883	Fluorinated sulfonamide alcohol (PROVISIONAL).
269079	Fluorinated methacrylate monomer (PROVISIONAL).
269400	Partially fluorinated alcohol substituted glycol (PROVISIONAL).
269604	2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, telomers with C18–26-alkyl acrylate, 1-dodecanethiol, N-(hydroxymethyl)-2-methyl-2-propenamide, polyfluorooctyl methacrylate and vinylidene chloride, 2,2′-[1,2-diazenediylbis(1-methylethylidene)bis[4,5-dihydro-1H-imidazole] hydrochloride (1,2)-initiated (PROVISIONAL).
270598	Tetrafluoroethylene chlorotrifluoroethylene copolymer (PROVISIONAL).
270601	Fluoroelastomer (PROVISIONAL).
270770	Modified fluorinated acrylate (PROVISIONAL).
271364	Fluorinated polyalkyl silicones (PROVISIONAL).
271739	Urethane polymer modified with perfluoroalkylsulfonamide and polyethoxylate (PROVISIONAL).
272038	Ethylene-tetrafluoroethylene copolymer (PROVISIONAL).
272458	Fluoroolefin copolymer (PROVISIONAL).
272583	Fluoroalkyl acrylate copolymer.
272618	Polyfluorinated alkyl thio acrylamide.
273611	Trifluoroethene polymer with 4-(ethenyloxy)-1-butanol, ethene, ethoxy- and olefin ethoxy copolymer (PROVISIONAL).
274136	Fluorinated alkylsulfonamido polymer (PROVISIONAL).
274147	Perfluorinated polyamine (PROVISIONAL).
274352	Fluoroalkylacrylate co-polymer (PROVISIONAL).
274363	Modified fluorinated acrylate (PROVISIONAL).
274421	Fluoroalkyl acrylate copolymer (PROVISIONAL).
274512	Perfluoropolyether chlorosilane (PROVISIONAL).
274534	Trifluoroethene polymer with, 4-(ethenyloxy)-1-butanol, olefin copolymers and amine (PROVISIONAL).
274658	Partially fluorinated alcohol, reaction products with phosphorus oxide (P2O5), ammonium salts (PROVISIONAL).
274670	Fluorinated acrylic alkylamino copolymer.
275719	Fluorinated amine oxide (PROVISIONAL).
275899	Perfluoropolyether-block-polytetrafluoroethylene (PROVISIONAL).
276052	Fluorinated alkenyl ether (PROVISIONAL).
276109	Siloxanes and silicones, amino alkyl substituted alkyl hydroxyl, hydroxyl fluorinated alkyl, ester salts, reaction products with mixed metal oxides (PROVISIONAL).
276303	Perfluoro alkoxy acid fluoride derivative (PROVISIONAL).
276858	Polyfluoroalkyl phosphoric acid (PROVISIONAL).
276950	Fluorinated acrylic polymer with acrylate groups (PROVISIONAL).
277055	Fluoroalkyl acrylate copolymer.
277420	Fluorinated acrylic alkylamino copolymer (PROVISIONAL).
278105	Fluoroalkyl methacrylate co-polymer (PROVISIONAL).
278138	Fluoroalkyl acrylate copolymer (PROVISIONAL).
279051	Perfluoropolyether compound (PROVISIONAL).
279108	Perfluoroalkylethylmethacrylate copolymer.
279755	Urethane polymer modified with perfluoroalkylsulfonamide (PROVISIONAL).

(c) *Examples of PFAS by LVE case number and CASRNs.*

LVE case No.	CASRN	Chemical name
L–00–0274	260794–09–0 ...	2-Propenoic acid, 2-methyl-, 3-chloro-2-hydroxypropyl ester, polymers with N-(hydroxymethyl)-2-propenamide, .gamma.-.omega.-perfluoro-C8–16-alkyl acrylate, stearyl acrylate and vinyl chloride.
L–00–0275	260794–06–7 ...	2-Propenoic acid, 2-methyl-, 3-chloro-2-hydroxypropyl ester, polymers with N-(hydroxymethyl)-2-propenamide, .gamma.-.omega.-perfluoro-C8–16-alkyl acrylate and stearyl acrylate.
L–00–0316	165967–96–4 ...	Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.′,.alpha.″-[[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)silylidyne]tris[oxy(dimethylsilylene)-3,1-propanediyl]]tris[.omega.-methoxy-.
L–00–0328	355–37–3	Hexane, 1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-.
L–01–0355	452080–67–0 ...	Boron, trifluoro(tetrahydrofuran)-, (T–4)-, polymer with 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]oxetane, ether with 2,2-dimethyl-1,3-propanediol (2:1), bis(hydrogen sulfate), diammonium salt.
L–01–0447	113507–82–7 ...	Ethanesulfonic acid, 1,1,2,2-tetrafluoro-2-(pentafluoroethoxy)-.
L–01–0470	117205–07–9 ...	Ethanesulfonic acid, 1,1,2,2-tetrafluoro-2-(pentafluoroethoxy)-, potassium salt.
L–02–0278	178241–16–2 ...	Trisiloxane, 3-[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl-3-(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-.
L–02–0365	401510–99–4 ...	2,4,13,15-Tetrasilahexadecane, 4,13-bis[(dimethylsilyl)methyl]-7,7,8,8,9,9,10,10-octafluoro-2,4,13,15-tetramethyl-.
L–02–0467	178241–16–2 ...	Trisiloxane, 3-[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl-3-(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-.
L–02–0468	401510–99–4 ...	2,4,13,15-Tetrasilahexadecane, 4,13-bis[(dimethylsilyl)methyl]-7,7,8,8,9,9,10,10-octafluoro-2,4,13,15-tetramethyl-.
L–03–0400	506417–14–7 ...	Silane, bis[(1,1-dimethyl-2-propynyl)oxy]methyl(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-.
L–04–0227	507225–02–7 ...	Silsesquioxanes, 3,3,4,4,5,5,6,6,6-nonafluorohexyl, [(dimethylsilyl)oxy]-terminated.
L–04–0430	705291–24–3 ...	Cyclotetrasiloxanes, 2,4,6,8-tetramethl-, Si-mixed 3-(oxiranylmethoxy)propyl, and 3-[2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]propoxy]propyl, and 2-(trimethoxysilyl)ethyl derivs.
L–04–0433	709670–53–1 ...	Furan, tetrahydro-, polymer with 3-methyl-3-[(2,2,3,3,3-pentafluoropropoxy)methyl]oxetane, monoester with [3-(carboxyamino)methyl]-3,5,5-trimethylcyclohexyl]carbamic acid mono[2-[(1-oxo-2-propenyl)oxy]ethyl] ester, 2,2,2-trifluoroethyl ether.
L–05–0013	133068–47–0 ...	3,8,11,14-Tetraoxa-2,4-disilaheptadecane, 4-[(dimethylsilyl)oxy]-10,12,12,13,15,15,16,16,17,17,17-undecafluoro-2,4-dimethyl-10,13-bis(trifluoromethyl)-.
L–05–0015	145782–39–4 ...	Trisiloxane, 1,1,3,5,5-pentamethyl-3-[3,4,4,4-tetrafluoro-3-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]butyl]-.
L–05–0016	717825–76–8 ...	4,7,10,15-Tetraoxa-14-silaeicos-19-yn-18-ol, 14,14-dibutyl-1,1,1,2,2,3,3,5,6,6,8-undecafluoro-18-methyl-5,8-bis(trifluoromethyl)-.
L–05–0072	18323–96–1	Ytterbium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato-.kappa.O,.kappa.O')-.
L–05–0177	802935–59–7 ...	Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]-, polymer with trifluoro(trifluoromethyl)oxirane, reaction products with 3-(ethenyldimethylsilyl)-N-methylbenzenamine and 2,4,6,8-tetramethylcyclotetrasiloxane.
L–06–0099	78560–47–1	Silane, trichloro(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-.
L–06–0100	85877–79–8	Silane, trimethoxy(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-.
L–06–0101	102390–98–7 ...	Silane, triethoxy(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-.
L–06–0106	186599–46–2 ...	Silanetriamine, N,N,N′,N′,N″,N″-hexamethyl-1-(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-.
L–06–0135	375–19–9	Butanimidamide, 2,2,3,3,4,4,4-heptafluoro-.
L–06–0207	848407–98–7 ...	Sulfonium, triphenyl-, salt with 1,1,2,2,3,3,4,4-octafluoro-1,4-butanedisulfonic acid (2:1).
L–06–0208	524067–96–7 ...	Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamide (1:1).
L–06–0256	376–84–1	2-Propenoic acid, 2,2,3,3,4,4,5,5-octafluoropentyl ester.
L–07–0097	908858–79–7 ...	Siloxanes and Silicones, di-Me, Me 3,3,4,4,5,5,6,6,6-nonafluorohexyl, chloro-terminated.
L–07–0138	913292–62–3 ...	Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propoxy]-, polymer with 2,2,3-trifluoro-3-(trifluoromethyl)oxirane, reaction products with 3,3′-(1,2-ethanediyl)bis[3-[(dimethylsilyl)oxy]-1,1,5,5-tetram.
L–07–0158	917979–29–4 ...	Propanol fluoride, 2,2′-[(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis(oxy)]bis[2,3,3,3-tetrafluoro-, polymer with 2,2,3-trifluoro-3-(trifluoromethyl)oxirane, reaction products with 3-(ethenyldimethylsilyl)-N-methylbenzenamine and methylbis[(1-methylethenyl)oxy]silane.
L–07–0190	66137–74–4	Ethanesulfonyl fluoride, 1,1,2,2-tetrafluoro-2-(1,1,2,2-tetrafluoro-2-iodoethoxy)-.
L–07–0225	882878–48–0 ...	Siloxanes and Silicones, di-Me, Me 3,3,4,4,5,5,6,6,6-nonafluorohexyl.
L–07–0253	144317–44–2 ...	Sulfonium, triphenyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1).
L–07–0254	241806–75–7 ...	Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1).
L–07–0367	375–96–2	Nonane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-eicosafluoro-.
L–07–0368	374–77–6	Cyclohexane, 1,1,2,2,3,4,4,5,5,6-decafluoro-3,6-bis(trifluoromethyl)-.
L–07–0404	799274–55–8 ...	Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4-octafluoro-1,4-butanedisulfonate(2-) (2:1).
L–08–0097	848408–02–6 ...	Sulfonium, triphenyl-, 2,2'-oxybis[1,1,2,2-tetrafluoroethanesulfonate] (2:1).
L–08–0213	756819–73–5 ...	Cyclotetrasiloxane, 2,4,6,8-tetramethyl-2-[3-[2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propoxy]propoxy]propyl]-.
L–08–0214	1005771–59–4	Cyclotetrasiloxane, 2,4,6,8-tetramethyl-2-[3-[2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propoxy]propoxy]propyl]-, Si-[3-(2-oxiranylmethoxy)propyl] derivs.
L–08–0246	1010387–03–7	1,5-Trisiloxanediol, 1,1,3,5,5-pentamethyl-3-(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)-.
L–08–0261	1010423–83–2	Siloxanes and Silicones, Me hydrogen, [[7,9,9,10,12,12,13,13,14,14,14-undecafluoro-1,1-dimethyl-7,10-bis(trifluoromethyl)-5,8,11-trioxa-1-silatetradec-1-yl]oxy]-terminated.
L–08–0362	122179–35–5 ...	Disiloxane, 1,1,3,3-tetramethyl-1,3-bis(3,3,4,4,5,5,6,6,6-nonafluorohexyl)-.
L–09–0018	808752–25–2 ...	Sulfonium, triphenyl-, salt with 4,4,5,5,6,6-hexafluorodihydro-4H–1,3,2-dithiazine 1,1,3,3-tetraoxide (1:1).
L–09–0059	862261–51–6 ...	Sulfonium, (4-methylphenyl)diphenyl-, salt with 4,4,5,5,6,6-hexafluorodihydro-4H–1,3,2-dithiazine 1,1,3,3-tetraoxide (1:1).

LVE case No.	CASRN	Chemical name
L–09–0080	1072943–15–7	Borate(1-), tetrahydro-, sodium (1:1), reaction products with reduced polymd. oxidized tetrafluoroethylene, hydrolyzed, diallyl ethers, polymers with 3-[(dimethylsilyl)oxy]-1,1,3,5,5-pentamethyl-1-[2 -(trimethoxysilyl)ethyl]trisiloxane.
L–09–0104	882878–48–0 ...	Siloxanes and Silicones, di-Me, Me 3,3,4,4,5,5,6,6,6-nonafluorohexyl.
L–10–0129	1202381–95–0	Siloxanes and Silicones, di-Me, Bu group- and hydrogen-terminated, reaction products with 3-(ethenyldimethylsilyl)-N-methylbenzenamine and 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propoxy]propanoyl fluoride-2,2,3-trifluoro-3-(trifluoromethyl)oxirane polymer.
L–10–0130	1202381–96–1	Siloxanes and Silicones, di-Me, Bu group- and hydrogen-terminated, reaction products with 3-(ethenyldimethylsilyl)-N-methylbenzenamine and 2,2′-[(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis(oxy)]bis[2,3,3,3-tetrafluoropropanoyl fluoride]-2,2,3-trifluoro-3-(trifluoromethyl)oxirane polymer.
L–10–0166	1188330–60–0	Oxetane, 2,2,3,3-tetrafluoro-, homopolymer, fluorinated, reduced, bis(2,3-dihydroxypropyl) ethers.
L–10–0260	1214752–87–0	Borate(1-), tetrahydro-, sodium (1:1), reaction products with reduced polymd. oxidized tetrafluoroethylene, hydrolyzed, diallyl ethers, polymers with 2,4,6,8-tetramethylcyclotetrasiloxane, Si-(8,13-dioxo-4,7,12-trioxa-9-azapentadec-14-en-1-yl) derivs.
L–10–0333	185911–29–9 ...	Silanetriol, 1-(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)-.
L–10–0340	85857–16–5	Silane, trimethoxy(3,3,4,4, 5,5,6,6,7,7,8,8, 8-tridecafluorooctyl)-.
L–11–0313	1304011–35–5	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,3-diisocyanatomethylbenzene, polyethylene glycol mono-Me ether- and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-1-octanol-blocked.
L–11–0313	1304012–00–7	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), polymer with 1,3-diisocyanatomethylbenzene, polyethylene glycol mono-Me ether- and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-1-octanol-blocked.
L–12–0008	307–08–4	1H-Fluorene, 1,1,2,2,3,3,4,4,4a,4b,5,5,6,6,7,7,8,8,8a,9,9,9a-docosafluorododecahydro-.
L–12–0084	882878–48–0 ...	Siloxanes and Silicones, di-Me, Me 3,3,4,4,5,5,6,6,6-nonafluorohexyl.
L–12–0446	882878–48–0 ...	Siloxanes and Silicones, di-Me, Me 3,3,4,4,5,5,6,6,6-nonafluorohexyl.
L–13–0098	370097–12–4 ...	1-Propene, 1,1,2,3,3,3-hexafluoro-, oxidized, polymd., reduced, hydrolyzed, reaction products with ammonia.
L–13–0170	2690–05–3	Pentane, 1,1,1,2,2,3,4,4,5,5,5-undecafluoro-3-(1,1,2,2,2-pentafluoroethyl)-.
L–13–0171	50285–18–2	Pentane, 1,1,1, 2,2,3,4,5,5,5-decafluoro-3-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-4-(trifluoromethyl)-.
L–13–0172	306–98–9	Cyclohexane, 1,1,2,2,3,3,4,4,5,6-decafluoro-5,6-bis(trifluoromethyl)-.
L–13–0173	335–21–7	Cyclohexane, 1,1,2,2,3,3,4,4,5,5,6-undecafluoro-6-(1,1,2,2,2-pentafluoroethyl)-.
L–13–0174	354–97–2	Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-(1,1,2,2,2-pentafluoroethyl)-4-(trifluoromethyl)-.
L–13–0175	374–76–5	Cyclohexane, 1,1,2,3,3,4,5,5,6-nonafluoro-2,4,6-tris(trifluoromethyl)-.
L–13–0176	423–02–9	Cyclohexane, 1,1,2,2,3,3,4,4,5,5,6-undecafluoro-6-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-.
L–13–0178	1736–47–6	1H-Indene, 1,1,2,2,3,3,4,5,6,7-decafluoro-2,3-dihydro-.
L–13–0179	51294–16–7	Napthalene, heptadecafluorodecahydro(trifluoromethyl)-.
L–13–0622	15242–17–8	1-Propene, 3-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethoxy]-.
L–13–0623	15538–93–9	Silane, trichloro[3-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethoxy]propyl]-.
L–13–0624	19116–61–1	Silane, trimethoxy[3-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethoxy]propyl]-.
L–14–0440	211931–77–0 ...	Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.-[tetrafluoro(trifluoromethyl)ethyl]-.omega.-[1,2,2,2-tetrafluoro-1-[[3-(trimethoxysilyl)propoxy]methyl]ethoxy]-.
L–15–0011	173524–60–2 ...	Propanamide, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]-N-[3-(2,4,6,8-tetramethylcyclotetrasiloxan-2-yl)propyl]-.
L–15–0443	335–23–9	Cyclohexane, 1,1,2,2,3,3,4,5,5,6-decafluoro-4,6-bis(1,1,2,2,2-pentafluoroethyl)-.
L–15–0444	354–96–1	Butane, 1,1,1,2,3,4,4,4-octafluoro-2,3-bis(trifluoromethyl)-.
L–15–0445	355–04–4	Pentane, 1,1,1,2,2,3,3,4,5,5,5-undecafluoro-4-(trifluoromethyl)-.
L–16–0337	374–59–4	Cyclohexane, 1,1,2,2,3,3,4,4,5,5,6-undecafluoro-6-(1,1,2,2,3,3,3-heptafluoropropyl)-.
L–16–0341	882878–48–0 ...	Siloxanes and Silicones, di-Me, Me 3,3,4,4,5,5,6,6,6-nonafluorohexyl.
L–17–0102	374–60–7	Cyclohexane, 1,1,2,2,3,3,4,4,5,5,6-undecafluoro-6-(1,1,2,2,3,3,4,4,4-nonafluorobutyl)-.
L–20–0016	2374700–01–1	Siloxanes and Silicones, di-Me, 3,3,4,4,5,5,6,6-nonafluorohexyl group terminated.
L–20–0044	631842–87–0 ...	1-Pentadecene, 12,12,13,13,14,14,15,15,15-nonafluoro-.
L–20–0045	2301857–79–2	Silane, trichloro(12,12,13,13,14,14,15,15,15-nonafluoropentadecyl)-.
L–91–0059	83048–65–1	Silane, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)trimethoxy-.
L–91–0239	29457–72–5	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, lithium salt (1:1).
L–92–0121	374–76–5	Cyclohexane, 1,1,2,3,3,4,5,5,6-nonafluoro-2,4,6-tris(trifluoromethyl)-.
L–92–0123	306–98–9	Cyclohexane, 1,1,2,2,3,3,4,4,5,6-decafluoro-5,6-bis(trifluoromethyl)-.
L–93–0061	182700–90–9 ...	1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl-, reaction products with benzene-sulfur chloride (S2Cl2) reaction products chlorides.
L–95–0212	355–74–8	1,6-Hexanediol, 2,2,3,3,4,4,5,5-octafluoro.
L–95–0213	2264–01–9	2-Propenoic acid, 1,1'-(2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl) ester.
L–95–0354	166089–96–9 ...	Siloxanes and silicones, Me hydrogen, [[dimethyl[3,3,4,4-tetrafluoro-4-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]butyl]silyl]oxy]-terminated.
L–96–0371	78560–45–9	Silane, trichloro(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)-.
L–97–0041	132910–12–4 ...	Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha., .alpha′.-(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[.omega.-(1-carboxy-1,2,2,2-tetrafluoroethoxy)-.
L–97–0042	162442–49–1 ...	Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha., .alpha′.-(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[.omega.-(1,2,2,2-tetrafluoro-1-[(2-propenylamino)carbonyl]ethoxy]-.
L–97–0063	2264–01–9	2-Propenoic acid, 1,1′-(2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl) ester.
L–97–0064	25965–83–7	2-Propenoic acid, 2-methyl-(undecafluorocyclohexyl)methyl ester.
L–97–0108	174393–72–7 ...	Siloxanes and silicones, di-Me, 3-hydroxypropyl Me, Me vinyl, [(ethenyldimethylsilyl)oxy]-terminated, ethers with trifluoro(trifluoromethyl)oxirane homopolymer 1,2,2,2-tetrafluoro-1-(hydroxymethyl)ethyl tetrafluoro(trifluoromethyl)ethyl ether.

LVE case No.	CASRN	Chemical name
L–97–0109	174393–73–8 ...	Siloxanes and silicones, di-Me, 3-hydroxypropyl Me, Me hydrogen, ethers with trifluoro(trifluoromethyl)oxirane homopolymer 1,2,2,2-tetrafluoro-1-(hydroxymethyl)ethyl tetrafluoro(trifluoromethyl)ethyl ether.
L–97–0181	17978–75–5	Erbium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato-O,O')-.
L–98–0261	63513–12–2	Phosphonic acid, [[4-[(heptadecafluorononenyl)oxy]phenyl]methyl]-.
L–98–0327	355–93–1	2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5-octafluoropentyl ester.
L–99–0272	183905–82–0 ...	Propanyl fluoride, 2,2'-[(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis(oxy)bis[2,3,3,3-tetrafluoro-, polymer with trifluoro(trifluoromethyl)oxirane, hydrolyzed.
L–99–0273	183905–83–1 ...	Propanyl fluoride, 2,2'-[(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis(oxy)bis[2,3,3,3-tetrafluoro-, polymer with trifluoro(trifluoromethyl)oxirane, reaction products with 2-propen-1-amine.
L–99–0275	128194–56–9 ...	Silanol, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)dimethyl-.
L–99–0276	173524–60–2 ...	Propanamide, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]-N-[3-(2,4,6,8-tetramethylcyclotetrasiloxan-2-yl)propyl]-.
L–99–0277	165320–75–2 ...	1,5-Trisiloxanediol, 3-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)-1,1,3,5,5-pentamethyl-.
L–99–0278	185701–90–0 ...	Propanoyl fluoride, 2,2'-[(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis(oxy)]bis[2,3,3,3-tetrafluoro-, polymer with trifluoro(trifluoromethyl)oxirane, reaction products with N-[3-(triethoxysilyl)propyl]-1,2-ethanediamine.

(d) Examples of PFAS by LVE case number, without CASRNs.

LVE case No.	Chemical name or generic name
L–01–0271	Iodonium, bis(4-(1,1-dimethylethyl)phenyl)-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-[(nonafluorobutyl)sulfonyl]-1-butanesulfonamide (1:1).
L–10–0356	2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with .alpha.-(2-methyl-1-oxo-2-propen-1-yl)-.omega.-[3,3,4,4, 5,5,6,6, 7,7,8,8,8-tridecafluorooctyl)oxy]poly(oxy-1,2-ethanediyl) and 2-propenoic acid.
L–89–0099	Triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecarfluoroctyl)silane.
L–89–0131	Trichloro(3,3,4,4,5,56,6,7,78,8,8-tridecafluorooctyl)silane.
L–95–0011	Tetrafluorethene, polymer with trifluoro(trifluoromethoxy)ethene and 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane.
L–95–0070	Perhalopolyoxyperfluoroalkenemethylenepolyethoxy alcohols, esters with phosphorousoxychloride.
L–00–0054	Polyfluoroalkylether.
L–00–0056	Fluoropolyether derivative.
L–00–0151	Perfluoroalkyl phosphate diethanolamine salt.
L–00–0313	Fluorosilane.
L–00–0314	Fluorosilane.
L–00–0371	Per fluorobutanesulfonate.
L–00–0373	Perfluorether.
L–00–0375	Perfluoroether nitrile.
L–00–0376	Perfluoroalkyl fluoride.
L–00–0377	Perfluorovinyl ether.
L–00–0378	Perfluoroalkyl acid flouride.
L–00–0386	Polyfluoroalkylether.
L–00–0387	Polyfluoroalkylether.
L–01–0013	Perfluorobutanesulfonate.
L–01–0048	Ethylene—tetrafluoroethylene copolymer.
L–01–0142	Perfluoroalkyl ester.
L–01–0143	Perfluoroalkyl acid fluoride.
L–01–0150	Fluorine-substituted cyclosiloxane.
L–01–0151	Fluorochemical curative.
L–01–0152	Perfluoroalkyl ester.
L–01–0153	Perfluoroalkyl nitrile.
L–01–0158	Fluoro acrylic telomer.
L–01–0261	Fluoroalkylsulfonimide.
L–01–0265	Fluoroalkyl alkylammonium salt.
L–01–0373	Polyperfluorooxetane-trimethoxysilane.
L–01–0410	Substituted fluoro alkane sulfonic acid.
L–01–0432	Substituted fluoro alkane sulfonic acid.
L–01–0435	Fluorinated acrylic ester random copolymer.
L–01–0526	Polyperfluorooxetane-trimethoxysilane.
L–01–0548	Triazatriphosphorine, fluorobutoxy ethoxy, phenoxy phenoxy derivatives.
L–01–0549	Phenol, reaction products with triazatriphosphorine and reduced, oxidized tetrafluoroethylene.
L–02–0007	Phenol, reaction products with triazatriphosphorine and fluorinated triethylene glycol mono butyl ether.
L–02–0017	Salt of fluoropolyether derivative.
L–02–0080	Perfluorooctanesulfonate.
L–02–0192	Fluorinated polymer acrylate.
L–02–0247	Fluorochemical acid onium.
L–02–0318	Perfluorooctanesulfonate.
L–02–0356	Polyfluoroalkylether.
L–02–0515	Carboxylic acid, fluoroalkyl ester.
L–02–0516	Carboxylic acid, fluoroalkyl ester.
L–03–0015	Triphenyl sulfonium perfluoro-1-butane sulfonate.

LVE case No.	Chemical name or generic name
L–03–0037	Polyfluoroalkylether.
L–03–0086	Polyfluoroalkylether.
L–03–0110	Polyfluoroalkylether.
L–03–0119	Fluoro acrylic polymer (telomer type).
L–03–0133	Fluoro acrylic polymer (telomer type).
L–03–0142	Ethylene—tetrafluoroethylene copolymer.
L–03–0232	Arylated onium perfluoroalkyl sulfonyl imide.
L–03–0233	Carboxylic acid, fluoroalkyl ester.
L–03–0286	Fluoroalkyl sulfonamide.
L–03–0288	Ammonium fluoroalkyl sulfonamide.
L–03–0289	Fluoroalkyl alkylammonium salt.
L–03–0296	Fluoroalkylsulfonimide.
L–03–0297	Fluoroalkyl sulfonamide.
L–03–0481	Phosphonic acid, alkyl ester, reaction products with a fluorinated alkene.
L–04–0008	Bis [3-perfluoroakyl (C8)-2-hydroxypropyl] polyoxyethylene ether.
L–04–0125	Fluorinated silane.
L–04–0211	Chlorofluoroalkylether.
L–04–0220	Perfluoro polymer with alcoholamine.
L–04–0231	Perfluoro polymer with alkylaminoethanol.
L–04–0284	Fluoroalkyl amidino salt.
L–04–0286	Fluorochemical nitrile.
L–04–0338	Ammonium fluoroalkyl sulfonamide.
L–04–0365	Fluoroalkyl sulfonamide derivative.
L–04–0366	Potassium salt of fluoroalkyl sulfonate.
L–04–0367	Sodium salt of fluoroalkyl sulfonate.
L–04–0368	Lithium salt of fluoroalkyl sulfonate.
L–04–0369	Ammonium salt of fluoroalkyl sulfonate.
L–04–0459	Fluorinated cyclo alkanes.
L–04–0472	Fluoroalkyl surfactant.
L–05–0099	Fluoroalkyloxy acrylate monomer.
L–05–0152	Thiopyranium tetrahydro-phenyl-, salt with nonafluoro-butanesulfonic acid.
L–05–0160	Aliphatic urethane modified acrylate polymer, perfluoroalkoxy amido blocked.
L–05–0164	Triphenylsulfonium fluoroalkylsulfonate.
L–05–0193	1-Perfluoro butanone, 1-carbopolycyclic-[(perfluoro, butyl)sulfonyl] oxime.
L–05–0203	Fluoropolyether derivative.
L–05–0215	Fluorine-substituted alkyl-substituted organosilicon.
L–05–0316	1-Perfluoro pentanone, 1-carbopolycyclic-[(perfluoro, butyl)sulfonyl]oxime.
L–05–0317	1-Perfluoro propanone, 1-carbopolycyclic-[(perfluoro, butyl)sulfonyl]oxime.
L–05–0325	Sulfonium, alkoxy naphthalenyldiphenyl-, salt with fluorohydro-dithiazine tetraoxide.
L–06–0102	Alkane-1-one, 1-(9H-fluoren-2-yl)-polysubstituted-, O-[(nonafluorobutyl) sulfonyl]oxime.
L–06–0211	Nonafluoroalkyl sulfonyl oxime fluoren compound.
L–06–0214	Sulfonium, triphenyl-, salt with perfluoroalkyl sulfonic acid.
L–06–0241	Nonafluoroalkyl sulfonyl oxime, dodecafluoro fluoren compound.
L–06–0319	Fluoroalkyl alkenoate(c=3~5), polymer with alkyloxirane(c=2~5) homopolymer monoalkyl(c=1~5) alkyl-alkenoate(c=3~5), alkyloxirane(c=2~6) polymer alkyl-alkenoate(c=3~5), alkyl(c=1~30) alkyl-alkenoate(c=3~5), azobisnitrilealkane initiated.
L–06–0336	Substituted fluoro alkane sulfonic acid.
L–06–0381	Fluorinated surfactant.
L–06–0391	A fluoren oxime fluoroalkyl sulfonate.
L–06–0392	A fluoren oxime fluoroalkyl sulfonate.
L–06–0400	Fluoroalkyl alkenoate(c=3-5), polymer with alkyloxirane(c=2-5) homopolymer monoalkyl(c=1-5) alkyl-alkenoate(c=3-5), alkyl(c=1-30) alkyl-alkenoate(c=3-5), alkyl(c=1-5)-oxo-alkkenyl-[(alkyl(c=1-5)-oxo-alkenyl)oxy]poly(oxy-ethanediyl).
L–07–0012	Fluorochemical amide derivative.
L–07–0013	Fluorochemical amide derivative.
L–07–0055	Oxetane, 2,2,3,3-tetrafluoro-, homopolymer, fluorinated, reduced, mono(alkylsilylalkyl)ether.
L–07–0091	Perfluoropolyoxyalkane.
L–07–0150	Trimethoxylsilyl terminated perfluoropolyether.
L–07–0205	Arylsulfonium perfluoroalkyl salt.
L–07–0206	Hexane, 1,6-diisocyanato-, homopolymer, 2-hydroxyethyl acrylate- and reduced fluorinated heteromonocycle homopolymer-blocked.
L–07–0213	Perfluoroalkyl aromatic imide.
L–07–0229	Iodonorbornene perfluoroalkoxysulfonylfluoride.
L–07–0230	Norbornene perfluoroalkoxysulfonyl fluoride.
L–07–0231	Norborneperfluoroalkyl sulfonate.
L–07–0233	Tert-butylphenyltetramethylsulfonium norborneneperfluoroalkylsulfonate.
L–07–0238	Fluorinated surfactant.
L–07–0273	Fluoroalkylsilane ester, hydrolyzed.
L–07–0323	Hydrofluoropropane.
L–07–0324	Hydrofluoropropane.
L–07–0328	Fluoropolymer.
L–07–0413	Functionalized perfluoropolyether.
L–08–0004	Acrylic copolymer contain fluoroalkyl groups.
L–08–0073	Perfluorinated polysulfonic acid complexed with an organic conjugated polymer.
L–08–0091	Sulfonium, triphenyl-, salt with hexafluorosulfonimide heterocycle (1:1).
L–08–0108	Polyfluoro-iodo-1-[(polyfluoroethenyl)oxy]alkane.

LVE case No.	Chemical name or generic name
L–08–0121	Perfluoropolyether urethane acrylate.
L–08–0140	Fluoro silicone.
L–08–0167	Fluoroalkyl phosphate.
L–08–0168	Fluoroalkyl phosphate.
L–08–0169	Fluoroalkyl phosphate.
L–08–0172	Dithiazine-fluorodihydro-tetraoxide.
L–08–0247	Fluorinated surfactant.
L–08–0251	Fluoroalkyloxypolyurethane silane.
L–08–0327	Fluorosilicone.
L–08–0379	Fluoropolymer.
L–08–0409	Fluorinated sulfonamide alcohol.
L–09–0028	Fluoroalkyl phosphate.
L–09–0031	Fluoroalkyl polyester.
L–09–0096	Fluorinated ester.
L–09–0097	Fluorinated alcohol.
L–09–0098	Fluorinated acrylate.
L–09–0099	Fluoroacrylate derivative and oligomers.
L–09–0102	Fluoropolymer acrylate.
L–09–0122	Poly(oxy-1,2-ethanediyl), .alpha.-(polyfluoroalkyl)-.omega.-hydroxy-.
L–09–0133	Fluoroelastomer curative.
L–09–0166	Fluoropolymer acrylate.
L–09–0210	Polyfluoroalkylether.
L–09–0239	Modified tetrafluoroethylene-hexafluoropropene-vinylidene fluoride copolymer.
L–09–0245	Bis(alkyl aryl) iodonium perfluorobutanesulfonyl-1-perfluorbutanesulfonamide.
L–09–0260	Bis(alkyl aryl) iodonium perfluorobutanesulfonate.
L–09–0331	Fluorinated acrylic ester copolymer (telomer type).
L–09–0352	Fluorinated sulfonyl fluoride.
L–09–0358	Perfluorocyclo-1,3-bis(sulfonyl)imide salt.
L–09–0366	Fluoropolymer.
L–09–0375	Perfluoropolyether iodide.
L–10–0035	Polyperfluorooxetane-trimethoxysilane.
L–10–0058	Perfluoroalkyl cycloaliphatic imide.
L–10–0121	Polyfluorinated phenylpyrimidine ether.
L–10–0122	PFAS salt.
L–10–0141	Phenyl benzothiophenium salt with hexafluorodihydro dithiazine tetraoxide.
L–10–0160	Perfluorosulfonic acid copolymer.
L–10–0169	Polyfluoroalkylated pyrimidylphenyl benzyl ether.
L–10–0170	Polyfluoroalkylated pyrimidylphenol.
L–10–0199	Fluorinated organopolysilazane.
L–10–0239	Polyfluoroalkylated phenylpyrimidine diether.
L–10–0241	Polyfluoroalkylated phenylpyrimidine diether.
L–10–0293	Fluorinated iodooctanol.
L–10–0294	Fluorinated octanol.
L–10–0316	Fluoroalkylated cationic compound.
L–10–0339	Fluorinated octanol tosyl ester.
L–11–0038	Fluoropolyether modified polyoxyethylene compound.
L–11–0045	Reaction products with hydride reduction substance of fluorinated homopolymer.
L–11–0046	Hydride reduction substance of fluorinated homopolymer.
L–11–0065	Fluorinated acrylic copolymer.
L–11–0066	Fluorinated acrylic copolymer.
L–11–0133	Fluorosurfactant.
L–11–0134	Fluorinated acrylic copolymer.
L–11–0138	Biphenyl biphenyl-ylthiophenyl phenyl sulfonium, trifluorotris pentafluoroalkyl phosphate.
L–11–0191	Fluoropolymer acrylate.
L–11–0203	Hydride reduction substance of perfluoropolyoxyalkane.
L–11–0243	Fluorinated polymer.
L–11–0369	Fluorinated polymer.
L–11–0407	Acrylic fluoropolymer.
L–12–0020	Perfluoroalkyl acrylate polymer.
L–12–0062	Perfluoropolyetheramide derivative.
L–12–0063	Fluorinated quaternary ammonium salt silane derivative.
L–12–0076	2-Propenoic acid, 2-methyl-, 2-[[[2-[(polyfluorooctyl)oxy][[(polyfluorooooctyl)oxy]methyl]ethoxy]carbonyl]amino]ethyl ester, polymer with alpha-(2-methyl-1-oxo-2-propen-1-yl)-omega-hydroxypoly[oxy(methyl-1,2-ethanediyl)], alkyl peroxide-initiated.
L–12–0110	Perfluoroacrylate copolymer.
L–12–0129	2-Propenoic acid, 2-methyl-, 2-hydroxybutyl ester, polymers with substituted methacrylate and reduced Me esters of reduced polymd. oxidized polyfluoroalkene acrylates, N-[2-(1-oxo-2-propen-1-yl)oxy]ethyl]carbamates, alkyl peroxide-initiated.
L–12–0131	Poly(oxy-1,2-ethanediyl), -hydro--hydroxy-, ether with polyfluoro alkanediol.
L–12–0138	2-Propenoic acid, 2-methyl-, 2-[[[2-[(polyfluorooctyl)oxy][[(polyfluorooctyl)oxy]-methyl]ethoxy]carbonyl]amino]ethyl ester, polymer with .alpha.-(substituted propeny-1-yl)-.omega.-hydroxypoly[oxt(methyl-1,2-ethanediyl)], substituted peroxoate-initiated.
L–12–0144	2-Propenoic acid, 2-methyl-, methyl ester, polymer with isooctadecyl 2-propenoate, alpha-(2-methyl-1-oxo-2-propen-1-yl)-omega-methoxypoly(oxy-1,2-ethanediyl), alpha-(2-methyl-1-oxo-2-propen-1-yl)-omega-[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl),polyfluorohexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, alkyl peroxide-initiated.
L–12–0185	Perfluoropolyether compound.

LVE case No.	Chemical name or generic name
L–12–0224	Bis[tris(Modified oxyphenyl) sulfonium] salt with perfluorobutanedisulfanate.
L–12–0228	Perfluoropolyether.
L–12–0229	Perfluoropolyether.
L–12–0260	Substituted fluoroalkylsulfonate arylonium salt.
L–12–0272	2-Propenoic acid, 2-methyl-, polysubstituted-propyl ester, polymer with 2,2,3,3,4,4,4-heptafluoro-1-substituted-butyl 2-methyl-2-propenoate, di-Me 2,2′-(1,2-diazenediyl)bis[2-methylpropanoate]-inititated.
L–12–0285	Modified arysulfonium perfluoroalkyl salt.
L–12–0287	Fluorinated polymer.
L–12–0307	Polyalkylammonium polyfluoroalkanesulfonate.
L–12–0367	Alkyl ester fluoronated telomer with alkyl thiol plus silyl esters.
L–12–0375	fluorine surfactant.
L–12–0411	Fluoropolyether urethane methacrylate derivative.
L–12–0454	Perfluoropolyether Alkyl Silane Derivative.
L–12–0456	Perfluoropolyether Alkyl Allyl Ether.
L–13–0026	Fluoroalkane.
L–13–0031	2-Propenoic acid, 2-methyl-, heterotricycloalkyl ester, polymer with 2,2,3,3,4,4,4-heptafluoro-1-substituted-butyl 2-methyl-2-propenoate, di-Me 2,2′-(1,2-diazenediyl)bis[2-methylpropanoate]-inititated.
L–13–0034	Perfluoroalkyl acrylate copolymer.
L–13–0042	Acrylic copolymer solution containing fluoroalkyl groups.
L–13–0060	Perfluoropolyether-block-Polytetrafluoroethylene.
L–13–0070	Perfluoroelastomer.
L–13–0096	2-Propenoic acid, 2-methyl-, methyl ester, polymer with isooctadecyl 2-propenoate, alpha-(2-methyl-1-oxo-2-propen-1-yl)-omega-methoxypoly(oxy-1,2-ethanediyl), alpha-(2-methyl-1-oxo-2-propen-1-yl)-omega-[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl), polyfluorohexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, alkyl peroxide-initiated.
L–13–0097	Fluorinated polymer.
L–13–0125	Fluoro acrylic polymer.
L–13–0150	Perfluoroalkyl acrylate copolymer.
L–13–0155	Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ether with polyfluoro alkanediol.
L–13–0158	Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ether with polyfluoro alkanediol.
L–13–0160	Phosphazene PFPE derivative—Hexaol.
L–13–0187	Perfluoropolyether derivative.
L–13–0219	Poly(Fluorinated Propanoic Acid).
L–13–0224	Fluorinated acrylic copolymer.
L–13–0226	Fluorinated acrylic copolymer.
L–13–0244	Fluorinated acrylic copolymer.
L–13–0272	Perfluoroalkyl ester.
L–13–0273	Perfluoroalkyl acid fluoride.
L–13–0279	Fluorinated acrylic ester telomer.
L–13–0286	Fluorinated acrylic ester telomer.
L–13–0393	Perfluoroalkoxide salt.
L–13–0463	Fluorinated acrylic copolymer.
L–13–0496	fluoroalkyl fluoroalkylimidoylamidine.
L–13–0620	Aklyl,fluoro-aklyl silanol.
L–13–0728	Sulfonium, dialkyl (dialkoxy carbopolcycle), salt with polyfluoro-N-(polyfluoroalkyl)sulfonyl substituted amide.
L–13–0729	C6 Perfluorotelomer Compound.
L–14–0022	Acid fluoride.
L–14–0234	Sulfonium, polycarbomonocycle, polyfluoroalkanoate (1:1).
L–14–0339	Fluoropolymeric Ester.
L–14–0371	Ethylene,1,1,2,2,-tetra-fluoro,oxidized,polymerized,terminal-functionalized.
L–14–0374	Fluorinated silane.
L–14–0420	Fluorinated aryl sulfonimide.
L–14–0449	Fluoroelastomer.
L–14–0484	Fluorochemical polymer.
L–14–0496	Oxathianium substituted tricycloalkyloxycarbonyl difluoro methane sulfonate.
L–15–0027	Fluoroacrylate copolymer.
L–15–0035	Perfluoroalkyl modified organopolysiloxane.
L–15–0090	Fluoroalkyl derivative.
L–15–0196	Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ether with polyfluoro alkanediol.
L–15–0223	Fluoroalkenyl polyglycol.
L–15–0248	Siloxanes and silicones fluorinated copolymer.
L–15–0262	Ethylene-Tetrafluoroethylene copolymer.
L–15–0302	Fluoroacrylate polymer.
L–15–0334	Fluorinated sulfonate salt.
L–15–0354	Perfluorinated Polysulfonic Acid Complexed with an Organic Conjugated Polymer.
L–15–0423	Perfluoropolyether.
L–16–0035	Perfluoropolyether-trimethoxysilane.
L–16–0051	Fluorinated acrylic terpolymer.
L–16–0186	Fluorosilicone resin.
L–16–0190	Pentane perfluorocarbon.
L–16–0204	Pentane perfluorocarbon.
L–16–0208	Pentane perfluorcarbon.
L–16–0211	Cyclohexane perfluorocarbon.
L–16–0215	Cyclohexane perfluorocarbon.

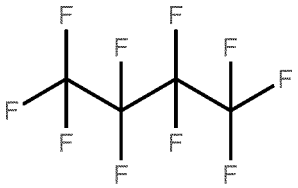
LVE case No.	Chemical name or generic name
L–16–0216	Cyclohexane perfluorocarbon.
L–16–0221	Cyclohexane perfluorocarbon.
L–16–0222	Perfluoroalkane.
L–16–0223	Perfluorcarbon.
L–17–0271	Pentane perfluorocarbon.
L–17–0285	Fluorinated urethane acrylate.
L–17–0315	Ethylene,1,1,2,2,-tetra-fluoro,butylene,1,1,2,2,3,3,4,4-octafluoro,oxidized,polymerized,terminal-functionalized.
L–17–0334	Sulfonium, Triphenyl tetrafluoro heterohexacyclic ethanesulfonate salt.
L–17–0339	Fluorinated Silicic acid, methyl ester.
L–18–0023	Fluorinated sulfonamide alcohol, polymer with 1,4-butanediol, 1,6-diisocyanatohexane, .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)], and diol.
L–18–0127	Thiophenium, 1-(2,7-disubstituted-1-naphthalenyl)tetrahydro-, salt with polyfluoro-N-polyfluoroalkylsulfonyl-1-alkanesulfonamide(1:1).
L–18–0267	Siloxanes and Silicones, di-Me, Me polyfluoro-.
L–18–0304	Alkanedioic acid, polyfluoro-, substituted alkyl alkenyl ester, polymer substituted alkane substituted bis dialkyl.
L–19–0033	Alkyl carbanate, perfluoro-alkyl ester.
L–19–0063	Aliphatic diisocyanate polymer with esters of reduced polymd. oxidized fluoroethylene, acrylate blocked.
L–19–0170	Aminoalkenyl, reaction products with reduced fluorooxetane homopolymer fluoromethanesulfonate, trichlorosilane and alkoxymethane.
L–19–0190	Polyfluoropropanoic acid homopolymer.
L–19–0233	Fluoroalkyl-acrylate modified hydroxy-functional polysiloxane.
L–20–0026	Silane, trialkoxyvinyl-, polymer with alkoxyethene and 1,1,2,2-tetrafluoroethene.
L–20–0061	Fluoroalkylepoxide.
L–20–0084	Polymer of perfluoroalkylethyl methacrylate, hydroxyalkyl methacrylate.
L–20–0085	Perfluoro alkanoic acid, perfluoro alkoxy.
L–20–0132	2-Propenoic acid, 2-methyl-, methyl ester, polymer with isooctadecyl 2-propenoate, .alpha.-(2-methyl-1-oxo-2-propen-1-yl)-.omega.-methoxypoly(oxy-1,2-ethanediyl), .alpha.-(2-methyl-1-oxo-2-propen-1-yl)-.omega.-[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl), polyfluorohexyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, alkyl peroxide-initiated.
L–85–0008	Alkenyl acid, polyfluoro disubstituted pentanediyl ester.
L–85–0051	Fluorinated alkanesulfonamide, halide salt.
L–85–0072	Per(chlorofluoro)telomer sulfonic acid.
L–85–0073	Per(chlorofluoro)telomer ester.
L–85–0074	Per(chlorofluoro)telomer nitrile.
L–85–0075	Per(chlorofluoro)telomer imidoyl amidine.
L–86–0067	Bis(substituted phenyl)polyoxyperfluoroalkylene.
L–88–0010	Fluoralkyl quaternary ammonium acetate.
L–88–0013	Fluorinated carboxylic acid salt.
L–88–0027	Fluoroalkene.
L–88–0028	Fluoroalkyl nitrile.
L–88–0029	Fluoroalkyl amine.
L–88–0030	Fluoroalkyl isocyanate.
L–88–0035	Inert perfluorocarbon liquid.
L–88–0036	Inert perfluorocarbon liquid.
L–88–0164	Inert perfluorocarbon liquid.
L–88–0165	Inert perfluorocarbon liquid.
L–88–0174	Fluoroalkylated protein A.
L–88–0175	Fluoroalkylated monoclonal antibody.
L–89–0045	Polyfluorocarboxylic acid.
L–89–0052	Inert perfluorocarbon liquid.
L–89–0118	Fluorinated amide.
L–89–0119	Fluorinated sulfonamide.
L–89–0120	Fluorochemical epoxy.
L–89–0164	Phosphonic acid [[(perfluoroalkenyloxo)phenyl]methyl]-, zinc salt (2:1).
L–89–0225	Isocyanate terminated perfluoropolyoxyalkene.
L–89–0236	Fluorine cotaining acrylate.
L–89–0277	Dicarboxyperfluoropolyoxyalkane.
L–90–0067	Fluorinated polyalkylakoxysilane.
L–90–0106	Perfluoroalkyl cyclohexyl sulfonate salt.
L–90–0260	Fluoroalkylether.
L–90–0261	Fluoroalkylether.
L–90–0262	Fluoroalkylalcohol.
L–90–0263	Fluoroacrylate monomer.
L–90–0455	Fluorinated acrylic ester copolymer.
L–90–0456	Fluorinated acrylic ester copolymer.
L–90–0592	Perfluorinated liquid.
L–91–0142	Perfluoropolyether derivative.
L–91–0178	Quaternary ammonium perfluoroalkyl carboxylate.
L–91–0259	Fluorochemical polyurethane.
L–92–0039	Peroxide curable fluoroelastomer of vinylidene fluoride and tetrafluoroethylene.
L–92–0120	Quaternary ammonium salt of fluorinated alklyl-aryl amide.
L–92–0151	Fluorochemical acrylic acid copolymer.
L–92–0185	Perfluoroether ester.
L–92–0186	Perfluoroether derivative.

LVE case No.	Chemical name or generic name
L–92–0194	Cationic fluorinated surfactant.
L–92–0201	Substituted fluorinated elastomer.
L–93–0082	Fluorourethane.
L–93–0191	Fluorochemical sulfonate salt.
L–94–0060	Perfluoroalkyl sodium salt.
L–94–0301	Fluorinated sulfide.
L–94–0337	Polymer of HFP, VF2, TFE & fluoro alkoxy methane.
L–95–0017	N-Alkyl perfluoropolyether carboxyamide.
L–95–0056	Fluoroalkyl phosphate.
L–95–0077	Fluorinated disulfide.
L–95–0078	Fluorinated sulfide.
L–95–0079	Fluorinated sulfide.
L–95–0107	Perfluoro-polyether-ethoxylated alcohol.
L–95–0109	Fluorinated disulfide.
L–95–0134	Amine oxide, dimethyl (polyfluoro-hydro-alkyl).
L–95–0135	Amine oxide, dimethyl (polyfluoro-alkyl).
L–95–0154	Fluoroacrylate polymer.
L–95–0176	Fluorinated acrylic ester copolymer.
L–95–0178	Ammonium perfluoroalkyl carboxylate.
L–95–0186	Fluorinated surfactant.
L–95–0261	Fluorochemical acrylate copolymer.
L–95–0270	Perfluoro polyether amido silane.
L–96–0009	Polyfluoroalkylether.
L–96–0101	Dicarboxyperfluoropolyoxyalkane.
L–96–0132	Perfluoroalkyl-alkyl urethane.
L–96–0219	Perfluoro oxygenated oligomers.
L–96–0257	Fluoroethylene-vinylether copolymer.
L–96–0325	Fluoroalkyltriisocyanatosilane.
L–96–0355	Fluorinated acrylic ester copolymer.
L–96–0368	alpha-Methyl-omega-perfluoroalkyl polyoxyethylene.
L–96–0405	N-Alkyl perfluoropolyether carboxyamide.
L–96–0436	Perfluoropolyether diol, magnesuim salt.
L–96–0452	Hexafluoropropene oligomers and reaction products.
L–96–0453	N-(Anthraquinoyl) perfluoropoly ether carboxyamide.
L–97–0038	Polyfluoro-1-octanethiol.
L–97–0056	2-Propenoic acid, 2-substituted ethyl ester, telomer with polyfluoro-1-octanethiol.
L–97–0115	Fluorinated acrylic ester copolymer.
L–97–0198	Polyfluorocarboxylic acid.
L–97–0281	Fluoroalkychlorosilane.
L–97–0340	Fluorochemical ether.
L–97–0341	Fluorochemical silane.
L–97–0413	Mixture of perfluoropropanediol phosphate.
L–97–0439	Phenyl fluorosulfate.
L–97–0447	Polyfluoralkylether.
L–97–0459	Acrylic polymer, fluoroalkyl, ethoxylate and silyl ester.
L–97–0468	Perfluoroalkyl-alkyl urethane.
L–97–0471	Polyfluoroalkylalkoxysilane oligomer.
L–98–0028	Bis[3-perfluoroalkyl (C8) -2-hydroxypropyl] polyoxyethylene ether.
L–98–0067	Fluorinated paralyene.
L–98–0154	Polyfluoro-sulfonic acid salt.
L–98–0281	Fluoroalkanol substituted benzene.
L–98–0298	Fluorocarbon cresyl titanate.
L–98–0406	Fluoroalkyl phenoxy substituted benzene.
L–98–0465	Fluoric organic polymer.
L–98–0467	Fluoric organic polymer.
L–98–0479	Fluoroalkyl substituted benzene.
L–98–0501	Fluoric organic compound.
L–98–0537	Fluoroalkyl diaminobenzene.
L–99–0042	Fluorinated compound.
L–99–0063	Fluorinated acid derivative.
L–99–0087	Fluoroalkyl substituted siloxanes.
L–99–0091	Fluorinated acrylic ester copolymer.
L–99–0159	Fluoropolyether derivative.
L–99–0199	Fluorinated polymer.
L–99–0202	Fluorinated dicarboxylic acid derivative.
L–99–0212	Fluoropolyether derivative.
L–99–0254	Polyfluorocarboxylic acid ammonium salt.
L–99–0257	Fluoroalkyl substituted siloxanes and silicones.
L–99–0261	Fluoroalkyl substituted siloxanes and silicones.
L–99–0262	Fluorine-containing organopolysiloxane.
L–99–0263	Polyfluoroalkylether.
L–99–0264	Polyfluoroalkylether.
L–99–0265	Substituted perfluoroalkyl ether.
L–99–0266	Fluoroalkyl substituted siloxanes and silicones.

LVE case No.	Chemical name or generic name
L–99–0267	Polyfluoroalkylether.
L–99–0268	Fluoroalkyl substituted siloxanes.
L–99–0284	Perfluoropolyether derivative.
L–99–0289	Polyfluorocarboxylic acid ammonium salt.
L–99–0339	Fluoroolefin copolymer.
L–99–0346	Perfluoropolyether derivative.
L–99–0393	Fluorinated synthetic rubber.
L–99–0394	Fluorinated polymer.
L–99–0415	Fluoropoly ether derivative.
L–99–0416	Fluoropoly ether derivative.
L–99–0417	Fluoropoly ether derivative.
L–99–0440	Fluorinated surfactant.

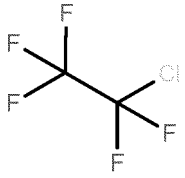
(e) Structural diagram examples, with respective CASRNs.

1. Perflourocarbon



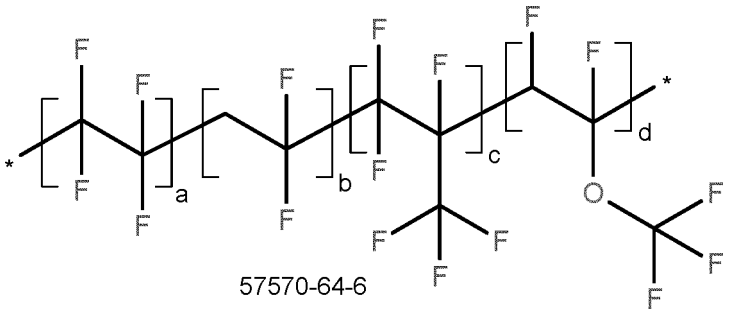
355-25-9

2. Halo Fluorocarbon (R, R' and/or R'' = halogen which is not fluorine)



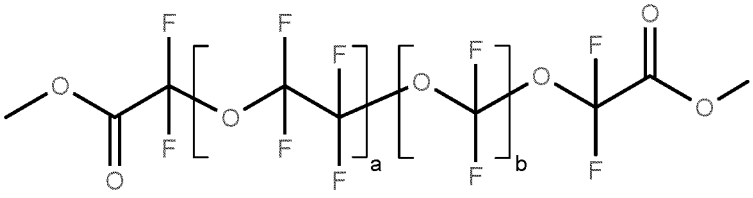
76-15-3

3. Fluoro polymer (for example, polymers made from tetrafluoroethene (C2F4), hexafluoropropene (C3F6) and/or halotrifluoroethene (C2F3halo))

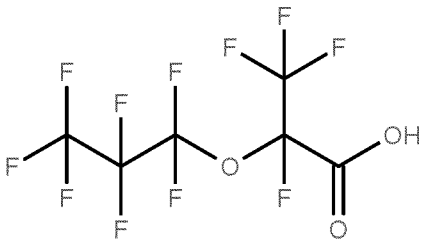


57570-64-6

4. Perfluoro/polyfluoro ether

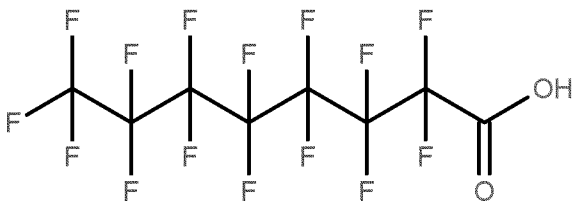


161075-12-3

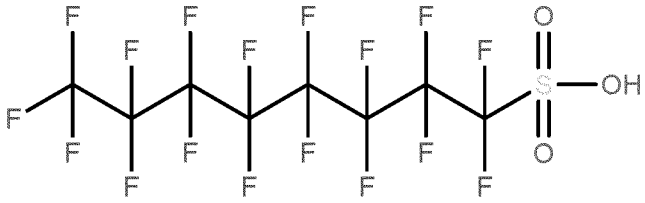


13252-13-6

5. Perfluoroalkyl-R (R = O, N, P, C (not CF2), S, Si, H, or metal)

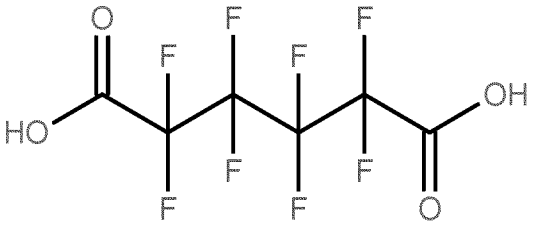


335-67-1

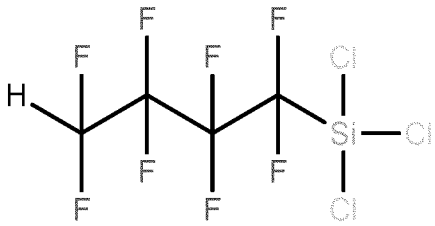


1763-23-1

6. R-Perfluoroalkyl-R (R = O, N, P, C (not CF2), S, Si, H, or metal)



336-08-3



375-63-3

§ 705.10 Persons who must report.

Persons who have manufactured a chemical substance identified in § 705.5 at any period from January 1, 2011 to the effective date of this rule.

§ 705.15 What information to report.

For the one-time submission, persons identified in § 705.10 of this part must report to EPA, for each site of each of the chemical substances identified in § 705.5, the following information to the extent known to or reasonably ascertainable by them. In the event that actual data is not known to or reasonably ascertainable by the submitter, then reasonable estimates may be submitted:

(a) *Company and plant site information.* The following currently correct company and plant site information must be reported for each site at which a reportable chemical substance is manufactured (see § 711.3 for the ''site'' for importers):

(1) The highest-level U.S. parent company name, address, and Dun and Bradstreet D–U–N–S® (D&B) number. A submitter under this part must obtain a D&B number for the U.S. parent company if none exists.

(2) The name of a person who will serve as Authorized Official for the submitter company, and who will be able to sign the certification statement as described in paragraph (i) of this section, the Authorized Official's full mailing address, telephone number, and email address.

(3) The name of a person who will serve as technical contact for the submitter company, and who will be able to answer questions about the information submitted by the company to EPA, the contact person's full mailing address, telephone number, and email address.

(4) The name, full street address, and six-digit North American Industry Classification System (NAICS) code(s) of the site. A submitter under this part must include the appropriate D&B number for each plant site reported, and the county or parish (or other jurisdictional indicator) in which the plant site is located. A submitter under this part must obtain a D&B number for the site reported if none exists. A submitter under this part must also provide other site identification numbers, including the Facility Registry Service (FRS) identification number, if they exist.

(b) *Chemical-specific information.* The following chemical-specific information must be reported for each PFAS manufactured for each year since January 1, 2011:

(1) The common or trade name, the chemical identity, and the representative molecular structure of each PFAS for which such a report is required.

(i) The specific, currently correct CA Index name as used to list the chemical substance on the TSCA Inventory and the correct corresponding CASRN for each reportable PFAS at each site. Submitters who wish to report chemical substances listed on the confidential portion of the TSCA Inventory will need to report the chemical substance using a TSCA Accession Number. If a submitter has a low-volume exemption (LVE) case number for the chemical substance, that number may also be used if a CASRN is not known to or reasonably ascertainable by the submitter.

(ii) In addition to reporting the number itself, submitters must specify the type of number they are reporting by selecting from among the codes in Table 1 of this paragraph.

TABLE 1—CODES TO SPECIFY TYPE OF CHEMICAL IDENTIFYING NUMBER

Code	Number type
A	TSCA Accession Number.
C	Chemical Abstracts Service Registry Number (CASRN).
L	Low-volume exemption (LVE) Case Number.

(2) The physical form(s) of the PFAS as it is sent off-site from each site. If the PFAS is site-limited, you must report the physical form(s) of the PFAS at the time it is reacted on-site to produce a different chemical substance. For each PFAS at each site, the submitter must report as many physical forms as applicable from among the physical forms listed in this unit:

(i) Dry powder.

(ii) Pellets or large crystals.

(iii) Water- or solvent-wet solid.

(iv) Other solid.

(v) Gas or vapor.

(vi) Liquid.

(c) Categories of use. For each year since January 1, 2011, report the following information on categories or proposed categories of use of each PFAS manufactured.

(1) *Industrial processing and use information.* A designation indicating the type of industrial processing or use operation(s) at each site that receives a PFAS from the submitter site directly or indirectly (whether the recipient site(s) are controlled by the submitter site or not). For each PFAS, report the letters which correspond to the appropriate processing or use operation(s) listed in Table 2. A particular designation may need to be reported more than once, to the extent that a submitter reports more than one sector that applies to a given designation under this paragraph.

TABLE 2—CODES FOR REPORTING TYPE OF INDUSTRIAL PROCESSING OR USE OPERATION

Designation	Operation
PC	Processing as a reactant.
PF	Processing—incorporation into formulation, mixture, or reaction product.
PA	Processing—incorporation into article.
PK	Processing—repackaging.
U	Use—non-incorporative activities.

(2) A code indicating the sector(s) that best describe the industrial activities associated with each industrial processing or use operation reported under this section. For each chemical substance, report the code that corresponds to the appropriate sector(s) listed in Table 3. A particular sector code may need to be reported more than once, to the extent that a submitter reports more than one function code that applies to a given sector code under this paragraph.

TABLE 3—CODES FOR REPORTING INDUSTRIAL SECTORS

Code	Sector description
IS1	Agriculture, forestry, fishing, and hunting.
IS2	Oil and gas drilling, extraction, and support activities.
IS3	Mining (except oil and gas) and support activities.
IS4	Utilities.
IS5	Construction.
IS6	Food, beverage, and tobacco product manufacturing.
IS7	Textiles, apparel, and leather manufacturing.
IS8	Wood product manufacturing.
IS9	Paper manufacturing.
IS10	Printing and related support activities.
IS11	Petroleum refineries.
IS12	Asphalt paving, roofing, and coating materials manufacturing.
IS13	Petroleum lubricating oil and grease manufacturing.
IS14	All other petroleum and coal products manufacturing.
IS15	Petrochemical manufacturing.
IS16	Industrial gas manufacturing.
IS17	Synthetic dye and pigment manufacturing.
IS18	Carbon black manufacturing.
IS19	All other basic inorganic chemical manufacturing.
IS20	Cyclic crude and intermediate manufacturing.
IS21	All other basic organic chemical manufacturing.
IS22	Plastics material and resin manufacturing.
IS23	Synthetic rubber manufacturing.
IS24	Organic fiber manufacturing.
IS25	Pesticide, fertilizer, and other agricultural chemical manufacturing.
IS26	Pharmaceutical and medicine manufacturing.
IS27	Paint and coating manufacturing.
IS28	Adhesive manufacturing.
IS29	Soap, cleaning compound, and toilet preparation manufacturing.
IS30	Printing ink manufacturing.
IS31	Explosives manufacturing.
IS32	Custom compounding of purchased resins.
IS33	Photographic film, paper, plate, and chemical manufacturing.
IS34	All other chemical product and preparation manufacturing.
IS35	Plastics product manufacturing.
IS36	Rubber product manufacturing.
IS37	Non-metallic mineral product manufacturing (includes cement, clay, concrete, glass, gypsum, lime, and other non-metallic mineral product manufacturing).
IS38	Primary metal manufacturing.
IS39	Fabricated metal product manufacturing.

TABLE 3—CODES FOR REPORTING INDUSTRIAL SECTORS—Continued

Code	Sector description
IS40	Machinery manufacturing.
IS41	Computer and electronic product manufacturing.
IS42	Electrical equipment, appliance, and component manufacturing.
IS43	Transportation equipment manufacturing.
IS44	Furniture and related product manufacturing.
IS45	Miscellaneous manufacturing.
IS46	Wholesale and retail trade.
IS47	Services.
IS48	Other (requires additional information).

(3) For each sector reported under paragraph (c)(2) of this section, the applicable code(s) from Table 4 must be selected to designate the function category(ies) that best represents the specific manner in which the chemical substance is used.

TABLE 4—CODES FOR REPORTING FUNCTION CATEGORIES

Code	Category
F001	Abrasives.
F002	Etching agent.
F003	Adhesion/cohesion promoter.
F004	Binder.
F005	Flux agent.
F006	Sealant (barrier).
F007	Absorbent.
F008	Adsorbent.
F009	Dehydrating agent (desiccant).
F010	Drier.
F011	Humectant.
F012	Soil amendments (fertilizers).
F013	Anti-adhesive/cohesive.
F014	Dusting agent.
F015	Bleaching agent.
F016	Brightener.
F017	Anti-scaling agent.
F018	Corrosion inhibitor.
F019	Dye.
F020	Fixing agent (mordant).
F021	Hardener.
F022	Filler.
F023	Anti-static agent.
F024	Softener and conditioner.
F025	Swelling agent.
F026	Tanning agents not otherwise specified.
F027	Waterproofing agent.
F028	Wrinkle resisting agent.
F029	Flame retardant.
F030	Fuel agents.
F031	Fuel.
F032	Heat transferring agent.
F033	Hydraulic fluids.
F034	Insulators.
F035	Refrigerants.
F036	Anti-freeze agent.
F037	Intermediate.
F038	Monomers.
F039	Ion exchange agent.
F040	Anti-slip agent.
F041	Lubricating agent.
F042	Deodorizer.
F043	Fragrance.
F044	Oxidizing agent.
F045	Reducing agent.
F046	Photosensitive agent.
F047	Photosensitizers.
F048	Semiconductor and photovoltaic agent.
F049	UV stabilizer.
F050	Opacifer.
F051	Pigment.
F052	Plasticizer.

TABLE 4—CODES FOR REPORTING FUNCTION CATEGORIES—Continued

Code	Category
F053	Plating agent.
F054	Catalyst.
F055	Chain transfer agent.
F056	Chemical reaction regulator.
F057	Crystal growth modifiers (nucleating agents).
F058	Polymerization promoter.
F059	Terminator/Blocker.
F060	Processing aids, specific to petroleum production.
F061	Antioxidant.
F062	Chelating agent.
F063	Defoamer.
F064	pH regulating agent.
F065	Processing aids not otherwise specified.
F066	Energy Releasers (explosives, motive propellant).
F067	Foamant.
F068	Propellants, non-motive (blowing agents).
F069	Cloud-point depressant.
F070	Flocculating agent.
F071	Flotation agent.
F072	Solids separation (precipitating) agent, not otherwise specified.
F073	Cleaning agent.
F074	Diluent.
F075	Solvent.
F076	Surfactant (surface active agent).
F077	Emulsifier.
F078	Thickening agent.
F079	Viscosity modifiers.
F080	Laboratory chemicals.
F081	Dispersing agent.
F082	Freeze-thaw additive.
F083	Surface modifier.
F084	Wetting agent (non-aqueous).
F085	Aerating and deaerating agents.
F086	Explosion inhibitor.
F087	Fire extinguishing agent.
F088	Flavoring and nutrient.
F089	Anti-redeposition agent.
F090	Anti-stain agent.
F091	Anti-streaking agent.
F092	Conductive agent.
F093	Incandescent agent.
F094	Magnetic element.
F095	Anti-condensation agent.
F096	Coalescing agent.
F097	Film former.
F098	Demulsifier.
F099	Stabilizing agent.
F100	Alloys.
F101	Density modifier.
F102	Elasticizer
F103	Flow promoter.
F104	Sizing agent.
F105	Solubility enhancer.
F106	Vapor pressure modifiers.
F107	Embalming agent.
F108	Heat stabilizer.
F109	Preservative.
F110	Anti-caking agent.
F111	Deflocculant.
F112	Dust suppressant.
F113	Impregnation agent.
F114	Leaching agent.
F115	Tracer.
F116	X-ray absorber.
F999	Other.

(4) *Consumer and commercial use information.* Using the applicable codes listed in Table 5 to paragraph (c)(4) of this section, submitters must designate the consumer and commercial product category(ies) that best describe the consumer and commercial products in which each PFAS is used (whether the recipient site(s) are controlled by the

submitter site or not). If more than 10 codes apply to a PFAS, submitters need only report the 10 codes for PFAS that cumulatively represent the largest percentage of the submitter's production volume for that chemical, measured by weight. If none of the listed consumer and commercial product categories accurately describes the consumer and commercial products in which each PFAS is used, the category ''Other'' may be used, and must include a description of the use.

TABLE 5—CODES FOR REPORTING CONSUMER AND COMMERCIAL PRODUCT CATEGORIES

Code	Category
	Chemical Substances in Furnishing, Cleaning, Treatment Care Products
CC101	Construction and building materials covering large surface areas including stone, plaster, cement, glass and ceramic articles; fabrics, textiles, and apparel.
CC102	Furniture & furnishings including plastic articles (soft); leather articles.
CC103	Furniture & furnishings including stone, plaster, cement, glass and ceramic articles; metal articles; or rubber articles.
CC104	Leather conditioner.
CC105	Leather tanning, dye, finishing, impregnation and care products.
CC106	Textile (fabric) dyes.
CC107	Textile finishing and impregnating/surface treatment products.
CC108	All-purpose foam spray cleaner.
CC109	All-purpose liquid cleaner/polish.
CC110	All-purpose liquid spray cleaner.
CC111	All-purpose waxes and polishes.
CC112	Appliance cleaners.
CC113	Drain and toilet cleaners (liquid).
CC114	Powder cleaners (floors).
CC115	Powder cleaners (porcelain).
CC116	Dishwashing detergent (liquid/gel).
CC117	Dishwashing detergent (unit dose/granule).
CC118	Dishwashing detergent liquid (hand-wash).
CC119	Dry cleaning and associated products.
CC120	Fabric enhancers.
CC121	Laundry detergent (unit-dose/granule).
CC122	Laundry detergent (liquid).
CC123	Stain removers.
CC124	Ion exchangers.
CC125	Liquid water treatment products.
CC126	Solid/Powder water treatment products.
CC127	Liquid body soap.
CC128	Liquid hand soap.
CC129	Solid bar soap.
CC130	Air fresheners for motor vehicles.
CC131	Continuous action air fresheners.
CC132	Instant action air fresheners.
CC133	Anti-static spray.
CC134	Apparel finishing, and impregnating/surface treatment products.
CC135	Insect repellent treatment.
CC136	Pre-market waxes, stains, and polishes applied to footwear.
CC137	Post-market waxes, and polishes applied to footwear (shoe polish).
CC138	Waterproofing and water-resistant sprays.
	Chemical Substances in Construction, Paint, Electrical, and Metal Products
CC201	Fillers and putties.
CC202	Hot-melt adhesives.
CC203	One-component caulks.
CC204	Solder.
CC205	Single-component glues and adhesives.
CC206	Two-component caulks.
CC207	Two-component glues and adhesives.
CC208	Adhesive/Caulk removers.
CC209	Aerosol spray paints.
CC210	Lacquers, stains, varnishes and floor finishes.
CC211	Paint strippers/removers.
CC212	Powder coatings.
CC213	Radiation curable coatings.
CC214	Solvent-based paint.
CC215	Thinners.
CC216	Water-based paint.
CC217	Construction and building materials covering large surface areas, including wood articles.
CC218	Construction and building materials covering large surface areas, including paper articles; metal articles; stone, plaster, cement, glass and ceramic articles.
CC219	Machinery, mechanical appliances, electrical/electronic articles.
CC220	Other machinery, mechanical appliances, electronic/electronic articles.
CC221	Construction and building materials covering large surface areas, including metal articles.

TABLE 5—CODES FOR REPORTING CONSUMER AND COMMERCIAL PRODUCT CATEGORIES—Continued

Code	Category
CC222	Electrical batteries and accumulators.
	Chemical Substances in Packaging, Paper, Plastic, Toys, Hobby Products
CC990	Non-TSCA use.
CC301	Packaging (excluding food packaging), including paper articles.
CC302	Other articles with routine direct contact during normal use, including paper articles.
CC303	Packaging (excluding food packaging), including rubber articles; plastic articles (hard); plastic articles (soft).
CC304	Other articles with routine direct contact during normal use including rubber articles; plastic articles (hard).
CC305	Toys intended for children's use (and child dedicated articles), including fabrics, textiles, and apparel; or plastic articles (hard).
CC306	Adhesives applied at elevated temperatures.
CC307	Cement/concrete.
CC308	Crafting glue.
CC309	Crafting paint (applied to body).
CC310	Crafting paint (applied to craft).
CC311	Fixatives and finishing spray coatings.
CC312	Modelling clay.
CC313	Correction fluid/tape.
CC314	Inks in writing equipment (liquid).
CC315	Inks used for stamps.
CC316	Toner/Printer cartridge.
CC317	Liquid photographic processing solutions.
	Chemical Substances in Automotive, Fuel, Agriculture, Outdoor Use Products
CC401	Exterior car washes and soaps.
CC402	Exterior car waxes, polishes, and coatings.
CC403	Interior car care.
CC404	Touch up auto paint.
CC405	Degreasers.
CC406	Liquid lubricants and greases.
CC407	Paste lubricants and greases.
CC408	Spray lubricants and greases.
CC409	Anti-freeze liquids.
CC410	De-icing liquids.
CC411	De-icing solids.
CC412	Lock de-icers/releasers.
CC413	Cooking and heating fuels.
CC414	Fuel additives.
CC415	Vehicular or appliance fuels.
CC416	Explosive materials.
CC417	Agricultural non-pesticidal products.
CC418	Lawn and garden care products.
	Chemical Substances in Products not Described by Other Codes
CC980	Other (specify).
CC990	Non-TSCA use.

(5) For each consumer and commercial product category reported under paragraph (c)(4) of this section, the applicable code(s) described in Table 4 under paragraph (c)(3) of this section must be selected to designate the function category(ies) that best represents the specific manner in which the PFAS is used.

(6) Submitters must indicate, for each consumer and commercial product category reported under paragraph (c)(4) of this section, whether the use is a consumer or a commercial use, or both.

(7) Submitters must determine, within each consumer and commercial product category reported under paragraph (c)(4) of this section, whether any amount of each reportable chemical substance manufactured (including imported) by the submitter is present in (for example, a plasticizer chemical substance used to make pacifiers) or on (for example, as a component in the paint on a toy) any consumer products intended for use by children age 14 or younger, regardless of the concentration of the chemical substance remaining in or on the product. Submitters must select from the following options: The chemical substance is used in or on any consumer products intended for use by children; the chemical substance is not used in or on any consumer products intended for use by children; or information as to whether the chemical substance is used in or on any consumer products intended for use by children is not known to or reasonably ascertainable by the submitter.

(8) For each year where the PFAS is used in consumer or commercial products, the estimated typical maximum concentration, measured by weight, of the chemical substance in each consumer and commercial product category reported under paragraph (c)(4) of this section. For each PFAS in each commercial and consumer product category reported under paragraph (c)(4) of this section, submitters must select from among the ranges of concentrations listed in Table 6 of this paragraph and report the corresponding code (*i.e.,* M1 through M5):

TABLE 6—CODES FOR REPORTING MAXIMUM CONCENTRATION OF CHEMICAL SUBSTANCE

Code	Concentration range (% weight)
M1	Less than 1% by weight.
M2	At least 1 but less than 30% by weight.
M3	At least 30 but less than 60% by weight.
M4	At least 60 but less than 90% by weight.
M5	At least 90% by weight.

(d) For each year since January 1, 2011, the total amounts manufactured or processed of each PFAS, including the amounts manufactured or processed in each calendar year for each category of use as described in paragraph (c) of this section.

(1) For each year the PFAS was manufactured, the total annual volume (in pounds) of each PFAS domestically manufactured or imported at each site. The total annual domestically manufactured volume (not including imported volume) and the total annual imported volume must be separately reported. These amounts must be reported to two significant figures of accuracy.

(2) A designation indicating, for each PFAS at each site, whether the imported PFAS is physically present at the reporting site.

(3) The volume directly exported of each PFAS domestically manufactured or imported at each site. These amounts must be reported to two significant figures of accuracy.

(4) The estimated percentage, rounded off to the closest 10 percent, of total production volume of the reportable chemical substance associated with each combination of industrial processing or use operation, sector, and function category as reported in paragraph (c) of this section. Where a particular combination of industrial processing or use operation, sector, and function category accounts for less than 5 percent of the submitter's site's total production volume of a reportable chemical substance, the percentage must not be rounded off to 0 percent. Instead, in such a case, submitters must report the percentage, rounded off to the closest 1 percent, of the submitter's site's total production volume of the reportable chemical substance associated with the particular combination of industrial processing or use operation, sector, and function category.

(5) The estimated percentage, rounded off to the closest 10 percent, of the submitter's site's total production volume of the PFAS associated with each consumer and commercial product category as reported in paragraph (c)(4) of this section. Where a particular consumer and commercial product category accounts for less than 5 percent of the total production volume of a reportable chemical substance, the percentage must not be rounded off to 0 percent. Instead, in such a case, submitters must report the percentage, rounded off to the closest 1 percent, of the submitter's site's total production volume of the reportable chemical substance associated with the particular consumer and commercial product category.

(6) The estimated maximum amount (in pounds) to be manufactured or imported during the first year of production within the covered reporting period (*i.e.,* since January 1, 2011), and the estimated maximum amount (in pounds) to be manufactured or imported during any 12-month period during the first three years of production within the covered reporting period.

(7) An indication of whether the PFAS was site-limited.

(8) The estimated maximum amount (in pounds) of the PFAS on site at any point in time since January 1, 2011. This amount is not limited to quantities being actively manufactured or used, and includes quantities stored.

(9) The total volume (in pounds) of each PFAS recycled on-site since January 1, 2011.

(e) A description of the byproducts resulting from the manufacture, processing, use, or disposal of each PFAS since January 1, 2011.

(1) For each byproduct produced from the manufacture, processing, use, or disposal of a PFAS, the submitter will identify the byproduct by its specific, currently correct CA Index name as used to list the chemical substance on the TSCA Inventory and the correct corresponding CASRN. A submitter under this part may use an EPA-designated TSCA Accession Number for a chemical substance in lieu of a CASRN when a CASRN is not known to or reasonably ascertainable by the submitter. Submitters who wish to report chemical substances listed on the confidential portion of the TSCA Inventory will need to report the chemical substance using a TSCA Accession Number.

(i) In addition to reporting the number itself, submitters must specify the type of number they are reporting by selecting from among the codes in Table 1 of paragraph (b)(1)(i) of this section.

(ii) If the specific identity of the byproduct is unknown to the submitter, the submitter may provide a description of the chemical substance.

(iii) An indication of which specific PFAS activity(ies) (*i.e.,* manufacture, process, use, or disposal) manufactured the byproduct.

(2) An indication of whether the byproduct is released to the environment, and if so, the environmental medium (a) to which it is released (*i.e.,* air, water, land).

(3) For each year, the byproduct volume (in pounds) released to the environment.

(f) All existing environmental and health effects information of such substance or mixture. The scope of this information shall not be limited to studies conducted or published since 2011.

(1) For each published study report, the submitter shall complete an Organization for Economic Cooperation and Development (OECD) Harmonized Templates for Reporting Chemical Test Summaries, and submit the accompanying study reports and supporting information.

(2) Submitters shall also provide any additional human health data not in study reports, including but not limited to any preliminary studies, informal test results in workers, or inhalation studies.

(g) The number of individuals exposed to PFAS in their places of employment and the duration of such exposure for each year since January 1, 2011.

(1) A narrative description of worker activities involving the PFAS at the manufacturing site, such as bag dumping, sampling, cleaning, or unloading drums.

(2) For each worker activity in this paragraph, indicate the number of workers reasonably likely to be exposed. The submitter must select from among the worker ranges listed in Table 8 of

paragraph (g)(1)(i) of this section and report the corresponding code (*i.e.,* W1 though W8).

TABLE 7—CODES FOR REPORTING NUMBER OF WORKERS REASONABLY LIKELY TO BE EXPOSED

Code	Range
W1	Fewer than 10 workers.
W2	At least 10 but fewer than 25 workers.
W3	At least 25 but fewer than 50 workers.
W4	At least 50 but fewer than 100 workers.
W5	At least 100 but fewer than 500 workers.
W6	At least 500 but fewer than 1,000 workers.
W7	At least 1,000 but fewer than 10,000 workers.
W8	At least 10,000 workers.

(3) For each PFAS, the maximum duration of exposure for any worker at the manufacturing site, in hours per day and days per year.

(4) For each combination of industrial processing or use operation, sector, and function category identified in paragraph (c) of this section, the submitter must estimate the number of workers reasonably likely to be exposed to each PFAS. For each combination associated with each chemical substance, the submitter must select from among the worker ranges listed in Table 8 under paragraph (g)(1)(i) of this section and report the corresponding code (*i.e.,* W1 though W8).

(5) For each PFAS, the maximum duration of exposure for any worker for each combination of industrial processing or use operation, sector, and function category, in hours per day and days per year.

(6) Where the PFAS is used in a commercial product, the submitter must estimate the number of commercial workers reasonably likely to be exposed to each reportable chemical substance. For each commercial use associated with each substance, the submitter must select from among the worker ranges listed in Table 8 under paragraph (g)(1)(i) of this section and report the corresponding code (*i.e.,* W1 though W8).

(7) For each PFAS, the maximum duration of exposure for any worker for each commercial use, in hours per day and days per year.

(h) During the years in which the PFAS was manufactured, the manners or methods of its disposal, and any changes to the disposal methods or processes since January 1, 2011.

(1) Description of disposal processes or methods, using the appropriate codes in Table 9 of paragraph (h)(1) of this section, and additional descriptions as needed.

TABLE 8—CODES FOR REPORTING DISPOSAL METHODS

Code	Disposal method
D1	On-site land disposal: RCRA Class C landfill (hazardous).
D2	On-site land disposal: Other landfill.
D3	Other on-site land disposal.
D4	On-site underground injection (UIC).
D5	Off-site land disposal: RCRA Class C landfill (hazardous).
D6	Off-site land disposal: Other landfill.
D7	On-site incineration.
D8	Off-site incineration.
D9	Publicly owned treatment works (POTW).
D10	Other off-site waste transfer.
D11	Release to surface water.
D12	Release to air (stack emissions).
D13	Release to air (fugitive emissions).
D99	Other.

(2) Describe any changes to the disposal process(es) or method(s) indicated in paragraph (h)(1) for any PFAS manufactured since 2011.

(3) Indicate total volume released to each environmental medium since 2011 for each PFAS.

(4) Indicate total volume incinerated on-site since 2011 for each PFAS. If incineration occurred, indicate the temperature at which the PFAS was incinerated.

(i) *Certification statement signed and dated by an authorized official of the submitter company.* The authorized official must certify that the submitted information has been completed in compliance with the requirements of this part, such as all information known or reasonably ascertainable is submitted, and that the confidentiality claims made in this report are true and correct. The certification must be signed and dated by the authorized official for the submitter company, and provide that person's name, official title, and email address.

§ 705.20 When to report.

All information reported to EPA in response to the requirements of this part must be submitted during the applicable submission period. The submission period shall begin six months following the effective date of this rule and last for six months.

§ 705.22 Duplicative reporting.

(a) If a person identified in § 705.10 has already reported certain information in § 705.15 to EPA pursuant to TSCA section 8(a), then duplicative reporting of that information is not required of the years for which the information has already been reported. Any person covered in this part may notify EPA through the electronic reporting system in § 705.35 that such information has

already been submitted. This information may include:

(1) Physical state of the chemical or mixture, pursuant to § 711.15(b)(3)(C)(ix);

(2) Industrial processing and use type, sector(s), functional category(ies), and percent of production volume for each use, pursuant to § 711.15(b)(4)(i)(A) through (D);

(3) Consumer and/or commercial indicator, product category(ies), functional category(ies), percent of production volume for each use, indicator for use in products intended for children, and maximum concentration in the product, pursuant to § 711.15(b)(4)(ii)(A) through (F);

(4) Number of workers reasonably likely to be exposed for each combination of industrial processing or use operation, sector, and function, pursuant to § 711.15(b)(4)(i)(F), and the number of commercial workers reasonably likely to be exposed when the substance is used in a commercial product, pursuant to § 711.15(b)(4)(ii)(G).

(b) Any person covered in this part must report all information to EPA in § 705.15 for each year since January 1, 2011. If a person has already reported any of the data elements identified in paragraph (a) of this section, but not for all years since 2011, then that person must submit the required information for the intervening years.

§ 705.25 Recordkeeping requirements.

Each person who is subject to the reporting requirements of this part must retain records that document any information reported to EPA. Relevant records must be retained for a period of 5 years beginning on the last day of the submission period.

§ 705.30 Confidentiality claims.

(a) *Making confidentiality claims*—(1) *Generally.* Any person submitting information under this part may assert a confidentiality claim for that information, except for information described in paragraph (a)(2) of this section. Any such confidentiality claims must be asserted at the time the information is submitted. Instructions for asserting confidentiality claims are provided in the document identified in § 705.35. Information claimed as confidential in accordance with this section will be treated and disclosed in accordance with the procedures in 40 CFR part 2 and section 14 of TSCA.

(2) *Exceptions.* Confidentiality claims cannot be asserted:

(i) For chemical identities listed on the public portion of the TSCA Inventory;

(ii) For processing and use data elements required by § 705.15(c)(1) through (7); or

(iii) When a response is left blank or designated as ''not known or reasonably ascertainable.''

(3) *Health and environmental effects information.* Any person submitting health and effects information under this part may only assert a confidentiality claim for information that ''discloses processes used in the manufacturing or processing of a chemical substance or mixture or, in the case of a mixture, the release of data disclosing the portion of the mixture comprised by any of the chemical substances in the mixture.'' If any such information is claimed as confidential, a person who submits the information must also provide EPA with a sanitized copy for public release, removing only that information that is claimed as confidential.

(b) Unless exempted, *all confidentiality claims require substantiation at time of submission and must be signed and dated by an authorized official.* Confidentiality claims for the following data elements are exempt from this substantiation requirement:

(1) Production volume information required pursuant to § 705.15(d)(1), (5), and (6).

(c) *Marking information claimed as confidential in confidentiality substantiation documentation.* If any of the information contained in the answers to the questions listed in paragraph (e) of this section is asserted to contain information that itself is considered to be confidential, you must clearly identify the information that is claimed confidential.

(d) *Certification statement for claims.* An authorized official representing a person asserting a claim of confidentiality must certify that the submission complies with the requirements of this part by signing and dating the following certification statement:

''I certify that all claims for confidentiality asserted with this submission are true and correct, and all information submitted herein to substantiate such claims is true and correct. Any knowing and willful misrepresentation is subject to criminal penalty pursuant to 18 U.S.C. 1001. I further certify that: (1) I have taken reasonable measures to protect the confidentiality of the information; (2) I have determined that the information is not required to be disclosed or otherwise made available to the public under any other Federal law; (3) I have a reasonable basis to conclude that disclosure of the information is likely to cause substantial harm to the competitive position of my company; and (4) I have a reasonable basis to believe that the information is not readily discoverable through reverse engineering.''

(e) Substantiation requirements for *all types of confidentiality claims.* For each data element that is claimed as confidential, you must submit with your report detailed written answers to the following questions:

(1) Will disclosure of the information claimed as confidential likely cause substantial harm to your business's competitive position? If you answered yes, describe the substantial harmful effects that would likely result to your competitive position if the information is disclosed, including but not limited to how a competitor could use such information, and the causal relationship between the disclosure and the harmful effects.

(2) Has your business taken precautions to protect the confidentiality of the disclosed information? If yes, please explain and identify the specific measures, including but not limited to internal controls, that your business has taken to protect the information claimed as confidential.

(3)(i) Is any of the information claimed as confidential required to be publicly disclosed under any other Federal law? If yes, please explain.

(ii) Does any of the information claimed as confidential otherwise appear in any public documents, including (but not limited to) safety data sheets; advertising or promotional material; professional or trade publications; state, local, or Federal agency files; or any other media or publications available to the general public? If yes, please explain why the information should be treated as confidential.

(iii) Does any of the information claimed as confidential appear in one or more patents or patent applications? If yes, please provide the associated patent number or patent application number (or numbers) and explain why the information should be treated as confidential.

(4) Does any of the information that you are claiming as confidential constitute a trade secret? If yes, please explain how the information you are claiming as confidential constitutes a trade secret.

(5) Is the claim of confidentiality intended to last less than 10 years (see TSCA section 14(e)(1)(B))? If yes, please indicate the number of years (between

1–10 years) or the specific date after which the claim is withdrawn.

(6) Has EPA, another federal agency, or court made any confidentiality determination regarding information associated with this chemical substance? If yes, please provide the circumstances associated with the prior determination, whether the information was found to be entitled to confidential treatment, the entity that made the decision, and the date of the determination.

(f) *Additional requirements for specific chemical identity.* A person may assert a claim of confidentiality for the specific chemical identity of a chemical substance as described in § 711.15(b) of this part only if the identity of that chemical substance is treated as confidential in the Master Inventory File as of the time the report is submitted for that chemical substance. Generic chemical identities and accession numbers may not be claimed as confidential. To assert a claim of confidentiality for the identity of a reportable chemical substance, you must submit with the report detailed written answers to the questions from paragraph (b) of this section and to the following questions.

(1) Is this chemical substance publicly known (including by your competitors) to be in U.S. commerce? If yes, please explain why the specific chemical identity should still be afforded confidential status (*e.g.,* the chemical substance is publicly known only as being distributed in commerce for research and development purposes, but no other information about the current commercial distribution of the chemical substance in the United States is publicly available). If no, please complete the certification statement:

I certify that on the date referenced, I searched the internet for the chemical substance identity (*i.e.,* by both chemical substance name and CASRN). I did not find a reference to this chemical substance that would indicate that the chemical is being manufactured or imported by anyone for a commercial purpose in the United States. [provide date].

(2) Does this particular chemical substance leave the site of manufacture (including import) in any form, *e.g.,* as a product, effluent, emission? If yes, please explain what measures have been taken to guard against the discovery of its identity.

(3) If the chemical substance leaves the site in a form that is available to the public or your competitors, can the chemical identity be readily discovered by analysis of the substance (*e.g.,* product, effluent, emission), in light of existing technologies and any costs, difficulties, or limitations associated with such technologies? Please explain why or why not.

(4) Would disclosure of the specific chemical name release confidential process information? If yes, please explain.

(g) *No claim of confidentiality.* Information not claimed as confidential in accordance with the requirements of this section may be made public without further notice to the submitter.

§ 705.35 Electronic reporting.

You must use CDX to complete and submit the reporting form required under this part. Submissions may only be made as set forth in this paragraph. Submissions must be sent electronically to EPA via CDX. The information submitted and all attachments (unless the attachment appears in scientific literature) must be in English. All information must be true and correct. Access the PFAS reporting tool and instructions, as follows:

(1) By website. Access the PFAS reporting tool via the CDX homepage at *https://cdx.epa.gov/* and follow the appropriate links.

(2) By phone or email. Contact the EPA TSCA Hotline at (202) 554–1404 or *TSCA-Hotline@epa.gov.*

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