



DECISION

19 August 2020

Summary

Substance	NPD 100 PLUS
Application code	APP204043
Application type	To import or manufacture for release any hazardous substance under Section 28 of the Hazardous Substances and New Organisms Act 1996 (“the Act”)
Applicant	Nelson Petroleum Distributors Limited
Purpose of the application	To manufacture NPD 100 PLUS for release
Date application formally received	9 July 2020
Consideration date	19 August 2020
Considered by	The Acting General Manager ¹ of the Hazardous Substances and New Organisms group of the Environmental Protection Authority (“the EPA”)
Decision	Approved with controls
Approval code	HSR101436
Hazard classifications	3.1A, 6.1E (oral), 6.1E (aspiration), 6.3B, 6.7B, 6.9B (oral, dermal, inhalation), 9.1B, 9.3C

¹ The Acting General Manager of the HSNO group of the EPA has made the decision on this application under delegated authority in accordance with section 19 of the Act.

1. Substance

- 1.1. NPD 100 PLUS is a pre-mixed fuel containing 2% to 3% anti-knock additives², plus other components, including the primary component, petrol (unleaded). It is intended for use as a fuel in domestic and commercial engines and vehicles.
- 1.2. Transfer and use of NPD 100 PLUS will occur in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment.
- 1.3. As the substance is a fuel and therefore does not contain an 'active ingredient', the term 'primary component' has been used instead.

2. Process and consultation

Application receipt

- 2.1. The application was formally received on 9 July 2020 under section 28 of the Act.

Information available for consideration

- 2.2. The information available for the consideration comprised:
 - the application form
 - the confidential appendix to the application
 - the EPA staff advice memorandum/science memorandum.
- 2.3. There was sufficient information to assess the application.

Public notification

- 2.4. This application was not publicly notified under section 53(2) of the Act because it was unlikely that there would be significant public interest in the application.

Notification to government departments

- 2.5. In line with section 53(4) of the Act, the application was not publicly notified under section 53(2) of the Act, however, the following government department was notified of the application for NPD 100 PLUS on 9 July 2020: the Ministry of Health (MoH). No comments were received.
- 2.6. WorkSafe New Zealand (WorkSafe) was also notified of the application on 9 July 2020, in order to remove a tracking requirement under Additional Substances that Do Not Require Tracking Safe Work Instrument (SWI) for the substance, related to the Health and Safety at Work Act 2015 (HSW Act) and Health and Safety at Work (Hazardous Substances) Regulations 2017 (HSW (HS) Regulations).

² An anti-knock additive is used to improve the fuel's octane rating, which suppresses the "knocking" in the engine. Knocking, sometimes known as 'pinking' is when fuel is unable to burn in a stable way, detonating, causing the characteristic knocking sound and potentially damaging the engine.

Legislative criteria for the application

- 2.7. The application was considered under section 29 of the Act, taking into account other relevant sections of the Act, the EPA Notices, the HSW Act, the HSW (HS) Regulations and the Hazardous Substances and New Organisms (Methodology) Order 1998.

3. Hazardous properties of NPD 100 PLUS

- 3.1. The hazard classifications of NPD 100 PLUS were determined based on the information provided by the applicant, information on the individual components of NPD 100 PLUS and the mixture rules.
- 3.2. The classifications that have been applied to NPD 100 PLUS are slightly different to those submitted by the applicant (Table 1). The difference in classifications may have arisen due to different interpretations of the mixture classification rules by the applicant.

Table 1: Hazard classifications of NPD 100 PLUS

Hazard	Applicant classification	EPA classification
Flammable liquid	3.1A	3.1A
Acute toxicity (oral)	6.1E	6.1E
Aspiration hazard	6.1E	6.1E
Skin irritancy/corrosivity	6.3B	6.3B
Carcinogenicity	6.7B	6.7B
Target organ or systemic toxicity (oral/dermal/inhalation)	6.9B (unspecified)	6.9B (oral, dermal, inhalation)
Aquatic ecotoxicity	9.1B	9.1B
Terrestrial vertebrate ecotoxicity	ND	9.3C

4. Risk and benefit assessment

Risk assessment

- 4.1. The risk assessment has taken into account the hazardous properties of the substance, the considerations in Part 2 of the Act, the prescribed controls under the Act and the requirements under other relevant legislation such as the HSW Act, Land Transport Rule 45001, Civil Aviation Act 1990 and Maritime Transport Act 1994.
- 4.2. The human health and environmental risks have been assessed in accordance with Section 29(1) of the Act. This assessment takes into account the full life cycle of this substance, including manufacture, packaging, transport, storage, use and disposal.
- 4.3. The EPA determined that there is a potential for significant exposures to people and the environment during the manufacture and use phase of NPD 100 PLUS.

4.4. NPD 100 PLUS has the same primary component, petrol (unleaded), which is already present in various approved substances at similar and lower concentrations to NPD 100 PLUS. These substances are intended to be used in similar ways. The hazards of the main additive, N-methylaniline, as well as the other components of the substance, have been well described. Accordingly, the risks to human health and the environment are not likely to be significantly higher from the use of NPD 100 PLUS compared to other approved substances containing the same primary petrol (unleaded) component. Therefore, the assessment of risks to human health and the environment for NPD 100 PLUS has been limited to a qualitative assessment.

4.5. The risk and benefit assessment:

- considered the risks posed by NPD 100 PLUS,
- determined whether the risks are outweighed by the benefits,
- determined whether any variations, additions to or deletion of the prescribed controls are required to manage the risks of the substance.

Assessment of physical risks

4.6. NPD 100 PLUS is a flammable liquid and could cause damage in the instance of a spill or leak of the substance in the presence of an ignition source. The magnitude of this effect would be **major**. The prescribed controls under HSW (HS) regulations and other relevant legislation specifically address risks associated with the flammability of this substance during storage, transport, use, disposal and in the event of an emergency. Therefore, the likelihood of an event of this nature of occurring during the life cycle of this substance would be **highly unlikely**. Accordingly, the level of residual risk from the physical hazards of NPD 100 PLUS is **negligible**, provided that the prescribed controls are in place and complied with. The flammability risks associated with NPD 100 PLUS are similar to other commonly available fuels.

Assessment of risks to human health

- 4.7. NPD 100 PLUS is intended to be supplied to the domestic and professional markets. It is likely that users will be exposed to the substance during the loading (fuelling) stages of use.
- 4.8. The combination of the primary component, petrol (unleaded), and main additive, N-methylaniline, as a pre-mixed substance, in NPD 100 PLUS is new.
- 4.9. NPD 100 PLUS has a similar or higher concentration of the primary component, petrol (unleaded), than currently approved substances with the same primary component and use pattern.
- 4.10. NPD 100 PLUS has a similar or higher hazard classification than currently approved substances with the same primary component and use pattern.

Acute oral toxicity (6.1E)

4.11. It is **very unlikely** that oral exposure will occur during the use of this substance, but any effect is expected to be **minor and reversible**. The prescribed controls include requirements for the use of

Personal Protective Equipment (PPE) for professionals when working with class 6 and 8 substances to limit exposure to the substance. Furthermore, the transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. As such, the risk from acute oral toxicity is assessed as being **negligible**.

Aspiration hazard (6.1E)

4.12. It is **unlikely** that an aspiration hazard will occur during the use of this substance. The prescribed controls include requirements for the use of PPE for professionals when working with class 6 and 8 substances to limit exposure to the substance. Furthermore, the transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. As such, the risk of aspiration hazard is **negligible**.

Skin irritancy (6.3B)

4.13. It is **likely** that skin exposure will occur during the use of this substance, but any effect is expected to be **minor and reversible**. The prescribed controls include requirements for the use of PPE for professionals when working with class 6 and 8 substances to limit exposure to the substance. Furthermore, the transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. As such, the risk from the skin irritancy hazard is assessed as **negligible**.

Carcinogenicity (6.7B)

4.14. Given the use pattern, it is considered **very unlikely** that users will be exposed to or ingest the substance in sufficient quantities for chronic exposure to occur during the use of the substance. Any effect is expected to be **major**. The prescribed controls include requirements for the use of PPE for professionals when working with class 6 and 8 substances to limit exposure to the substance. Furthermore, the transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. Therefore, the risk is assessed as **negligible**.

Target organ toxicity via the oral route (6.9B)

4.15. It is considered **very unlikely** that the substance could be ingested during the use of this substance in sufficient quantities for chronic exposure to occur. Any effect is expected to be **moderate**. The prescribed controls include requirements for the use of PPE for professionals when working with class 6 and 8 substances to limit exposure to the substance. Furthermore, the transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground

tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. Therefore, the risk is assessed as **negligible**.

Target organ toxicity via the dermal route (6.9B)

4.16. It is considered **likely** that dermal exposure will occur during the use of this substance, however, it is **unlikely** this will be in sufficient quantities for chronic exposure to occur. Any effect is expected to be **moderate**. The prescribed controls include requirements for the use of PPE for professionals when working with class 6 and 8 substances to limit exposure to the substance. Furthermore, the transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. Therefore, the risk is assessed as **negligible**.

Target organ toxicity via the inhalation route (6.9B)

4.17. It is considered **unlikely** that the substance would be inhaled during the use of the substance in sufficient quantities for chronic exposure to occur. Any effect is expected to be **moderate**. The prescribed controls include requirements for the use of PPE for professionals when working with class 6 and 8 substances to limit exposure to the substance. Furthermore, the transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. Therefore, the risk is assessed as **negligible**.

Assessment of risks to human health from workplace activities

4.18. WorkSafe were notified of the application and have provided the following comment on whether the HSW requirements manage the risk to people from workplace activities.

4.19. WorkSafe has assessed the available information for NPD 100 PLUS and considers that compliance with the HSW (HS) Regulations will be adequate to reduce the risks associated with the use of this substance in the workplace. While the regulations cover standard risk mitigation measures, occupational exposure in the workplace needs to be assessed at each site and appropriate controls put in place to mitigate the identified risks.

4.20. Due to the flammable classification of the primary petrol component (3.1A), the substance would be subject to tracking provisions in Part 19 of the HSW (HS) Regulations thereby giving the substance additional restrictions over other similar fuel products that do not require tracking. The tracking requirements would also prevent the product from being sold to the public as intended.

4.21. WorkSafe is therefore proposing a SWI to remove the tracking control from this substance. The SWI would add this substance to Table 3 of Schedule 26 of the HSW (HS) Regulations for substances that do not require tracking.

4.22. Other fuel products (E10, E85, petrol, aviation gasoline, racing gasoline, kerosene, diesel fuel) have a number of other varied requirements in the HSW (HS) Regulations (such as those for secondary containment, fire extinguishers, emergency response plans, signage). However, none of the regulations that set these requirements have specific SWI hooks that could be used to extend these variations to a new substance NPD 100 PLUS. Of these requirements, only the tracking requirement would pose a significant impediment to the intended use of this substance if approved.

Assessment of risks to the environment

Aquatic ecotoxicity (9.1B)

4.23. It is **unlikely** that aquatic organisms will be exposed to NPD 100 PLUS as exposure is only likely to occur from spillage or leakage that results in the substance entering waterways.

4.24. NPD 100 PLUS is classified as ecotoxic to aquatic organisms, and as such, it is expected that exposure may result in **moderate** effects to organisms. Transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. Therefore, the risk is assessed as **negligible**.

Toxicity to terrestrial vertebrates (9.3C)

4.25. It is **unlikely** that terrestrial vertebrates will be exposed to NPD 100 PLUS as exposure is only likely to occur from spillage or leakage of the substance.

4.26. NPD 100 PLUS is classified as ecotoxic terrestrial vertebrates, and as such, it is expected that exposure may result in **moderate** effects to organisms. Transfer and use of NPD 100 PLUS occurs in a series of controlled, closed systems. The substance will be stored in underground tanks and dispensed via a nozzle into the fuel tanks of vehicles or fuel containers for at-home use to refuel petrol-powered equipment. Therefore, the risk is assessed as **negligible**.

Assessment of risks to Māori and their relationship to the environment

4.27. A cultural assessment has been undertaken by the EPA to consider potential impacts of the application on the economic, social, and cultural well-being of Māori, and the relationship of Māori with the environment, pursuant to sections 5(b), 6(d) and 8 of the HSNO Act. The cultural assessment includes tangible and intangible taonga, such as culturally significant species, resources, and places, and the customary values, practices and uses associated with these taonga. Key findings of the assessment are outlined below.

Impact on the relationship of Māori and their culture and traditions with their environment and taonga

4.28. This application is not likely to significantly affect the relationship of Māori and their culture and traditions with their environment and taonga, including culturally significant species, resources, and places, and the customary values, practices and uses associated with these taonga.

Impact on the maintenance and enhancement of the capacity of people and communities to provide for their own economic, social and cultural well-being

4.29. This application is not likely to significantly affect the ability and capacity of Māori to maintain their economic, social, and cultural well-being.

Treaty of Waitangi principles

4.30. The Principles of the Treaty of Waitangi have been considered in relation to this application, as summarised below.

The active protection principle: the Crown has a duty to actively protect Māori interests.

4.31. No issues arise.

The informed decision making principle: the Crown has a duty to make informed decisions.

4.32. No issues arise.

The partnership principle: to act fairly, reasonably, and in good faith.

4.33. No issues arise.

Assessment of risks to society, the community and the market economy

4.34. No risks to society, communities or the market economy from the approval of NPD 100 PLUS have been identified, if set controls are adhered to.

New Zealand's international obligations

4.35. No international obligations that may be impacted by the approval of NPD 100 PLUS have been identified.

The effects of the substance being unavailable

4.36. The likely effects of NPD 100 PLUS being unavailable have been considered. Should NPD 100 PLUS not be available, it could lead to less consumer choice.

Assessment of benefits

4.37. The applicant considers that the approval of NPD 100 PLUS will provide the following benefits:

- the substance, and other similar substances, would be created in New Zealand. These formulations could be created so they are useful for New Zealand conditions and requirements. This also allows the creation of more efficient products that other countries may wish to use;

- allows tuned engines to perform optimally, reducing fuel consumption and harmful emissions;
- NPD 100 PLUS is usually dispensed with a different filter from what comes standard in other retail spaces. These high performance filters in the dispensers are 'absolute rated' with an efficiency rating of 99.5% for high performance engines as opposed to the efficiency rating of approximately 75% on standard filters used with 98 Unleaded currently;
- NPD PLUS 100 enables modern high compression or low emission engines to reach their full potential, as well as showing improved cleaning of the engine and fuel system to further reduce harmful emissions and reduce maintenance costs;
- the fuel economy is also improved compared to other products currently in use and the shelf life of the petrol has been shown to be extended, with tests carried out in New Zealand show that the octane rating was maintained for an excess of 12 months.

4.38. Although the benefits identified above were not verified by the EPA, it is considered that the availability of NPD 100 PLUS will provide beneficial economic effects for some businesses with the potential for flow-on effects to local communities and the New Zealand economy, including improved consumer choice and greater market competition.

5. Prescribed controls

- 5.1. The hazard classifications of NPD 100 PLUS determine a set of prescribed controls, specified by the EPA Notices³ under section 77 of the Act. There are also requirements in the HSW (HS) Regulations. Note: the HSW (HS) requirements are not set for the substance under this approval but apply in their own right.
- 5.2. The prescribed controls set the baseline for how the substance must be managed and include specifications on how the substance is to be packaged, labelled, stored, disposed, transported, handled and used. The prescribed controls also set information requirements (eg Safety Data Sheets), signage and emergency management. These controls form the basis of the controls specified in Appendix A.

Exposure limits

- 5.3. Under s77B of the Act, the EPA may set a Tolerable Exposure Limit (TEL) and/or an Environmental Exposure Limit (EEL) for a substance with toxic or ecotoxic properties.
- Regulation 13.17 of the HSW (HS) Regulations prohibits the use of a class 6 substance in excess of a TEL.

³ There may also be default controls in regulations made under the Act for certain hazardous substances such as fireworks.

- Clause 49 of the Hazardous Property Controls Notice prohibits use of a class 9 substance in excess of an EEL.

5.4. The EPA has not provided ADE (Acceptable Daily Exposure) and PDE (Potential Daily Exposure) values for any components in this substance. However, TEL values have previously been set for the primary petrol component based upon the substances benzene, toluene and xylene when they are components of petrol, and therefore apply to NPD 100 PLUS (Table 2).

Table 2: Petrol components exposure thresholds

Petrol components	Acceptable Daily Exposure (ADE) – mg/kg bw/d	Potential Daily Exposure (PDE) – mg/kg bw/d	Tolerable Exposure Limit (TEL) mg/L (water) mg/kg (soil) mg/m ³ (air)
Benzene	Not applicable	Not applicable	TEL _{air} 10 µg/m ³ TEL _{water} 10 µg/L
Toluene	Not applicable	Not applicable	TEL _{air} 400 µg/m ³ TEL _{water} 800 µg/L
Xylene	Not applicable	Not applicable	TEL _{air} 870 µg/m ³ TEL _{water} 600 µg/L

5.5. EEL values for have previously been set for the primary petrol component in NPD 100 PLUS based upon the substances benzene, toluene and xylene when they are components of petrol, and therefore these values are applicable to NPD 100 PLUS and the following EELs have been applied:

- EEL_{water} benzene = 2000 µg/L
- EEL_{water} toluene = 330 µg/L
- EEL_{water} o-xylene = 640 µg/L
- EEL_{water} m/p-xylene = 340 µg/L

5.6. There are Workplace Exposure Standard (WES) values currently set for components of NPD 100 PLUS but, as they are not Prescribed Exposure Standard (PES) values, they are guidance values used for the management of health risk. No PES has been set for any component of NPD 100 PLUS.

6. Changes to prescribed controls

6.1. The following modifications to the EPA Notice controls apply to NPD 100 PLUS, as set out in Table 3:

Table 3: Justification for section 77 changes to the prescribed controls (see Appendix A for control wordings)

Control	Justification
Restrictions to workplaces	Clause 13 of the Hazardous Property Controls (HPC) Notice requires certain substances to be restricted to workplaces only. This control is triggered for this substance as part of the prescribed controls for the 3.1A flammable hazard. However, this classification is drawn from the primary petrol (unleaded) component which is excluded from this control under Schedule 1, Table 2 of the HPC notice. The components which make up NPD 100 PLUS are not restricted to a workplace so can be handled by domestic users. Therefore, it is recommended that NPD 100 PLUS be excluded from this restriction and the prescribed control be removed.
Management of large quantities	Clause 19 of the HPC Notice applies to petrol at more than 50 L in accordance with Schedule 3 of the HPC notice. In keeping with the alignment with the controls applied to petrol, and to ensure that large quantities of the substance stored domestically or in any other non-workplace are restricted, it is proposed that clause 19 should apply as if NPD 100 PLUS was listed in Schedule 3 of the notice at the same quantity as petrol (50 L).

- 6.2. The following additional HSNO controls apply to NPD 100 PLUS under section 77A of the Act, as set out in Table 4:

Table 4: Justification for the section 77A additional controls (see Appendix A for the control wordings)

Control	Justification
Restriction on petrol impurities	<p>The primary component in NPD 100 PLUS, petrol (unleaded), is associated with the toxicologically significant subcomponents and additives as part of its composition as a complex mixture substance. When present in high enough concentrations, these impurities can cause adverse effects to people or the environment. There are restrictions listed in the approval for petrol which should be imposed on the petrol content of NPD 100 PLUS. Imposing a restriction on the maximum amount of these components will prevent them from occurring in concentrations sufficient to cause adverse effects to people or the environment. Accordingly, the following limitations apply to the composition of the component petrol (unleaded):</p> <ul style="list-style-type: none"> • Aromatic hydrocarbons: maximum 55% (volume) • Benzene: maximum 1% (volume) • Additives: (each < 0.1% w/w) <ol style="list-style-type: none"> 1. azo dyes 2. antioxidants 3. metal deactivator 4. corrosion inhibitor • Detergent additives: (each < 0.5% w/w)

Assessment of changes to controls

- 6.3. The changes to the prescribed controls in the above section under sections 77 and 77A of the Act fulfil the legislative criteria.
- 6.4. These controls have been incorporated into the Appendix of this document.
- 6.5. The applicant was provided an opportunity to comment on the controls as set out in this decision and had concerns regarding the tracking requirement. WorkSafe is proposing a SWI to remove the tracking control from this substance.

7. Summary

- 7.1. After taking into account the prescribed controls and any variations to these controls, it was concluded that the residual level of risk of any potentially significant adverse effects, is negligible.

8. Decision

- 8.1. Pursuant to section 29 of the Act, I have considered this application for approval under section 28 of the Act. I have considered the effects of this substance throughout its life cycle, the controls that may be imposed on this substance and the likely effects of this substance being unavailable. I have also taken into account the considerations set out in Part 2 of the Act.
- 8.2. I consider that, with controls in place, the risks to human health and to the environment are negligible, and the benefits associated with the release of this substance will outweigh the adverse effects. Therefore, I consider that the application to import or manufacture NPD 100 PLUS for release is approved with controls in accordance with section 29 of the Act and clause 26 of the Hazardous Substances and New Organisms (Methodology) Order 1998.



Dr Clark Ehlers

Date: 19 / 08 / 2020

Acting General Manager, HSNO, EPA

Appendix: Controls applying to NPD 100 PLUS

EPA Controls

Control code	EPA Notice	Control description
LAB	EPA Labelling Notice 2017	Requirements for labelling of hazardous substances
PKG	EPA Packaging Notice 2017	Requirements for packaging of hazardous substances
SDS	EPA Safety Data Sheet Notice 2017	Requirements for safety data sheets for hazardous substances
DIS	EPA Disposal Notice 2017	Requirements for disposal of hazardous substances
HPC-1	EPA Hazardous Property Controls Notice 2017 Part 1	Hazardous Property Controls preliminary provisions
HPC-3	EPA Hazardous Property Controls Notice 2017 Part 3	Hazardous substances in a place other than a workplace
HPC-4A	EPA Hazardous Property Controls Notice 2017 Part 4A	Site and storage controls for class 9 substances
HPC-4B	EPA Hazardous Property Controls Notice 2017 Part 4B	Use of class 9 substances

HSNO Additional Controls and Modifications to Controls

Control Code	HSNO Act	Control
Restriction to workplaces	Section 77	The components which make up NPD 100 PLUS are not restricted to a workplace so can be handled by domestic users. Therefore, NPD 100 PLUS is excluded from Clause 13 of the HPC Notice and the prescribed control is removed.
Management of large quantities	Section 77	Clause 19 of the HPC notice applies as if the substance were listed in Schedule 3 of the HPC notice and exceeds 50 L as the specified quantity.
Restriction on petrol impurities	Section 77A	<p>The following limitations apply to the composition of the component petrol (unleaded):</p> <ul style="list-style-type: none"> • Aromatic hydrocarbons: maximum 55% (volume) • Benzene: maximum 1% (volume) • Additives: (each < 0.1% w/w) <ul style="list-style-type: none"> ○ azo dyes ○ antioxidants ○ metal deactivator ○ corrosion inhibitor • Detergent additives: (each < 0.5% w/w)

HSW Requirements

Note: these requirements are not set for the substance under this approval but apply in their own right under the HSW legislation according to the classification of the substance. They are listed here for information purposes only.

Code	Regulation	Description	Extra information
HSW2-1	Reg 2.1 - 2.4	Workplace labelling of hazardous substance containers	
HSW2-2	Reg 2.5 - 2.10	Signage	
HSW2-3	Reg 2.11	Safety data sheets	
HSW2-4	Reg 2.12 - 2.14	Packaging	
HSW3-1	Reg 3.1	Inventory	
HSW3-2	Reg 3.2 - 3.3	Managing risks associated with hazardous substances	

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HSW4-2	Reg 4.5 - 4.6	Information, instruction, training and supervision	
HSW5-1	Reg 5.2 - 5.5	Fire extinguishers	
HSW5-2	Reg 5.6 - 5.13	Emergency response plans	
HSW8-1	Reg 8.1 - 8.2	Compliance certification	
HSW8-2	Reg 8.3 - 8.4	Requirements for public transportation of class 1 to 5 substances	
HSW10-1	Reg 10.3	General controls on class 2, 3, and 4 substances	
HSW10-2	Reg 10.4	Substances that must be secured	
HSW10-3	Reg 10.5	Requirement to segregate class 2, 3, and 4 substances	
HSW10-4	Reg 10.6 - 10.7	Duty of PCBU to establish a hazardous area	
HSW10-5	Reg 10.8 - 10.20	Requirements to prevent unintended ignition of class 2.1.1, 2.1.2 and 3.1 substances	
HSW10-10	Reg 10.26	Duty of PCBU to establish hazardous substance location	
HSW10-12	Reg 10.30 - 10.33	Secondary containment for class 3 and 4 pooling substances	
HSW10-13	Reg 10.34 - 10.35	Requirement to have compliance certificate if class 2.1.1, 2.1.2, or 3.1 substance present at hazardous substance location	
HSW10-15	Reg 10.37	Requirement for transit depot	
HSW11-1	Part 11	Controls relating to adverse effects of unintended ignition of class 2 and 3.1 substances	
HSW13-2	Reg 13.7	Duty of PCBU who directs work using class 6, 8.1, 8.2, or 8.3 substances to ensure equipment is appropriate	
HSW13-3	Reg 13.8	Duty of PCBU who directs work using class 6 and 8 substances to ensure personal protective equipment used	
HSW13-8	Reg 13.17	Prohibition on use of substance in excess of tolerable exposure limit	The TEL set for this substance is: Tolerable exposure limits (TEL _{air}) = Benzene 10 µg/m ³

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			<p>Tolerable exposure limits (TEL_{water}) = Benzene 10 µg/L</p> <p>Tolerable exposure limits (TEL_{air}) = Toluene 400 µg/m³</p> <p>Tolerable exposure limits (TEL_{water}) = Toluene 800 µg/L</p> <p>Tolerable exposure limits (TEL_{air}) = Xylene 870 µg/m³</p> <p>Tolerable exposure limits (TEL_{water}) = Xylene 600 µg/L</p>
HSW13-9	Reg 13.18	Duty of PCBU to ensure prescribed exposure standards for class 6 substances not exceeded	No PES is set at this time
HSW13-14	Reg 13.30 - 33	Secondary containment requirements for class 6 and 8 pooling substances	
HSW16-1	Part 16	Requirements for tank wagons and transportable containers	
HSW17-1	Part 17	Requirements for stationary container systems	
HSW19-1	Part 19	Tracking hazardous substances	

Definitions

Terms used in the controls have the same meaning as defined in the Act, EPA Notices or regulations made under the Act. In addition, the following definitions apply:

Term	Definition
Likely	Good chance that it may occur under normal operating conditions.
Major	<p>A descriptor used to describe the magnitude of the effect of a substance. This descriptor is used when one or more of the following impacts are met:</p> <ul style="list-style-type: none"> significant irreversible adverse health effects affecting individuals and requiring hospitalisation and/or reversible adverse health effects reaching beyond the immediate community long term/irreversible damage to localised ecosystem but no species loss measurable adverse effect on GDP, some long-term (more than five years) job losses social disruption to surrounding community, including some evacuations.
Minor	<p>A descriptor used to describe the magnitude of the effect of a substance. This descriptor is used when one or more of the following impacts are met:</p> <ul style="list-style-type: none"> mild reversible short-term adverse health effects to identified and isolated groups localised and contained reversible environmental impact, some local plant or animal communities temporarily damaged, no discernible ecosystem impact or species damage regional adverse economic effects on small organisations (businesses, individuals) lasting less than six months, temporary job losses potential social disruption (community placed on alert).
Moderate	<p>A descriptor used to describe the magnitude of the effect of a substance. This descriptor is used when one or more of the following impacts are met:</p> <ul style="list-style-type: none"> minor irreversible health effects to individuals and/or reversible medium-term adverse health effects to larger (but surrounding) community (requiring hospitalisation) measurable long term damage to local plant and animal communities, but no obvious spread beyond defined boundaries, medium term individual ecosystem damage, no species damage medium term (one to five years) regional adverse economic effects with some national implications, medium term job losses some social disruption (for example, people delayed).
Very likely	Almost certain or expected to occur if all conditions met.
Water	Has the meaning provided in the HPC Notice.
Water body	Includes all natural and modified/artificial water courses such as reservoirs, irrigation canals, water-supply races, canals for the supply of water for electricity generation or farm drainage, ditches, streams, rivers, ponds and lakes. For clarity, it excludes fully covered pipes, tanks or other enclosed structures, puddles or groundwater.

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Watercourse or Waterway	Includes every river, stream, passage, and channel on or under the ground, whether natural or not, through which water flows, whether continuously or intermittently.
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