

# **Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals, Revision 7 (2017)**

**Consultation Document**

OCTOBER 2019



**Environmental  
Protection Authority**  
Te Mana Rauhi Taiao

New Zealand Government



## We seek public input

This document has been prepared by the Environmental Protection Authority (EPA) to inform the proposal to update New Zealand's current hazardous substance classification system to Revision 7 (2017) of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The proposal is being publicly notified to enable the public to comment and to put all relevant information before decision makers. We welcome your feedback.

We would like to hear what you think about the proposals outlined. You can make a submission online using the form in the *Public Consultations: Open for submission* area of the EPA website [www.epa.govt.nz](http://www.epa.govt.nz). The submission form includes the questions asked throughout this consultation document.

If you are unable to enter your submission online, please contact us at [HShotices@epa.govt.nz](mailto:HShotices@epa.govt.nz) and we will forward you a form to complete. You can also use this email address to contact us with any questions you may have on the submission process.

For more information on how to make a submission, see *Public consultations: How to make a submission* on our website.

## Closing date for submissions

Please send your submissions to us no later than 5pm, Thursday 9 January 2020.

## How we will consider your submissions

The EPA will review and analyse the submissions received and will prepare a summary of submissions, which will be available on our website.

## Confidentiality

The Privacy Act 1993 establishes certain principles with respect to the collection, use, and disclosure of information about individuals by various agencies including the EPA. It governs access by individuals to information about themselves held by agencies. Any personal information you supply in the course of making a submission will be used only in conjunction with the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the EPA may publish.

The EPA will post all, or parts of, any written submission on its website at [www.epa.govt.nz](http://www.epa.govt.nz). By making a submission, it is implied that you consent to such publication, unless you clearly specify otherwise in your submission.

The content of submissions are subject to public release under the Official Information Act 1982 if requests are made to the EPA. Please clearly indicate if you have any objection to the release of any information contained in your submission, and in particular, which part(s) you consider should be withheld, together with the reason(s) for withholding the information. The EPA will take into account all

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## Disclaimer

The contents of this proposal do not reflect final Environmental Protection Authority policy. Words and details that form part of these proposals do not necessarily reflect settled terminology and may change in the process of drafting the final EPA Notices. This document does not alter the laws of New Zealand and the EPA does not accept any responsibility or liability to any person, whether in contract, equity or tort, or any other legal principle, for any direct or indirect losses or damage arising from reliance on the contents of this document.

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## 1. Executive Summary

1. The Environmental Protection Authority (EPA) is proposing to update New Zealand's current hazardous substance classification system to Revision 7 (2017) of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

### *What is the GHS?*

2. The GHS is an internationally agreed system developed by the United Nations (UN) to classify chemicals and communicate their hazards through labels and safety data sheets. It was first published in 2003 and has been revised every two years.
3. Adopting the GHS 7 system will ensure New Zealand has an internationally-aligned classification system for hazardous substances that facilitates trade, increases efficiency in chemicals management, and enhances the effectiveness of the Hazardous Substances and New Organisms (HSNO) Act 1996.
4. While we believe that adopting the GHS 7 will be beneficial long-term, we recognise that there are costs involved. There will be a one-off cost to industry to update systems that currently refer to the existing HSNO classification framework and to update training for relevant staff. Regulators with systems that use the existing classification framework will also face costs to update those systems, for example WorkSafe's Hazardous Substances Calculator. There will also be a one-off cost to the EPA largely around preparation of new EPA Notices, guidance material, and the re-classification of products.

### *How will the GHS classification system be implemented?*

5. The change in classification system will be achieved by the EPA issuing a new Classification Notice, as provided for within the HSNO Act. It is intended that the GHS 7 be incorporated into the Classification Notice by reference. Where the GHS provides for options, or where we have included categories that are additional to the GHS, these will be clearly set out in the Classification Notice.
6. Adopting the GHS 7 will mean that the new Classification Notice will align with the Labelling and Safety Data Sheet Notices, which already require compliance with the GHS requirements. Having the classification system and compliance requirements aligned will reduce complexity for stakeholders. Transitional provisions are proposed to give stakeholders time to adjust to the new classification system.
7. An exposure draft of the new Classification Notice is attached as Appendix 2. Information on consequential amendments to other EPA Notices is provided in Section 6.

### *Who will have an interest in the proposed changes?*

8. We believe that this consultation document will be of specific interest to applicants for new hazardous substances approvals, producers of safety data sheets, importers and manufacturers, industry organisations, other regulators - especially those that administer

legislation that refers to the current HSNO classification system, relevant health sector bodies, and NGOs.

9. We have taken into consideration Māori interests and the Principles of the Treaty of Waitangi when developing the proposals outlined in this document in respect of sections 5(b), 6(d) and 8 of the HSNO Act.

### *Previous Consultation*

10. The EPA has previously consulted (2014) on updating the HSNO classification system to GHS. However, the EPA made a decision to defer updating the classification system at that time in order to focus on meeting the Government's deadline to effect the transfer of many workplace controls from HSNO to the new Health and Safety at Work (HSW) legislation.
11. The proposals in this document are largely consistent with the 2014 consultation, with the exceptions being that we are now proposing to not adopt acute toxicity Category 5, to not adopt skin irritation Category 3, and to adopt aquatic toxicity Acute Categories 2 and 3. The main reason for these proposed changes is to promote international alignment (refer Section 5).

### *Proposals*

12. We are consulting on five specific proposals:
  - to update the existing HSNO classification system by issuing a new EPA Classification Notice that will incorporate the GHS 7 by reference
  - regarding application of the GHS 7 building blocks, to
    - not adopt acute toxicity Category 5 (HSNO 6.1E)
    - not adopt skin irritation Category 3 (HSNO 6.3B)
    - not adopt aspiration hazard Category 2
    - adopt all seven categories for aquatic toxicity, i.e. Acute 1–3 and Chronic 1–4 (HSNO 9.1A–D)
  - where the GHS 7 provides for optional concentration cut-off values for classification of mixtures, we propose to include the lower concentration cut-off values in the Classification Notice (refer Table 2)
  - to replace the current HSNO classification subclasses for terrestrial ecotoxicity (9.2, 9.3 and 9.4) and 9.1D biocides with a classification category “substances that are ecotoxic in the terrestrial environment”, which will be applied only to agrichemicals or related substances, as defined in Appendix 1 of this document
  - an additional two-year transitional period to be included in the EPA Labelling Notice, Safety Data Sheet Notice, and Packaging Notice to allow those impacted to make any necessary changes resulting from the re-issuing of approvals and updating to the GHS 7.

*Next steps*

13. Should the EPA progress the proposal to adopt the GHS 7, all existing HSNO approvals will require updating to convert their HSNO classifications to the GHS, which we will consult on in 2020. Further information on this is provided in Section 7.



## 2. Introduction

14. This document is consulting on five proposals related to moving New Zealand from its current hazardous substances classification system, to the GHS 7. Adopting the GHS 7 would be achieved by the issuing of a new EPA Classification Notice and revoking the Minimum Degrees of Hazard Notice.
15. There would also be consequential amendments to other EPA Notices, primarily to replace occurrences of the existing HSNO classifications with GHS classifications.

### Public consultation

16. This consultation document was prepared to give affected stakeholders and interested parties an opportunity to comment on proposals related to the implementation of the GHS 7. It has been published on our website and directly sent to a list of interested parties including the Ministry for the Environment, the Ministry of Health, the Ministry for Primary Industries (MPI), the Ministry of Business, Innovation and Employment, Customs, and WorkSafe.
17. This document:
  - outlines the statutory requirements for issuing an EPA Notice
  - introduces the rationale behind the introduction of the GHS, including benefits and costs
  - includes consideration of international best practice
  - provides information on the proposed changes
  - highlights legislative impacts and consequential amendments to EPA Notices that will be required to implement the GHS 7.

### HSNO and GHS classification

18. Hazardous substances in New Zealand are managed under several different pieces of legislation with one of the key ones being the HSNO Act. The purpose of the HSNO Act is to protect people and the environment from the harmful effects of hazardous substances.
19. The HSNO Act sets the criteria that designate a substance as hazardous, and also allows the setting of a framework that assigns particular hazard classifications to all substances that are designated as hazardous. The hazard classification of a substance determines the nature and level of its conditions of use (controls). Most HSNO controls are set out in EPA Notices.
20. The current HSNO classification framework, implemented in 2001, was based on a pre-published version of the GHS. The framework has not been updated since that time.
21. The GHS is an internationally agreed system developed by the UN to classify chemicals and communicate their hazards through labels and safety data sheets. It was first published in 2003 and has been revised every two years since then.

22. Under the GHS, chemicals are classified based on their physical, health, and environmental hazards. The broad goals of the GHS are to:
  - enhance the protection of human health and the environment by providing a consistent means of communicating chemical hazards by standardising the content and format of labels and safety data sheets
  - reduce the need for national testing and evaluation of chemicals
  - provide a recognised chemicals management framework for those jurisdictions without an existing system
  - facilitate international trade in chemicals for which hazards have been assessed and identified on an internationally accepted basis.
23. The hazard classes and categories of the GHS are building blocks on which to form a regulatory approach. Not all hazards may be relevant in all situations and in some circumstances more detail may be needed. With the building block approach, adoption of the GHS may vary from sector to sector, as well as from country to country.
24. New Zealand is different from its international counterparts in that we have one legislative framework (the HSNO Act) and one regulatory authority (the EPA) that is responsible for classifying and approving all types of hazardous substances across all sectors. Other agencies, have responsibilities under other legislation to manage specific risks in particular sectors, for example WorkSafe and MPI.
25. Accordingly, when the proposed GHS was adopted into the HSNO regulations in 2001 it was done in a comprehensive manner. All the GHS classification building blocks were adopted and made available to classify all hazardous substances, regardless of type and sector of use.
26. We are intending to implement the GHS 7 in the same way, i.e. across all sectors, workplaces and non-workplaces. The GHS 7 will be applied to all hazardous substances, for example explosives, dangerous goods, pesticides, and consumer goods.
27. Although there is generally a 1:1 mapping between HSNO and the GHS, there are some newer GHS classifications that do not have HSNO equivalents. In addition, New Zealand has an additional three sub-classes for terrestrial ecotoxicology (subclasses 9.2, 9.3 and 9.4).
28. The GHS allows jurisdictions to select higher or lower concentration cut-off values for classification of mixtures based on the hazardous properties of their components. We are proposing to adopt the lower values as discussed under Proposal 3, Section 5 of this document.

#### *Key differences between HSNO and GHS 7*

29. The key differences between the existing HSNO hazard classification framework (based on a pre-published version of the GHS in 2001) and the GHS 7 are outlined below.

### **Desensitised explosives**

- HSNO has different categories for liquid and solid desensitised explosives (subclasses 3.2 and 4.1.3).
- GHS 7 does not split desensitised explosives into liquids and solids.

### **Flammable gases**

- HSNO has two classification categories for flammable gases (2.1.1A and 2.1.1B).
- GHS 7 has three categories – Category 1A, 1B and 2.
  - Category 1A includes three sub-categories:
    - flammable gases
    - pyrophoric gases - this classification will apply to a limited number of gases already classified as flammable gases, including diborane, phosphine, and silane and potentially mixtures containing these substances
    - chemically unstable gases - these gases are classified as flammable gases and will need to be additionally classified in this category. Two major chemically unstable gases are acetylene and ethylene oxide, however other gases and mixtures may also meet the criteria for classification in this category.
  - Category 1B is a new sub-category for gases that meet the flammability criteria for Category 1A, but that are not pyrophoric nor chemically unstable, and that have either a lower flammability limit of more than 6 percent by volume in air, or a fundamental burning velocity of less than 10 cm/s. Some flammable refrigerant gases are likely to meet the criteria for this category. Where data is not available to support classification in sub-category 1B, the gas will be classified in Category 1A.
  - Gases currently classified as HSNO 2.1.1A will fall into GHS Categories 1A and 1B.
  - Gases currently classified as HSNO 2.1.1B will fall into GHS Category 2.

### **Aerosols**

- HSNO has one classification category for flammable aerosols (2.1.2A).
- GHS 7 has three categories – two are for flammable aerosols (Category 1 and 2) and a third category for non-flammable aerosols (Category 3).

### **Gases under pressure**

- HSNO does not have a specific classification category for gases under pressure. Compressed gases were regulated under the HSNO Compressed Gases Regulations which were transferred to the Health and Safety at Work (Hazardous Substances) Regulations in 2017.

- GHS 7 includes a category for gases under pressure, which we will adopt. This will provide not only better alignment with overseas adoption of the GHS but also better alignment with the classification of gases as “dangerous goods” for transport under the (New Zealand) Land Transport Rule: Dangerous Goods (and similar Maritime and Civil Aviation Rules).

#### **Aspiration hazard**

- Under HSNO, substances that have an aspiration hazard are captured under 6.1E.
- GHS 7 has a separate classification class for aspiration hazard, with two categories provided for – Category 1 and Category 2 (GHS Chapter 3.10). We propose to not adopt GHS Category 2 for aspiration hazard. This is in line with Australia, the United States (USA) and the European Union (EU).
- Refer to Proposal 2c for further discussion on this matter.

#### **Respiratory irritants**

- Under HSNO, substances that are respiratory irritants are captured under 6.1E.
- GHS 7 has a separate classification category for transient target organ effects that covers narcotic effects and respiratory tract irritation.

#### **Specific target organ toxicity**

- Under HSNO, substances with specific target organ toxicity are captured under 6.9, which covers both single and repeat exposures.
- GHS 7 has separate classification classes for effects arising from a single exposure (GHS Chapter 3.8) and repeated exposure (GHS Chapter 3.9), as well as an additional category for single exposure transient target organ effects (GHS Category 3).

#### **Aquatic Toxicity**

- The current HSNO classification framework has four classification categories for aquatic ecotoxicity (9.1A – 9.1D). It does not explicitly have different classification categories for chronic and acute ecotoxicity.
- GHS 7 has seven categories for substances hazardous to the aquatic environment – three acute toxicity categories (Acute 1, 2, 3) and four chronic toxicity categories (Chronic 1, 2, 3, 4). Where relevant, a substance could be assigned both an acute and chronic classification.

The GHS also acknowledges that ingredients classified as Acute 1 or Chronic 1 contribute to the toxicity of a mixture even at low concentrations, and should therefore be given increased weight when applying the summation method to the classification of mixtures. To account for this, the GHS uses multiplying factors (M-factor), which increase by powers of 10 as the ecotoxicity of a substance increases. Correspondingly, an appropriate M-factor is assigned to chemicals classified as Acute 1 and/or Chronic 1 at the time they are classified.

- The criteria for HSNO Category 9.1A matches the criteria for the GHS Acute 1 Category. However, some 9.1A substances could also be classified as GHS Chronic 1 Category. HSNO categories 9.1B and 9.1C can correspond to GHS Chronic 2 and 3 respectively. HSNO Category 9.1D contains criteria which are separately contained in the GHS Acute 2, Acute 3, and Chronic 1 - 4 Categories.
- Refer to Proposal 2d for further discussion on our proposed adoption of the GHS categories for substances hazardous to the aquatic environment.

#### **Substances ecotoxic to the terrestrial environment**

- The current HSNO classification framework contains classification criteria and categories for substances that are ecotoxic to the terrestrial environment. These are sub-class 9.2 (ecotoxic to the soil environment), sub-class 9.3 (ecotoxic to terrestrial vertebrates) and sub-class 9.4 (ecotoxic to terrestrial invertebrates).
- The GHS does not include these classification categories.
- Refer to Proposal 4 for further discussion on this matter, and on our intentions to retain a classification category for certain substances that are ecotoxic to the terrestrial environment.

#### **Substances hazardous to the ozone layer**

- Ozone-depleting properties are not one of the intrinsic hazardous properties listed in the HSNO Act. Ozone-depleting substances are regulated under the Ozone Layer Protection Act 1996.
- GHS 7 includes a classification class for substances hazardous to the ozone layer (GHS Chapter 4.2). Adopting the GHS label elements for ozone-depleting hazards into the HSNO framework would be beneficial as it would create consistency with the GHS label elements required for any other hazardous properties that these substances may possess. However, given the lack of legislative provisions to classify ozone-depleting hazards, we are not proposing to adopt this category at this time. Regardless, information on the GHS label elements for ozone-depleting hazards could be included in guidance material for information purposes.

### **Previous consultation to implement GHS in New Zealand**

30. In 2014, the EPA consulted on updating our current classification system to the GHS (Revision 5, 2013). The proposal was well received by submitters, with approximately 90 percent of responders supporting it. However, in 2016 the EPA decided to defer updating the classification system until a later date in order to focus on meeting the Government's deadline to effect the split of workplace controls between HSNO and the new Health and Safety at Work (HSW) legislation. That split of controls was effected on 1 December 2017.
31. While the decision to move to the GHS classification system was deferred, the EPA implemented the GHS labelling, safety data sheet, and packaging proposals largely in line with

the proposals put forward in 2014. A second consultation took place in 2016 to confirm those decisions. Both consultation documents are available on the EPA website at the following links:

- 2014 consultation document  
<https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/HS-WSR-Completed-Consultation/EPA-Notices-Discussion-Class-Labelling-SDS-Packaging.pdf>
- 2016 consultation document  
<https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/HS-WSR-Completed-Consultation/Classification-consultation.pdf>

32. The summary of submission reports from both consultations are also available on the EPA website at the following links:

- Submission report from 2014 consultation  
<https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/HS-WSR-Completed-Consultation/ab177ff28b/Submission-Report-CLPS-Notices-Dec-2014-Consultation.pdf>
- Submission report from 2016 consultation  
<https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/HS-WSR-Completed-Consultation/c6b333b5b7/Submission-Analysis-Report-CLPS-Notices-Sep-2016-Consultation.pdf>

33. Links to the EPA Labelling and Safety Notices are provided below:

- Labelling Notice  
<https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/EPA-Notices/31fb7a7c7d/Hazardous-Substances-Labelling-Notice-2017.pdf>
- Safety Data Sheet Notice  
<https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/EPA-Notices/89b79e19ad/Hazardous-Substances-Safety-Data-Sheets-Notice-2017.pdf>

### 3. Statutory requirements for issuing and amending an EPA Notice

34. The introduction of the GHS classifications and associated proposals, as outlined in this document, will be implemented through issuing a new EPA Classification Notice. An exposure draft of this notice is attached as Appendix 2.
35. EPA Notices are legally binding regulatory instruments that enable the EPA to set rules under the HSNO Act, in much the same way as rules are set under regulations. These notices are approved by the EPA Board rather than Cabinet. This allows notices to be updated more readily than regulations.
36. Before issuing an EPA Notice, the EPA must, under section 76C of the HSNO Act:
  - publicly notify its intention to issue the notice
  - give interested persons a reasonable time to make submissions on the proposal, and
  - consult any persons, representative groups within the hazardous substances industry or elsewhere, government departments, WorkSafe, and Crown entities that the EPA considers appropriate.
37. The EPA must also consider and give any weight that it considers appropriate, to the following matters:
  - the costs and benefits of implementing measures for which the notice is being proposed
  - international best practice in respect of hazardous substances management, and
  - any other matters that the EPA considers appropriate in the circumstances.
38. Any resulting EPA Notice must be publicly notified, along with a statement describing the consultation that took place before the notice was made. Public notification will include publication in the New Zealand Gazette.
39. In issuing this document and entering into this consultation process, the EPA is meeting its consultation requirements in respect to the Notice proposed by this document.

#### *Benefits and costs*

40. The EPA must consider the benefits and costs of the provisions included in an EPA Notice. In general terms, the implementation of the GHS 7 is expected to lead to the following benefits:
  - an internationally aligned classification system for hazardous substances that facilitates trade, increases efficiency in chemicals management and enhances the effectiveness of the HSNO Act
  - having a classification system that is aligned to the Labelling and Safety Data Sheet Notices, which already require compliance with the GHS, will result in reduced complexity for our stakeholders

- harmonisation of labels and safety data sheets with overseas requirements, which could lead to a reduction in the cost of products, including cost reductions for consumers, greater product choice for consumers, and earlier introduction of newer and potentially safer products
- consistency between workplace classification of hazardous substances and the rules for air, land and sea transport of dangerous goods
- comparing classification results between New Zealand and overseas will be easier
- continuation of New Zealand's use of international best practice in the area of chemicals regulation
- creates an opportunity to utilise the International Uniform Chemical Information Database (IUCPID), an international hazardous substance database, and also promote the sharing of data with overseas regulatory agencies
- increased efficiencies for the EPA when processing applications, which will enable resources to be directed to other areas that add significant value to the country, for example reassessments
- it will minimise cost and disruption for stakeholders if we implement GHS 7 at the same time that we re-issue individual approvals that were issued before 1 December 2017.

41. Potential costs associated with the introduction of the GHS 7 include:

- costs to other regulators who have systems that currently use HSNO classifications, which will require updating to GHS, for example WorkSafe's Hazardous Substances Calculator
- a one-off cost to companies to re-label products and prepare new safety data sheets if required, noting that the EPA Labelling and Safety Data Sheets Notices issued in 2017 already require compliance with GHS. These notices also contain a four-year transitional period, as well as alternative compliance provision for some jurisdictions.
- a one-off cost to companies who need to re-classify products covered under a group standard if they have not already done so by the time the EPA implements the GHS classification system. The use of the correlation tables included in the Classification Notice will facilitate this process.
- a one-off cost to companies with in-house systems to update them to accept GHS classifications
- training and education costs for stakeholders on the changes to the classification system
- an initial one-off cost to the EPA to implement a new classification system and to undertake consequential work as a result, notably updating the EPA Notices and all existing approvals to apply the new classification system, as well as developing guidance material
- reduction in efficiency during the transition period while New Zealand businesses adjust to a new system



### *Māori interests*

42. We have taken into consideration Māori interests and the Principles of the Treaty of Waitangi when developing the proposals outlined in this document in respect of sections 5(b), 6(d) and 8 of the HSNO Act.
43. Having a robust, internationally aligned classification system in Aotearoa to help ensure that people, communities and the environment are protected from the adverse effects of chemicals is consistent with Māori environmental values and frameworks.

### *International best practice*

44. In addition to considering costs and benefits of measures proposed in EPA Notices, due consideration must also be given to international best practice.
45. The GHS is an international system developed to achieve harmonisation of chemical hazard classification and hazard communication by way of standard label elements and safety data sheets. Global adoption of such a system is expected to facilitate international trade in chemical products and lead to a reduction in associated compliance costs, both for regulators and industry.
46. It has been implemented in over 60 jurisdictions, including all of New Zealand's major trading partners (Australia, the EU, USA, Canada, China, Japan and South Korea). Regulatory authorities can decide how to apply the various building blocks of the GHS, resulting in some variation across jurisdictions. We note that some jurisdictions have applied GHS to only workplace chemicals and others to both domestic and workplace chemicals.
47. The edition of the GHS that has been adopted varies across jurisdictions, although key trading partners have indicated likely future moves to the GHS 7:
  - the EU has incorporated the GHS 7 into law and has commenced transitioning to this, which will be complete in October 2020
  - Australia undertook consultation in July 2019 on proposals to move to the GHS 7 which received widespread support, with a two-year transitional period favoured
  - the USA and Canada plan to implement the GHS 7 around 2020/21
  - members of the Asia-Pacific Economic Co-operation have indicated intentions to move to the GHS 7 in the near future.
48. The proposals in this document are intended to make New Zealand's regulation of hazardous substances consistent with international best practice wherever possible.

### *Next Steps*

49. At the close of the consultation period, the EPA will review each written submission and prepare a summary of submissions. This summary will be available to all submitters and placed on the EPA website.

50. The EPA Notices that will be issued following this consultation will be legally drafted and must:
- set out fully the requirements of the Notice (except where information is incorporated in the Notice by reference)
  - include a statement of the objective of the notice
  - be signed by the chairperson of the EPA
  - be published in the New Zealand Gazette.
51. The intended implementation date for the new Classification Notice, and the relevant amended EPA Notices is mid-April 2021. However, transitional provisions have been included where relevant to give industry time to comply with any new requirements. More information on transitional provisions is provided in Section 6 of this document.

## 4. Summary of proposals to issue a new Classification Notice

52. A summary of the proposals included in this consultation document is provided in Table 1. Detailed information on each proposal, along with our rationale, is provided in Sections 5 and 6.

**Table 1: Summary of proposals**

No.	Proposal
1	<p>To update the classification system to the GHS 7 by:</p> <ul style="list-style-type: none"> <li>• issuing a new EPA Classification Notice that incorporates the GHS document by reference</li> <li>• revoking the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017</li> <li>• discontinuing current HSNO classification framework and numbering.</li> </ul>
2	<p>Regarding which GHS building blocks to adopt, we propose:</p> <ul style="list-style-type: none"> <li>• to not adopt GHS acute toxicity Category 5 (HSNO 6.1E)</li> <li>• to not adopt GHS skin irritation Category 3 (HSNO 6.3B)</li> <li>• to not adopt GHS aspiration hazard Category 2</li> <li>• to adopt all seven GHS categories for aquatic toxicity, i.e. Acute 1–3 and Chronic 1–4 (HSNO 9.1A–D).</li> </ul>
3	<p>With regards to mixtures, where optional concentration cut-off values are provided in the GHS, we propose to adopt the lower values, as listed in Table 2.</p>
4	<p>To replace the current HSNO classification categories for terrestrial ecotoxicity (9.2, 9.3 and 9.4) and 9.1D biocides with a classification category for “substances that are ecotoxic in the terrestrial environment”, which will be applied only to agrichemicals or related substances, as defined in Appendix 1.</p>
5	<p>To implement an additional two-year transitional period for compliance with the EPA Labelling Notice, Safety Data Sheet Notice, and Packaging Notice to allow time to make any necessary changes as a result of re-issuing approvals and updating to the GHS 7.</p>

## 5. Details of proposals to issue a new Classification Notice

### Proposal 1 – Updating the existing HSNO classification system to the GHS 7

#### *Proposal 1*

To update the existing HSNO classification system by issuing a new EPA Classification Notice which will incorporate the GHS Revision 7, 2017 by reference ([http://www.unece.org/trans/danger/publi/ghs/ghs\\_rev07/07files\\_e0.html](http://www.unece.org/trans/danger/publi/ghs/ghs_rev07/07files_e0.html)).

#### *Background*

53. The existing HSNO hazard classification system is currently prescribed in:
  - Hazardous Substances (Minimum Degrees of Hazard) Notice 2017
  - Hazardous Substances (Classification) Notice 2017.
54. We propose to update the classification system to the GHS 7 by issuing a new EPA Classification Notice. The new Classification Notice will incorporate the classification criteria from the GHS by reference to the corresponding sections of the GHS 7 document (a link to the GHS 7 book is provided under Proposal 1 above). Where the GHS provides for options, or where we have included categories that are additional to the GHS, these will be set out clearly in the Notice.
55. The current alpha-numeric HSNO numbering system will be discontinued.
56. The Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 will be revoked. Relevant clauses of this notice will be included in the new Classification Notice, for example exclusions for medicines, food, and psychoactive substances. This proposal was consulted on in 2014 with strong support.
57. The new EPA Classification Notice will contain a correlation table to be used in situations where other legislation (e.g. HSW) refers to hazardous substances classified under the current HSNO classification framework.

#### *Rationale*

58. Incorporating the GHS by reference into the Classification Notice will result in a relatively slim-line, succinct notice rather than a large complex document. In addition, it will be easier to update the notice when the GHS is updated.
59. Detailed material in the GHS can be reproduced, if necessary, in guidance material, as is currently done in the EPA's User Guide to Thresholds and Classifications. It should be noted that the GHS is relatively settled in terms of classification content, with few substantive changes between recent editions.

60. Where the GHS 7 allows for regulatory authorities to adopt subcategories for some toxic hazards (HSNO sub-classes 6.4, 6.5, 6.6, 6.7, 6.8), we will not adopt these optional subcategories. This will maintain the current approach under HSNO and is consistent with what was proposed in 2014, which was well received.

### *Discontinue the current HSNO classification framework and alpha-numeric numbering system*

61. The current HSNO classification framework comprises:
- numbered classes indicating the intrinsic hazardous property of a substance
  - numbered subclasses indicating the type of hazard within that class of hazardous property
  - lettered categories indicating the degree of hazard of a substance.
62. This approach was used to codify the GHS hazard categories into the HSNO classification framework. No other country has implemented the GHS with a similar codification system and we therefore propose discontinuing the current HSNO classification framework and numbering system and replacing this with the classification criteria from the GHS 7 by reference.
63. Discontinuing the HSNO numbering system is necessary to achieve full implementation of the GHS and to align New Zealand with our major international trading partners. This is particularly important given that New Zealand is primarily an importer of chemicals and chemical products. It will also introduce a simpler system for both importers/manufacturers and end-users of hazardous substances.
64. The current system will, however, still be referred to in guidance material as it will be important to show how the GHS classification categories align with the outgoing HSNO alpha-numeric classifications, particularly during the transitional period. A correlation table that maps HSNO to GHS classifications will be provided in the relevant EPA Notices, relevant guidance material, and on the EPA website.
65. While there will likely be a need for retraining in the new GHS system, we consider that these one-off costs are offset by the benefits that adopting this approach brings.

### *Transitional provisions*

66. Transitional provisions for compliance with EPA Labelling, Safety Data Sheet, and Packaging Notices, are discussed in Section 6, Proposal 5.

**Question 1**

Do you agree with our proposal to update the HSNO classification system by issuing a new EPA Classification Notice that will incorporate the GHS revision 7, 2017 by reference? Please provide your reasons.

**Question 2**

Do you agree with our proposal to discontinue the current HSNO classification framework and numbering system, noting that the current system will still be referred to in guidance material? If not, please provide your reasons.

**Question 3**

Are you aware of any benefits or costs involved in adopting the GHS 7 that are not outlined in Section 3 of this document?

**Question 4**

Do you have any other comments you would like to make on the proposal to adopt the GHS 7?

## Proposal 2 – Adoption of building blocks from the GHS

### **Proposal 2a**

To not adopt the GHS acute toxicity Category 5 (HSNO 6.1E).

### **Proposal 2b**

To not adopt the GHS skin irritation Category 3 (HSNO 6.3B).

### **Proposal 2c**

To not adopt the GHS aspiration hazard Category 2.

### **Proposal 2d**

To adopt the GHS Acute 1–3 and Chronic 1–4 classification categories for aquatic ecotoxicity (HSNO 9.1A–D).

### *Background*

67. As noted in Section 1 of this document, the hazard classes and categories in the GHS classification system can be seen as building blocks. Regulatory authorities can decide how to apply the various building blocks based on the requirements of their frameworks and audience and in this way adoption of the GHS can vary across industry and jurisdictions.
68. The building blocks that the EPA is proposing to adopt and not adopt are discussed below, along with our rationale.

### *Proposal 2a – Acutely toxic substances*

69. We propose to not adopt the lowest GHS classification category for acute toxicity, i.e. GHS Category 5 (HSNO 6.1E) across all sectors. This proposal is different from the one included in our 2014 consultation, where we proposed to apply this category to consumer products but not workplace chemicals. Submissions on that proposal were mixed, with just less than half the submitters supporting the removal of the classification completely in order to better support international alignment, and reduce complexity.
70. Our reason for changing our proposal at this time is to better align with overseas jurisdictions. Acute toxicity Category 5 has not been adopted in the EU Classification, Labelling and Packaging Regulation (which covers both workplace and consumer chemicals), and has not been adopted in the Australian, Canadian or USA Occupational Safety and Health Administration (OSHA) workplace frameworks. It has also not been adopted in Republic of Korea, Singapore, Malaysia, Philippines, and Indonesia. It has been adopted into certain laws of Japan that regulate lists of specified chemicals but is not included in the National Standard JIS Z 7253 (Hazard communication of chemicals based on GHS-Labeling and Safety Data Sheets). It is also included in national standards in China, but it is unknown whether these are applied to all hazardous substances across all sectors.

71. Retaining this category would mean that it would largely become a New Zealand-only exercise, reducing the value of international alignment that moving to the GHS would otherwise bring. It would also introduce a layer of complexity and confusion that could result if different requirements were applied in different settings. Of note is that the data necessary for this classification is often not readily available, and it will become increasingly less available due to the decrease in animal testing to this level.
72. The proposal to not adopt acute toxicity Category 5 will mean that hazard and precautionary information for this hazard will no longer be required on product labels. However, the level of harm associated with this hazard is considered low, and the potential for harm to result from this reduction in precautionary information on labels is also considered low. Additionally, it is noted that the Labelling Notice currently includes an alternative compliance provision that means products from Australia, USA, Canada or the EU do not need to include label information for this hazard if it is not required by their legislation.
73. Acute toxicity Category 5 does not trigger the requirement for child resistant packaging so there will be no change to the packaging requirements from this proposal.
74. With respect to protecting workers, the HSW (Hazardous Substances) Regulations do not include any specific requirements for 6.1E substances, including in respect of personal protective equipment.
75. Not adopting this category will result in some substances no longer being classified as hazardous under HSNO. The majority of substances will, however, remain hazardous for other endpoints.
76. We value feedback on this proposal to not adopt acute toxicity Category 5 in either workplaces or non-workplaces.

#### *Proposal 2b – Skin irritants*

77. We propose to not adopt the lowest GHS classification category for mild skin irritation, i.e. GHS Category 3 (HSNO 6.3B) across all sectors. This proposal is different from the one included in our 2014 consultation, where we proposed to apply this category to consumer products but not workplace chemicals. Submissions on that proposal were mixed, but the majority of submitters considered that removing the classification completely would better support international alignment, and would reduce complexity and confusion that may occur if different requirements applied in different settings.
78. Our reason for changing our proposal at this time is to better align with overseas jurisdictions. Skin irritation Category 3 has not been adopted in the EU Classification, Labelling and Packaging Regulation (which covers both workplace and consumer chemicals) and has not been adopted in the Australian, Canadian or USA OSHA workplace frameworks. The situation in other countries is the same as is described in paragraph 70.



79. As with acute toxicity above, retaining this category would mean that it would largely become a New Zealand-only exercise, and also introducing a layer of complexity and confusion that could result from different requirements being applied in different settings.
80. The proposal to not adopt skin irritation Category 3 will mean that hazard and precautionary information for this hazard will no longer be required on product labels. However, the level of harm associated with this hazard is considered low, and the potential for harm to result from this reduction in precautionary information on labels is also considered low. Additionally, it is noted that the Labelling Notice currently includes an alternative compliance provision that means products from Australia, USA, Canada or the EU do not need to include label information for this hazard if it is not required by their legislation.
81. Skin irritation Category 3 does not trigger the requirement for child resistant packaging so there will be no change to the packaging requirements from this proposal.
82. With respect to protecting workers, the HSW (Hazardous Substances) Regulations do not include any specific requirements for 6.3B substances, including in respect of personal protective equipment.
83. Not adopting this category will result in some substances no longer being classified as hazardous under HSNO. The majority of substances will, however, remain hazardous for other endpoints.
84. We value feedback on this proposal to not adopt skin irritation Category 3 in either workplaces or non-workplaces.

#### *Proposal 2c – Aspiration hazard*

85. We propose to not adopt the GHS Category 2 for aspiration hazard. This is in line with Australia, USA, Canada and the EU. It is also the same as the proposal we consulted on in 2014.
86. The current HSNO classification framework does not contain a specific classification category or criteria for aspiration hazard. This hazard is currently considered under criteria for 6.1E (GHS acute toxicity Category 5). This is less than ideal as the current assignment of classification 6.1E to aspiration hazard does not provide a direct link to label elements that reflect the more serious effects of aspiration (which may be fatal).
87. The GHS provides two classification categories for aspiration toxicity:
  - Category 1 for “chemicals known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard”
  - Category 2 for “chemicals which cause concern owing to the presumption that they cause human aspiration toxicity hazard”.

#### *Proposal 2d – Substances that are hazardous to the aquatic environment*

88. We are proposing to adopt all seven GHS categories for substances hazardous to the aquatic environment, i.e. GHS Acute 1–3 and Chronic 1–4 (GHS Chapter 4.1/HSNO 9.1A–D).

89. This is a change from our 2014 consultation where we proposed to not adopt Acute 2 and 3 in order to better align with the EU. However, since 2014, a number of jurisdictions have adopted Acute 2 and 3, including China and Japan. We also note that these categories will be captured in Australia following the reforms to the National Industrial Chemicals Notification and Assessment Scheme and the development of the National Standard for Environmental Risk Management of Industrial Chemicals.
90. Following consideration of the options, we now propose to adopt all seven GHS Aquatic toxicity categories, including Acute 2 and 3.

#### **Question 5**

Do you agree with proposal 2a to not adopt the GHS acute toxicity Category 5 (HSNO 6.1E)?  
If not, why not?

#### **Question 6**

Do you agree with proposal 2b to not adopt the GHS skin irritation Category 3 (HSNO 6.3B)?  
If not, why not?

#### **Question 7**

Do you agree with proposal 2c to not adopt the GHS aspiration hazard Category 2? If not, why not?

#### **Question 8**

Do you agree with proposal 2d to adopt all seven GHS categories for substances hazardous to the aquatic environment, i.e. GHS Acute 1– 3 and Chronic 1–4? If not, why not?

#### **Question 9**

Do you have any other comments on the building blocks we have proposed to adopt?

## Proposal 3 – Concentration cut-off values for mixtures under the GHS

### *Proposal 3*

The classification criteria for mixtures contained in the GHS will be incorporated into the EPA Notice by reference. Where optional concentration cut-off values are provided for, we propose that the values as listed in Table 2 will be included in the Classification Notice.

### *Background*

91. The current Classification Notice does not specify concentration cut-off values for the classification of mixtures<sup>1</sup>. These are instead provided for in guidance material published by EPA, including:
  - the User Guide to Thresholds and Classifications under the HSNO Act:  
<https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/Guidance/83fc330b67/thresholds-classification-guidance.pdf>
  - the “Blue Book”:  
<https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/Guidance/aea735e418/Assigning-a-product-to-a-HSNO-approval-the-Blue-Book-2014-edition.pdf>
92. The GHS classification system does specify concentration cut-off values for mixtures containing various hazardous components in several hazard classes. For some classification categories, optional concentration cut-off values are provided for classification, and for triggering labelling and safety data sheet requirements. Regulatory authorities are able to decide which of the optional concentration cut-off values are applied in their jurisdiction.
93. Where optional values are provided for, the concentration cut-off values that we propose to adopt for classification of mixtures are provided in Table 2. These are the lower cut-off values contained in the GHS, which is a change from the approach taken in our 2014 consultation.

### *Rationale*

94. In 2014 we proposed to adopt the higher concentration cut-off values for classification and labelling and the lower cut-off values for compliance with safety data sheet requirements. This was problematic in that HSNO compliance requirements cannot be set for a substance unless it has a HSNO classification.
95. Consequently, we now propose to adopt the lower cut-off values for classification of mixtures in order to maintain fidelity and consistency between the classification framework and compliance requirements of the notices. We note that the lower values have been adopted by USA, Canada and China among others, but also note that other jurisdictions including Australia and the EU

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<sup>1</sup> Note that mixture rules should not generally be the first choice when classifying a mixture. Product data would take precedence where it exists.

have chosen to adopt the higher cut-off values. However, products imported from these two jurisdictions will be covered by the alternative compliance provisions in the Labelling and SDS Notices and therefore no additional compliance costs will be incurred in these cases.

96. The proposed approach essentially maintains the status quo, in that the EPA currently uses the lower concentration cut-off values for classification.

**Table 2: Concentration cut-off values for ingredients that cause classification of a mixture (where optional values are provided in the GHS)**

GHS (HSNO) Classification	Concentration cut-off values for classification of mixture ( $\geq$ %)¹
Respiratory sensitiser Category 1 (6.5A)	0.1
Skin sensitiser Category 1 (6.5B)	0.1
Carcinogen Category 1 (6.7A)	0.1
Carcinogen Category 2 (6.7B)	0.1
Reproductive toxicant Category 1 (6.8A)	0.1
Reproductive toxicant Category 2 (6.8B)	0.1
Effects on or via lactation (6.8C)	0.1
Specific target organ toxicant (single exposure) Category 1 (6.9A)	1.0
Specific target organ toxicant (single exposure) Category 2 (6.9B)	1.0
Specific target organ toxicant (single exposure) Category 3	20
Specific target organ toxicant (repeat exposure) Category 1 (6.9A)	1.0
Specific target organ toxicant (repeat exposure) Category 2 (6.9B)	1.0

Notes:

- 1 These concentration cut-off values are generic values that are applicable to most mixtures and should normally be used. However, if information is available that the hazard of an ingredient will be evident at below these values, the mixture should be classified accordingly. Conversely, data may show that the hazard of an ingredient will not be evident when the ingredient is present at above these generic levels and the mixture may be classified accordingly. Adequate documentation supporting the use of any values other than the listed generic concentration limits should be retained and made available for review on request by the EPA.

**Question 10**

Do you agree with our proposal to adopt the lower level concentration cut-off values for classification as outlined in Table 2 above? If not, please provide your reasons.

**Question 11**

Do you envisage any issues with implementing these values? If so, please outline these issues.

## Proposal 4 – Implement a single classification category for substances that are ecotoxic to the terrestrial environment

### *Proposal 4*

Replace the current HSNO classification categories for terrestrial ecotoxicity (9.2, 9.3 and 9.4) and 9.1D biocides with a classification category for “substances that are ecotoxic to the terrestrial environment”. However, this category will only apply to agrichemicals or related substances, as defined in Appendix 1.

### *Background*

97. When the current HSNO classification framework was implemented in 2001, it was based on a pre-published version of the GHS. New Zealand anticipated the GHS would have hazard categories for terrestrial ecotoxicity and therefore included relevant hazard classifications in the HSNO regulations.
98. Three subclasses of terrestrial ecotoxicity were provided for, which could be applied to all types of hazardous substances covered by the HSNO Act.
  - sub-class 9.2 – ecotoxic to the soil environment
  - sub-class 9.3 – ecotoxic to terrestrial vertebrates
  - sub-class 9.4 – ecotoxic to terrestrial invertebrates
99. However, when the GHS was published in 2003 it did not include classification categories for terrestrial ecotoxicity. Consideration has been given at the UN GHS Sub-Committee of Experts to include classification criteria for these hazards, but to date no consensus has been reached that such criteria are necessary, and no work has been undertaken to develop them.
100. These HSNO subclasses are not included in the EU CLP regulation, the Australian or USA OSHA workplace frameworks, or the Chinese standard.
101. In order to better align internationally, we propose to discontinue the current 9.2, 9.3 and 9.4 subclasses. In its place, we propose to implement a single classification category for substances that are ecotoxic to the terrestrial environment, but to only apply this category to agrichemicals or related substances, as defined in Appendix 1. We do not propose to apply this category to other types of hazardous substances such as industrial and commercial substances.
102. The current HSNO classification framework also provides for classifying substances that are designed for biocidal action, but that do not trigger any other class 9 classification. Such substances are currently assigned a 9.1D classification. We propose to include these substances in the classification category devised for substances ecotoxic to the terrestrial environment.

103. We do not propose to set any specific classification criteria for substances classified in this category. Risk assessments will be carried out on agrichemicals or related substances (as defined in Appendix 1) and controls assigned based on the outcome of the risk assessment.

### *Rationale*

104. Although the GHS does not include categories for terrestrial ecotoxicity, these HSNO subclasses are an important part of the HSNO classification framework. They are used to classify substances intended for widespread use in the environment, such as agrichemicals, which subsequently allows the setting of controls to protect non-target organisms such as birds and bees.
105. The criteria for these HSNO subclasses were derived from criteria used by the USA Environmental Protection Agency (pre-2000) to classify pesticidal products. These classifications are of limited relevance to industrial chemical products and consumer products (other than pesticides). Additionally, there is very limited data available internationally in respect of these hazard endpoints for industrial or consumer products. Our proposal is therefore to limit application of this category to agrichemicals or related substances, as defined in Appendix 1.
106. As noted above, we do not propose any specific classification criteria for substances classified in this category. One of the reasons for this is that the current criteria to classify these subclasses do not address all ecotoxicity endpoints currently used in international risk assessment methodologies for pesticides. Such endpoints include reproductive toxicity to birds, chronic toxicity to honey bees, honey bee brood feeding test, sub-lethal effects on honey bees (such as behavioural and reproductive effects), toxicity to other non-target arthropods, and sub-lethal or reproductive toxicity to earthworms.
107. These international risk assessment methodologies typically do not use ecotoxicity endpoints to establish hazard classification systems as is currently done under HSNO. Instead, the ecotoxicity and environmental fate data and exposure assessment information provided in applications is used to undertake targeted risk assessments. The type and extent of hazard data and exposure information required depends on the nature and manner of use of a pesticidal substance – for example, whether it is a plant protection product, a seed treatment product, a rodenticide, or whether the substance is sprayed or applied as granules.
108. Replacing the current HSNO classification categories for terrestrial ecotoxicity with a more generally defined category would allow risk assessments to be conducted as appropriate. With this type of approach, it is not necessary to have classification criteria in place in order to assign controls. Instead, controls will be assigned, primarily from a standard tool-box, based on the outcome of the risk assessment. As noted above, these risk assessments would only be carried out for agrichemicals or related substances as defined in Appendix 1.
109. Also of relevance is that the EPA Labelling Notice includes specific labelling requirements for substances classified for terrestrial ecotoxicity hazards. We propose to use a performance-based approach (an approach that sets outcomes rather than mandatory rules) for label information for these types of hazards, and will provide guidance on applicable label wording.

Similarly, information on terrestrial ecotoxicity hazards will continue to need to be provided in section 12 of the Safety Data Sheet (ecological information).

**Question 12**

Do you agree with our proposal to replace the current HSNO subclasses for terrestrial ecotoxicity (9.2, 9.3 and 9.4) and 9.1D biocides with a single category “substances that are ecotoxic to the terrestrial environment”, and for that category to be applied only to agrichemicals or related substances, as defined in Appendix 1?

**Question 13**

Can you envisage any issues with implementing this proposal? If so, please outline these.



## 6. Consequential amendments to other EPA Notices

### *Proposal 5*

To include an additional two year transitional period in the Labelling, Safety Data Sheet, and Packaging Notices, on top of the four year transitional period currently provided for that is due to expire in December 2021.

110. The HSNO classification system is currently implemented via two EPA Notices – the Minimum Degrees of Hazard Notice and the Classification Notice. Implementing the GHS 7 will be achieved by issuing a new Classification Notice. The Minimum Degrees of Hazard Notice will be revoked.
111. A number of consequential changes will also need to be made to several other EPA Notices. These primarily involve replacing occurrences of the existing HSNO classifications with GHS classifications. A summary of these changes is provided in Table 3 below.

**Table 3: Summary of consequential amendments required for other EPA Notices**

EPA Notice	Summary of changes
Labelling Notice	<ul style="list-style-type: none"> <li>Minor changes, primarily replacing occurrences of the existing HSNO classifications with GHS classifications.</li> <li>Minor technical amendments to:               <ul style="list-style-type: none"> <li>reflect GHS 7 becoming the new HSNO classification system</li> <li>reflect the new terrestrial ecotoxicity category</li> <li>improve consistency and readability.</li> </ul> </li> <li>Changes to transitional provisions.</li> </ul>
Safety Data Sheet Notice	<ul style="list-style-type: none"> <li>Minor changes, primarily replacing occurrences of the existing HSNO classifications with GHS classifications.</li> <li>Minor technical amendments to:               <ul style="list-style-type: none"> <li>reflect GHS 7 becoming the new HSNO classification system</li> <li>improve consistency and readability.</li> </ul> </li> <li>Changes to transitional provisions.</li> </ul>
Packaging Notice	<ul style="list-style-type: none"> <li>Minor changes, primarily replacing occurrences of the existing HSNO classifications with GHS classifications.</li> <li>Changes to transitional provisions.</li> </ul>

EPA Notice	Summary of changes
Disposal Notice	Minor changes, primarily replacing occurrences of the existing HSNO classifications with GHS classifications.
Hazardous Property Controls Notice	Minor changes, primarily replacing occurrences of the existing HSNO classifications with GHS classifications.
Importers and Manufacturers Notice	Minor changes.
Enforcement Officer Qualifications Notice	No changes required.
Forms and Information Notice	No changes required

## Proposal 5 - Transitional provisions

112. We are proposing an additional two year transitional period in the Labelling, Safety Data Sheet, and Packaging Notices, on top of the four year transitional period currently provided for that is due to expire in December 2021. This should allow industry time to make any necessary changes to labels, safety data sheets and packaging as a result of re-issuing approvals and updating to the GHS 7. These transitional periods will be included in the Labelling Notice, Safety Data Sheet Notice and Packaging Notice that are currently based on the GHS 5.
113. Of note is that the Labelling and Safety Data Sheet Notices both include alternative compliance provisions that allow compliance with other versions of the GHS as adopted by the EU, Australia, Canada or USA<sup>2</sup>.

### Question 14

Do you consider an additional two year transitional period for labelling, safety data sheet, and packaging requirements is adequate? Please provide your reasons.

### Question 15

Do you have any comments relating to the proposed consequential amendments, including the revocation of the Minimum Degrees of Hazard Notice?

<sup>2</sup> It is unlikely that Brexit will require us to extend the existing alternative compliance provisions to include the United Kingdom, but we will keep a watching brief on this.

## 7. Preview of future consultation to update HSNO approvals

114. Should the proposals in this document proceed, a consequence of updating the classification system to the GHS 7 is that the EPA will need to update all HSNO approvals (including group standards) to convert their HSNO classifications to GHS classifications.
115. As part of this work, we are planning to revoke a large number of individual approvals (approximately 5,600) as they are covered by group standard approvals, i.e. their individual approval is essentially redundant.
116. We are currently in the process of scoping and planning this part of the project. This will involve undertaking a second consultation exercise in the first quarter of 2020 to request feedback on:
  - proposed GHS classifications for all individual approvals (derived from their existing HSNO classifications)
  - the list of individual substance approvals that we plan to revoke and the name of the group standard(s) they could be covered by.

### *Process to update approvals*

117. There are essentially three different types of substance approvals that need to be updated.
  - Individual approvals that were approved or reassessed before 1 December 2017. This was the date that many workplace controls were transferred out of HSNO to the new HSW (Hazardous Substances) Regulations.
  - New approvals approved or reassessed under Part 5 of the Act after 1 December 2017.
  - Group standards.
118. Further information on these three approval types is provided below.

### *Individual approvals approved or reassessed before 1 December 2017*

119. There are approximately 9,000 individual approvals that were approved or reassessed before 1 December 2017. These approvals need to be either revoked (if they are covered by one or more group standards) or reissued to:
  - update their classification to the GHS 7
  - bring their controls into line with the new health and safety regime that resulted in many HSNO workplace controls being transferred into the new HSW legislation
  - require compliance with the EPA Notices rather than the now revoked HSNO Regulations.
120. The legal mechanism to re-issue approvals is clause 4 of Schedule 7 of the Act.

*Part 5 approvals approved or reassessed after 1 December 2017*

- 121. Part 5 substances approved after 1 December 2017 need to comply with the new EPA Notices immediately upon their approval.
- 122. However they were classified according to the existing HSNO classification system, and therefore need to be reassessed to convert their HSNO classifications to GHS classifications when we implement GHS 7.
- 123. We estimate there will be approximately 300 of these approvals by the time we implement GHS 7 (mid-2021).
- 124. The legal mechanism to apply the GHS classification system to these approvals is via a modified reassessment as provided by section 63C of the HSNO Act.

*Group standards*

- 125. 208 group standards have been re-issued to bring their controls into line with the new health and safety regime, i.e. they are required to comply with the new EPA Notices rather than the old HSNO Regulations (notwithstanding that some notices include a transitional period).
- 126. However, the re-issued group standards still refer to the existing HSNO classification system, and therefore need to be amended to include the GHS classifications rather than HSNO classifications.
- 127. The legal mechanism to achieve this is section 96B(4) of the HSNO Act.

## 8. Amendments to other legislation

128. There is a range of legislation (including subsidiary legislation) that refers to hazardous substances as defined in the HSNO Act. Examples include the Health and Safety at Work legislation and the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012. As such, there will be legislative impacts from adopting the GHS classification system beyond just the HSNO Act and EPA Notices.

### *Health and Safety at Work Act*

129. The definition of a hazardous substance in the HSW Act is the same as under section 2(1) of the HSNO Act. Sections 212(2) and (3) of the HSW Act have the effect that if the EPA replaces its classification system, regulations made under section 212 may be made based on the existing classification system for a period of five years after the new Classification Notice is issued.
130. The definition of a hazardous substance in the HSW (Hazardous Substances) Regulations 2017 does not, however, include ecotoxic hazards, food, or medicines. Regulation 6 states that the alphanumeric hazard classifications refer to classes and subclasses as set out in the EPA Classification Notice.
131. The HSW (Major Hazard Facilities) Regulations 2016 refer to substances based on their HSNO classification which is defined as meaning the classification under the classification system described in the Hazardous Substances (Classification) Notice 2017. They also refer to substances by their GHS classification which is referenced to the 5th edition of the GHS. However, the GHS classification is noted as “for information only”.
132. The Ministry of Business, Innovation and Employment (MBIE) are planning to commence a review of the HSW (Hazardous Substances) Regulations in late 2019. This review could include updating these regulations to replace HSNO numbering with GHS descriptors. If this update has not been completed when the EPA implements the GHS 7 (planned for mid-2021), a correlation table could be utilised to help industry navigate between the two classification systems. We will continue to engage with MBIE over the course of both projects to ensure this work continues to progress in tandem.

## Appendix 1. Glossary of Terms

### **Agrichemical or related substance means—**

- (a) any hazardous substance used or intended for use in the direct management of plants and animals, or to be applied to the land, place, or water on or in which the plants and animals are managed, for the purposes of—
  - (i) managing or eradicating pests, including vertebrate pests; or
  - (ii) maintaining, promoting, or regulating plant or animal health, productivity, performance or reproduction; or
  - (iii) enhancing the effectiveness of a substance used for the treatment of plants and animals
- (b) and for the avoidance of doubt includes—
  - (i) veterinary medicines, pesticide adjuvants, fertilizers, plant growth regulators, household use pesticides.

**Aspiration hazard** results from the aspiration of a substance, such as a hydrocarbon liquid, which disrupts the lung membrane integrity causing chemical pneumonia, varying degrees of pulmonary injury or death.

**Chemically unstable gases** are flammable gases that are able to react explosively even in the absence of air or oxygen.

**Dangerous goods** are substances that when transported are a risk to health, safety, property or the environment.

**Desensitised explosives** are solid or liquid explosive substances or mixtures which are phlegmatised to suppress their explosive properties in such a manner that they do not mass explode and do not burn too rapidly and therefore may be exempted from the hazard class

**Ecotoxic to the terrestrial environment** means a substance that is ecotoxic to —

- (a) soil organisms; or
- (b) terrestrial vertebrates; or
- (c) terrestrial invertebrates

**Gases under pressure** are gases that are contained in a receptacle at a pressure of 200kPa (gauge) or more, or which are liquefied or liquefied and refrigerated. The GHS has four groups – compressed gases, liquefied gases, refrigerated liquefied gases and dissolved gases.

**GHS:** United Nations Globally Harmonized System of Classification and Labelling of Chemicals.

**IUCLID** (International Uniform Chemical Information Database): IUCLID is a database that captures, stores, maintains and exchanges data on intrinsic and hazard properties of chemical substances. IUCLID is distributed free of charge and is especially useful to chemical industry companies and to government authorities.

**Pyrophoric** means a substance liable to ignite spontaneously on exposure to air.

**Respiratory tract irritation** refers to a substance that impairs respiratory function, with symptoms such as cough, pain, choking, and breathing difficulties.

**Specific target organ toxicity** refers to a substance that produces specific target organ toxicity/systemic effects that are not specifically addressed elsewhere in the GHS. All significant health effects that can impair function, both reversible and irreversible, following single exposure or repeated exposure are included.

## Appendix 2. Draft Classification Notice



# Hazardous Substances (Classification) Notice 2019

This notice is issued by the Environmental Protection Authority (**the Authority**) under section 74 of the Hazardous Substances and New Organisms Act 1996 (**the Act**). It is issued in accordance with section 76C of the Act, having had regard to the matters specified in section 76C(2).

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*Administrative information: Date of notification in Gazette: .....*

## Objective of notice

The purpose of this notice is to replace the classification system for hazardous substances.

## Extent of consultation

[To be completed after consultation].

## Documents incorporated by reference

Information on how to access material incorporated by reference in this notice is available on the EPA website.

Documents that are incorporated by reference in this notice are also available, on request, for inspection free of charge during normal business hours at the head office of the Authority.

## Further information about EPA notices

EPA notices are tertiary instruments that are administered by the Authority. They are subject to the Legislation Act 2012 (the **Legislation Act**) and are classed as disallowable instruments. This means that the notice must be tabled in the House of Representatives and the House of Representatives may, by resolution, disallow the notice. The Regulations Review Committee is the select committee responsible for considering instruments such as this notice under the Legislation Act.

# Part A General

## 1. Title

This is the Hazardous Substances (Classification) Notice 2019.

## 2. Commencement

This notice comes into force on xxx.

## 3. Application

This notice applies for the purposes of the classification of hazardous substances for the purposes of —

- (a) this Act, any regulations, EPA notices or group standards made under the Act; and
- (b) any rule of law that relies on the classification system for hazardous substances under the Act or as established under an EPA notice.

## 4. Definitions

- (1) In this notice, unless the context otherwise requires—

**Act** means the Hazardous Substances and New Organisms Act

**approval** means an approval for a hazardous substance given under Part 5 of the Act

**deemed approval** means an approval for a hazardous substance or group of hazardous substances deemed to have been given under section 29 by—

- (a) the Hazardous Substances (Fireworks, Safety Ammunition, and Other Explosives Transfer) Regulations 2002; or
- (b) a notice issued under section 160A that is in force immediately before the commencement of Schedule 7 of the Act

**ecotoxic to the terrestrial environment** means a substance that is ecotoxic to—

- (a) soil organisms; or
- (b) terrestrial vertebrates; or
- (c) terrestrial invertebrates

**gas** has the same meaning as in the GHS

**hazardous substance** has the same meaning as in the Act

**GHS** means the Globally Harmonised System of Classification and Labelling of Chemicals, Seventh revised edition, 2017, published by the United Nations, as modified under Schedule 2 of this notice

**liquid** has the same meaning as in the GHS

**mixture**, means a combination of, or a solution composed of, 2 or more substances that do not react with each other

**organism** has the same meaning as in the Act

**solid** means a substance that is neither a liquid nor a gas

**UN Model Regulations** means the 20<sup>th</sup> revised edition of the Recommendations on the Transport of Dangerous Goods Model Regulations, published by the United Nations, 2013

- (2) Any term of expression that is defined in the Act and used, but not defined in this notice has the same meaning as in the Act.

## Part B Substances that are not hazardous substances

### 5. Minimum degrees of hazard

In respect of a substance classified in accordance with the GHS, an intrinsic property does not result in a substance being hazardous if the substance does not meet the minimum degrees of hazard required to classify the substance in respect of that property.

### 6. Exception relating to medicines

- (1) A medicine is not hazardous for the purposes of the Act unless an applicable approval or deemed approval is in place immediately before the commencement of this notice.
- (2) Despite subclause (1), a medicine must be treated as hazardous if it can be classified as a hazardous substance under the hazard classification system described in this notice and—
- (a) it is a substance to which section 3(1)(b)(i) of the Medicines Act 1981 applies; or
  - (b) an application is made to register that medicine as a trade name product under the Agricultural Compounds and Veterinary Medicines Act 1997.
- (3) In this clause, medicine has the same meaning as in section 3(1) of the Medicines Act 1981, except that it does not include a gas contained at a pressure greater than 170 kPa in a container larger than 100 ml, at any time after that gas becomes so contained and before the time the gas is first administered to a person for a therapeutic purpose.

### 7. Exception relating to food

- (1) A food is not hazardous for the purposes of the Act, unless an applicable approval or a deemed approval is in place immediately before the commencement of this notice.

- (2) In this clause,—

**food** has the same meaning as in section 9 of the Food Act 2014, except that it does not include a food additive if that food additive has not been mixed with or added to any other food or drink

**food additive** means a substance added to food and regulated under an adopted joint food standard as defined in the Food Act 2014.

## 8. Exception relating to psychoactive substances

- (1) A psychoactive substance is not hazardous for the purposes of the Act if the substance —

- (a) is an approved product; or
- (b) is able to be classified as a hazardous substance under the hazard classification system described in this notice by reason only of its psychoactive properties.

- (2) In this clause,—

**approved product** has the same meaning as in section 8 of the Psychoactive Substances Act 2013

**psychoactive properties**, in relation to a substance, means properties that make the substance capable of inducing a psychoactive effect (by any means) in an individual who uses the substance

**psychoactive substance** has the same meaning as in section 9 of the Psychoactive Substances Act 2013.

## Part C Classification system

### 9. Classification system

The classification system for hazardous substances is the system described in clauses 10 to 15.

### 10. Hazardous substances classifications under GHS

- (1) For the purposes of clause 9, the classes and categories of hazardous substances in the GHS are part of the classification system.
- (2) A hazardous substance is correctly classified within its class and category if it is classified in accordance with the GHS, as varied in accordance with clauses 14 and 15.
- (3) For the purpose of subclause (2)—
  - (a) the definitions in the GHS apply;
  - (b) however, to the extent of any inconsistency with a provision in this notice, the provisions of this notice prevail.
- (4) Despite subclauses (1) and (2), the following classes or categories in the GHS are not part of the classification system:
  - (a) acute toxicity (oral), category 5:
  - (b) acute toxicity (dermal) category 5:
  - (c) acute toxicity (inhalation), category 5:
  - (c) skin corrosion/irritation, category 3:
  - (d) aspiration hazard, category 2:
  - (e) hazardous to the ozone layer.
- (5) The GHS category serious eye damage/eye irritation, category 2 is part of the classification system, however—
  - (a) the subcategories A and B are not adopted;
  - (b) substances that would fall into those subcategories are part of category 2.

### 11 Gases under pressure

The following classifications apply for the purpose of establishing classifications for gases under pressure under section 74(c), whether or not the gases are intrinsically hazardous:

- (a) gases under pressure (as provided for in the GHS)
- (b) aerosol category 3 (as provided for in the GHS).

## **12. Compatibility groups for explosives form part of the classification system**

- (1) Compatibility groups for the class explosives form part of the classification system.
- (2) For the purposes of subclause (1)—
  - (a) class 1 explosives in the UN Model Regulations equate with the class explosives in the GHS; and
  - (b) a division within class 1 in the UN Model Regulations equates with the corresponding division in the class explosives in the GHS; and
  - (c) the compatibility groupings relating to a division in the UN Model Regulations apply to the corresponding division within the class explosives established under this notice by reference to the GHS.

## **13. Multiplying factors for mixture ingredients classified for aquatic toxicity, categories acute 1 or chronic 1**

For the avoidance of doubt, when using the summation method described in Part 4 of the GHS to classify mixtures containing ingredients that are classified as hazardous to the aquatic environment, Acute 1 or Chronic 1, multiplying factors must be used in accordance with the provisions of Part 4.1.3.5.5.5 of the GHS.

## **14. Classifications for substances ecotoxic to the terrestrial environment**

- (1) A substance that is ecotoxic to the terrestrial environment is classified as a hazardous substance if it is an agrichemical or related substance.
- (2) In this clause, agrichemical or related substance means—
  - (a) any hazardous substance used or intended for use in the direct management of plants and animals, or to be applied to the land, place, or water on or in which the plants and animals are managed, for the purposes of—
    - (i) managing or eradicating pests, including vertebrate pests; or
    - (ii) maintaining, promoting, or regulating plant or animal health, productivity, performance or reproduction; or
    - (iii) enhancing the effectiveness of a substance used for the treatment of plants and animals; and
  - (b) for the avoidance of doubt includes veterinary medicines, pesticide adjuvants, fertilisers, plant growth regulators, and domestic pesticides.



## 15. Classification of mixtures

Where a hazardous substance that is described in clause 10 is a mixture, the criteria for classifying the mixture are—

- (a) as set out in the GHS; or
- (b) in the case of a hazardous substance classified in the GHS which is described in Schedule 2, in accordance with the tables in Schedule 1.

## Part D: Savings

### 16. Correlations in classification system where other laws reference existing HSNO classifications

- (1) This clause applies for the purpose of any enactment or rule of law that refers to a particular hazardous substance classification under the Act. For the purposes of enactment or rule of law that refers to a hazardous substance classification under the classification system that applied immediately before the commencement of this notice—
  - (a) a reference to an existing HSNO classification may be treated as a reference to an equivalent GHS classification as provided in the correlation table in Schedule 2; and
  - (b) a reference to HSNO classes 1, 2, 3, 4, 5, 6, 8, or 9 or to particular subclasses (for example, 6.1) must be treated as a reference to all equivalent GHS classifications in that class or subclass.
- (2) Nothing in this clause—
  - (a) purports to limit section 212(3) of the Health and Safety at Work Act; or
  - (b) limits the ability of any person to rely on a hazardous substance having a GHS classification that the EPA gives to the substance as part of—
    - (i) approving the substance under Part 5 of the Act; or
    - (ii) amending and reissuing an approval for the substance under clause 4 of Schedule 7 of the Act.

- (3) In this clause—

**existing HSNO classification** means the relevant classification shown in column 1 of the correlation tables in Schedule 2 that applies immediately before the commencement of this clause

**equivalent GHS classification**, in relation to an existing HSNO classification, means the relevant classification in column 2 of the correlation tables in Schedule 2.

# Schedule 1. Replacement of certain GHS tables relating to mixtures

Clause 15

## Purpose of this Schedule

The tables in this Schedule replace some of the tables in the GHS.

1. The following table sets out the cut-off values/concentration limits of ingredients of a mixture classified as either a respiratory sensitiser or a skin sensitiser that would trigger classification of the mixture.

**Table 1: Classification of mixtures containing respiratory or skin sensitisers**

Ingredient classification	Mixture classification		
	Respiratory sensitiser Category 1		Skin sensitiser Category 1
	Solid/liquid	Gas	All physical states
Respiratory sensitiser Category 1	≥ 0.1%	≥ 0.1%	
Skin sensitiser Category 1			≥ 0.1%

Note: Table 1 replaces Table 3.4.5 in the GHS

2. The following table sets out the cut-off values/concentration limits of ingredients of a mixture classified as a carcinogen that would trigger classification of the mixture.

**Table 2: Classification of mixtures containing carcinogens**

Ingredient classification	Mixture classification	
	Category 1 carcinogen	Category 2 carcinogen
Category 1 carcinogen	≥ 0.1%	
Category 2 carcinogen		≥ 0.1%

Note: Table 2 replaces Table 3.6.1 in the GHS

3. The following table sets out the cut-off values/concentration limits of ingredients of a mixture classified as a reproductive toxicant or for effects on or via lactation that would trigger classification of the mixture.

**Table 3: Classification of mixtures containing reproductive toxicants**

Ingredient classification		Mixture classification	
	Category 1 reproductive toxicant	Category 2 Reproductive toxicant	Additional category for effects on or via lactation
Category 1 reproductive toxicant	≥ 0.1%		
Category 2 reproductive toxicant		≥ 0.1%	
Additional category for effects on or via lactation			≥ 0.1%

Note: Table 3 replaces Table 3.7.1 in the GHS

4. The following table sets out the cut-off values/concentration limits of ingredients of a mixture classified as a specific target organ toxicant (single exposure) that would trigger classification of the mixture.

**Table 4: Classification of mixtures containing specific target organ toxicants (single exposure)**

Ingredient classification		Mixture classification	
		Category 1 STOT	Category 2 STOT
Category 1 specific target organ toxicant		≥ 10%	1.0 ≤ ingredient < 10%
Category 2 specific target organ toxicant			≥ 1.0 %

Note: Table 4 replaces Table 3.8.2 in the GHS

5. The following table sets out the cut-off values/concentration limits of ingredients of a mixture classified as a specific target organ toxicant (repeated exposure) that would trigger classification of a mixture.

**Table 5: Classification of mixtures containing specific target organ toxicants (repeated exposure)**

Ingredient classification	Mixture classification	
	Category 1 STOT	Category 2 STOT
Category 1 specific target organ toxicant	$\geq 10\%$	$1.0 \leq \text{ingredient} < 10\%$
Category 2 specific target organ toxicant		$\geq 1.0\%$

Note: Table 5 replaces Table 3.9.3 in the GHS

## Schedule 2. Correlation tables

Clause 16

### Physical hazards

Column 1 Existing HSNO Classification	Column 2 Equivalent GHS classification
<b>Explosives</b>	
no HSNO equivalent	Unstable explosive
1.1 (A, B, C, D, E, F, G, J, L)	Explosive division 1.1
1.2 (B, C, D, E, F, G, H, J, K, L)	Explosive division 1.2
1.3 (C, F, G, H, J, K, L)	Explosive division 1.3
1.4 (B, C, D, E, F, G, S)	Explosive division 1.4
1.5D	Explosive division 1.5
1.6N	Explosive division 1.6
<b>Flammable gases</b>	
2.1.1A	Flammable gas Category 1A
	Flammable gas Category 1A pyrophoric gas
	Flammable gas Category 1A chemically unstable gas A
	Flammable gas Category 1A chemically unstable gas B
	Flammable gas Category 1B
	<i>Note: Some flammable gases Category 1A may be additionally classified as pyrophoric and/or chemically unstable.</i>
2.1.1B	Flammable gas Category 2
<b>Aerosols</b>	
2.1.2A (flammable aerosol)	Aerosol Category 1
	Aerosol Category 2
	Aerosol Category 3

Column 1 Existing HSNO Classification	Column 2 Equivalent GHS classification
<b>Gases under pressure</b>	
	Compressed gas Liquefied gas Refrigerated liquefied gas Dissolved gas
<b>Flammable liquids</b>	
3.1A	Flammable liquid Category 1
3.1B	Flammable liquid Category 2
3.1C	Flammable liquid Category 3
3.1D	Flammable liquid Category 4
<b>Desensitised explosives</b>	
3.2A (liquid) and 4.1.3A (solid) 3.2B (liquid) and 4.1.3B (solid) 3.2C (liquid) and 4.1.3C (solid)	Desensitised explosive Category 1 Desensitised explosive Category 2 Desensitised explosive Category 3 Desensitised explosive Category 4
<b>Flammable solids</b>	
4.1.1A	Flammable solid Category 1
4.1.1B	Flammable solid Category 2
<b>Self-reactive substances and mixtures</b>	
4.1.2A	Self-reactive substance or mixture Type A
4.1.2B	Self-reactive substance or mixture Type B
4.1.2C	Self-reactive substance or mixture Type C
4.1.2D	Self-reactive substance or mixture Type D
4.1.2E	Self-reactive substance or mixture Type E

Column 1 Existing HSNO Classification	Column 2 Equivalent GHS classification
4.1.2F	Self-reactive substance or mixture Type F
4.1.2G	Self-reactive substance or mixture Type G
<b>Pyrophoric liquids, pyrophoric solids, self-heating substances and mixtures</b>	
4.2A	Pyrophoric liquid Category 1, or Pyrophoric solid Category 1
4.2B	Self-heating substance or mixture Category 1
4.2C	Self-heating substance or mixture Category 2
<b>Substances and mixtures which, in contact with water, emit flammable gases</b>	
4.3A	Substance or mixture which, in contact with water, emits flammable gas Category 1
4.3B	Substance or mixture which, in contact with water, emits flammable gas Category 2
4.3C	Substance or mixture which, in contact with water, emits flammable gas Category 3
<b>Oxidising substances</b>	
5.1.1A	Oxidising liquid Category 1, or Oxidising solid Category 1
5.1.1B	Oxidising liquid Category 2, or Oxidising solid Category 2
5.1.1C	Oxidising liquid Category 3, or Oxidising solid Category 3
5.1.2A	Oxidising gas Category 1
<b>Organic peroxides</b>	
5.2A	Organic peroxide Type A
5.2B	Organic peroxide Type B
5.2C	Organic peroxide Type C
5.2D	Organic peroxide Type D

Column 1 Existing HSNO Classification	Column 2 Equivalent GHS classification
5.2E	Organic peroxide Type E
5.2F	Organic peroxide Type F
5.2G	Organic peroxide Type G
<b>Corrosive to metals</b>	
8.1A	Corrosive to metals Category 1



## Health hazards

Column 1 Existing HSNO Classification	Column 2 Equivalent GHS Classification
<b>Acute toxicity</b>	
6.1A (oral, dermal, inhalation)	Acute toxicity oral Category 1 Acute toxicity dermal Category 1 Acute toxicity inhalation Category 1
6.1B (oral, dermal, inhalation)	Acute toxicity oral Category 2 Acute toxicity dermal Category 2 Acute toxicity inhalation Category 2
6.1C (oral, dermal, inhalation)	Acute toxicity oral Category 3 Acute toxicity dermal Category 3 Acute toxicity inhalation Category 3
6.1D (oral, dermal, inhalation)	Acute toxicity oral Category 4 Acute toxicity dermal Category 4 Acute toxicity inhalation Category 4
6.1E (oral, dermal, inhalation)	Acute toxicity Category 5 is not adopted
<b>Aspiration hazard</b>	
6.1E (aspiration hazard)	Aspiration hazard Category 1 Aspiration hazard Category 2 is not adopted
<b>Respiratory tract irritation</b>	
6.1E (respiratory tract irritant)	Specific target organ toxicity single exposure Category 3 respiratory tract irritation
<b>Skin corrosion/irritation</b>	
8.2A	Skin corrosion Category 1A
8.2B	Skin corrosion Category 1B
8.2C	Skin corrosion Category 1C
6.3A	Skin irritation Category 2
6.3B	Skin irritation Category 3 is not adopted
<b>Serious eye damage/eye irritation</b>	
8.3A	Serious eye damage Category 1

Column 1 Existing HSNO Classification	Column 2 Equivalent GHS Classification
6.4A	Eye irritation Category 2  <i>Note: The GHS allows for a split within Category 2 to provide 2A and 2B that is not adopted in the EPA implementation of GHS.</i>
<b>Respiratory or skin sensitisation</b>	
6.5A	Respiratory sensitisation Category 1
6.5B	Contact sensitisation Category 1
<b>Germ cell mutagenicity</b>	
6.6A	Germ cell mutagenicity Category 1
6.6B	Germ cell mutagenicity Category 2
<b>Carcinogenicity</b>	
6.7A	Carcinogenicity Category 1
6.7B	Carcinogenicity Category 2
<b>Reproductive toxicity</b>	
6.8A	Reproductive toxicity Category 1
6.8B	Reproductive toxicity Category 2
6.8C (additional effects on or via lactation)	Effects on or via lactation
<b>Specific target organ toxicity</b>	
6.9A (oral, dermal, inhalation)	Specific target organ toxicity single exposure Category 1 Specific target organ toxicity repeated exposure Category 1
6.9B (oral, dermal, inhalation)	Specific target organ toxicity single exposure Category 2 Specific target organ toxicity repeated exposure Category 2
6.9B (narcotic effects)	Specific target organ toxicity single exposure Category 3 narcotic effects

## Environmental hazards

Column 1 Existing HSNO Classification	Column 2 Equivalent GHS Classification
<b>Hazardous to the aquatic environment</b>	
9.1A	Hazardous to the aquatic environment Category acute 1  Hazardous to the aquatic environment Category chronic 1
9.1B	Hazardous to the aquatic environment Category acute 2;  and  Hazardous to the aquatic environment Category chronic 2
9.1C	Hazardous to the aquatic environment Category acute 3  and  Hazardous to the aquatic environment Category chronic 3
9.1D	Hazardous to the aquatic environment Category acute 2  Hazardous to the aquatic environment Category acute 3  Hazardous to the aquatic environment Category chronic 4
<b>Ecotoxic to the terrestrial environment</b>	
9.2A, 9.2B, 9.2C, 9.2D 9.3A, 9.3B, 9.3C 9.4A, 9.4B, 9.4C	These classifications are not included in GHS.  <i>Note: The EPA has adopted a non-GHS classification to classify substances which are ecotoxic to the terrestrial environment as provided for in clause 14 of the Classification Notice.</i>

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