APPENDIX 2: HAZARDOUS FACILITY SCREENING PROCEDURE (HFSP)

(Reference: ***Part 3 District Wide Provisions, Section 12.8 Hazardous Substances***)

BACKGROUND

The HFSP is applied to hazardous facilities in all land use zones and in addition to other zone-specific land use controls. The procedure is applied to all new hazardous facilities, irrelevant of their type and size. The HFSP should generally also be applied to existing hazardous facilities if a significant change occurs in the character, nature and scale of effects.

Fundamentally, the HFSP is used to screen hazardous facilities and their sites. However, where hazardous facilities on the same site are separated more than 30m from each other, they may be dealt with as separate facilities and the HFSP is applied to these on a separate basis.

TERMINOLOGY

The HFSP uses a number of terms. These are listed and explained below.

Term	Explanation
Proposed Quantity	The quantity of a hazardous substances proposed to be used or stored on a site
Base Quantity	Pre-calibrated quantity of a hazardous substance that is deemed to be acceptable on a heavy industrial site without causing any significant off-site effects.
Adjustment Factor	Pre-calibrated factors that take into account substance, storage and site-specific circumstances.
Adjusted Quantity	Equivalent to the Base Quantity that has been adjusted using Adjustment Factors
Effect Type	Three Effect Types are used by the HFSP: • fire/explosion • effects on human health • effects on ecosystems
Quantity Ratio	The ratio of the proposed quantity of a substance over the applicable Base Quantity
Consent Status Index	Numerical values in the district plan that are used to determine the consent status of a facility

OVERVIEW

The HFSP is designed to assess the environmental effects of hazardous substances proposed to be stored or used on a site, taking into account their quantities, characteristics, location, type of activity and local environmental conditions. This assessment is carried out for three defined Effect Types:

- fire/explosion;
- human health;
- the natural environment.

Basically, the HFSP compares proposed quantities of hazardous substances with maximum allowable quantities (Adjusted Quantities) which depend on the type of substances, how they are used and stored, and the location of the facility. A Quantity Ratio is calculated by dividing the proposed quantity of each hazardous substance with the Adjusted Quantity.

The Quantity Ratios of individual substances are added up for each of the Effect Types. Cumulative Quantity Ratios are then compared with defined limits called Consent Status Indices which are listed in the rules of the district plan. If any of the Quantity Ratios exceed specified Consent Status Indices, the hazardous facility in question requires a resource consent.

Some information needs to be assembled at the outset about the hazards of the substances concerned. This includes site layout and location, types of activities as well as the sensitivity of the surrounding environment. In most cases, only a limited number of substances needs to be assessed to determine the resource consent status of an activity. This applies in particular if one, two or three substances are either very hazardous or stored/used in large quantities.

An overview of the HFSP is presented in ***Figure 1***.

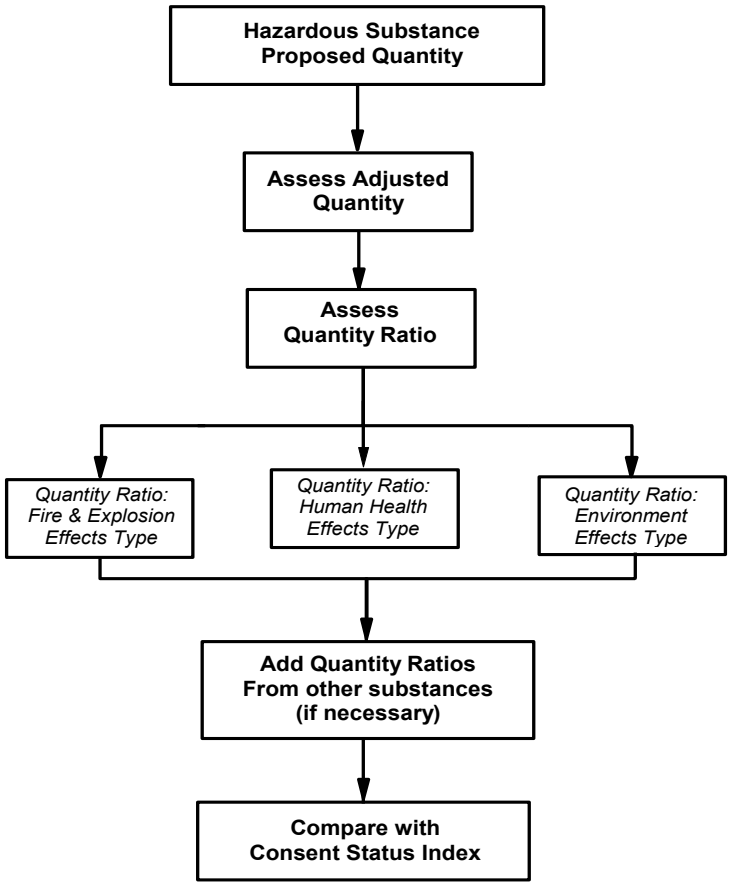

Figure 1: OVERVIEW OF HFSP (PROCESS FOR SINGLE SUBSTANCE)

RATING HAZARDOUS SUBSTANCES FOR THE HFSP

To be able to assess hazardous substances under the HFSP, they must be rated first. These rating criteria are based on the classification system specified by regulations under the Hazardous Substances and New Organisms Act 1996 (HSNO) and are specified in Appendix A.

For the purposes of the HFSP, each substance is rated based on three Effect Types:

(a) Fire/Explosion Effects: concerned with damage to property, the built environment and safety of people;

(b) Human Health Effects: concerned with the well-being, health and safety of people;

(c) Environmental Effects: concerned with damage to ecosystems and natural resources.

Each Effect Type is divided into a maximum of three hazard levels:

- high;
- medium;
- low.

The rating of a hazardous substance for the HFSP requires each substance to be assessed in terms of every hazard category listed in Appendix A. To rate a hazardous substance for the HFSP, the following strategy is taken:

(1) Some commonly used hazardous substances in New Zealand have already been assessed and pre-rated for the HFSP. This information is available from the council desk or from the Ministry for the Environment website.

(2) Under HSNO, all substances previously controlled by repealed legislation (such as the Dangerous Goods and Toxic Substances Acts) will be classified using HSNO classification criteria. Once a substance is classified under HSNO, it can be easily rated for the HFSP based on Appendix A. Information on the classification of hazardous substances under HSNO will be available from ERMA New Zealand (the Environmental Risk Management Authority) and be accessible through the MfE/ERMA websites.

(3) Where information for the rating of a hazardous substance for HFSP is not or is only partially available from the above discussed sources, a precautionary default rating of 'Medium' for the Fire/Explosion and Human Health Effect Types, and 'High' for the Environmental Effect Type is to be applied to the hazardous substance in question.

STEP-BY-STEP GUIDE TO THE HFSP

This section works through a step-by-step guide on how to use the Hazardous Facility Screening Procedure, following the steps shown in Figure 2 and the HFSP step by step guide that follows.

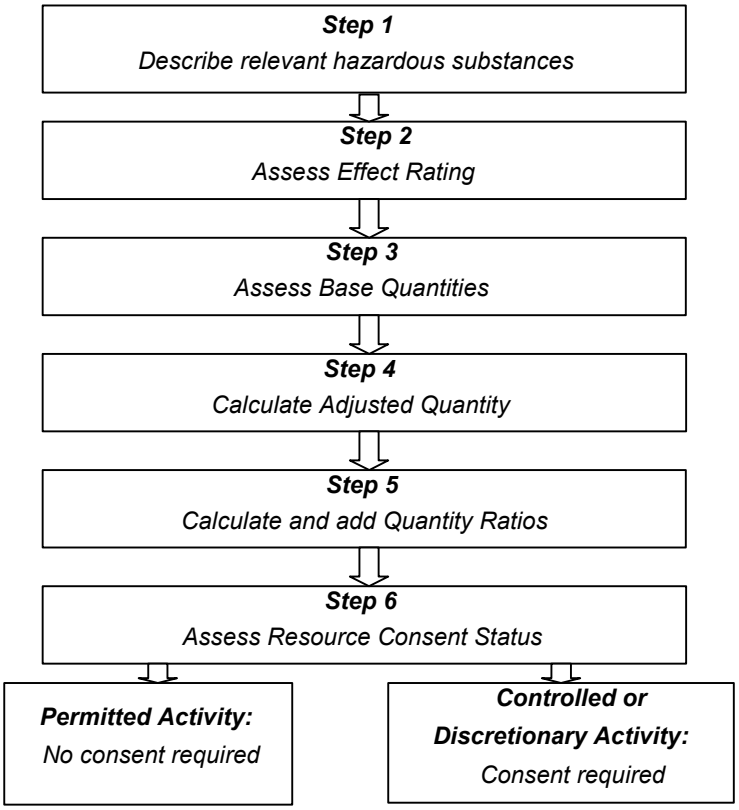

Figure 2: STEP-BY-STEP GUIDE TO THE HFSP

HAZARDOUS FACILITIES SCREENING PROCEDURE – STEP BY STEP GUIDE

STEP 1: DESCRIBE HAZARDOUS SUBSTANCES

To use the HFSP it is necessary to create an inventory of hazardous substances held on a site. The inventory should list:

(a) the names of the hazardous substances;

(b) quantities of the hazardous substances;

(c) the physical form of the substances at 20^{o}C and 101.3kPa; and

(d) the location of use or storage on the site.

HFSP CALCULATIONS			
Substance Name	**FORM (liquid, powder, solid, gas)**	**LOCATION**	**PROPOSED QUANTITY (tonnes or m^3)**
S1 S2 S3 S4, S5, S6, S7 etc.			

Explanation:

The HFSP uses standard units of tonnes (for solids, liquids and liquefied gases) and m³ (for compressed gases). It is therefore sometimes necessary to convert substance quantities to these units. In the case of liquids, it is necessary to apply the specific gravity (or density) to convert litres to kilograms, or m³ to tonnes.

Adjustments to quantities are also necessary where a substance is diluted with water or mixed with another substance. In this instance, only the percentage quantity of the hazardous substance or product in the dilution or mixture is assessed for the purposes of HFSP calculations (unless a mixture is more hazardous than its components, in which case data on the mixture need to be used).

An exception to this are products or brands that already constitute dilutions or mixtures of hazardous substances and which have been classified in terms of hazardous properties as the 'whole' dilution or mixture for life cycle management purposes. Examples of this are corrosives, oxidising substances and pesticides, which are often sold commercially as standard solutions or strengths. In these instances, quantity adjustments are only applied when these commercially supplied concentrations are further diluted or mixed.

STEP 2: ASSESS EFFECT RATING

For the purposes of the HFSP, the effects of substances are categorised into three Effect Types:

(a) Fire/Explosion Effect Type: addressing damage to the built environment and safety of people;

(b) Human Health Effect Type: addressing adverse effects on the well-being, health and safety of people;

(c) Environmental Effect Type: addressing adverse effects on ecosystems and natural resources.

Each Effects Type is divided into three Rating Levels:

♦ high; ♦ medium; ♦ low.

The division is predominantly based on the HSNO classification system.

Substance Name	**EFFECT RATING**		
	Fire and Explosion Effect Type (as applicable)	**Human Health Effect Type (as applicable)**	**Environment Effect Type (as applicable)**
S1	H/M/L	H/M/L	H/M/L
S2	H/M/L	H/M/L	H/M/L
S3	H/M/L	H/M/L	H/M/L
S4, S5, S6, S7 etc.	H/M/L	H/M/L	H/M/L

Explanation:

The following Effect Hazard Ratings are possible:

H = high M = medium L = low N/A = not applicable

The HFSP rates hazardous substances in terms of each of the three Effect Types. The Effect Rating of a hazardous substance is based on:

(a) The HSNO classification (refer Appendix A). Once a substance has been classified under HSNO, Effect Ratings can be assigned for each hazard type and Effect Type as shown in Appendix A.

(b) A list of pre-assessed hazardous substances (refer to information outside of the district plan).

In the absence of information, application of the default rating shall apply: i.e.:

(i) Fire Explosion Effect Type: Medium; and

(ii) Human Health Effect Type: Medium; and

(iii) Environment Effect Type: High.

STEP 3: ASSESS BASE QUANTITIES

The Base Quantity (BQ) is a pre-calibrated quantity. It is the amount of a substance that has been assessed as generating no significant off-site effects in a heavy industrial area before site - and substance-specific considerations have been taken into account (see ***Step 4***). Base Quantities for different hazardous properties and hazard levels are listed for each Effect Type in ***Table 1***.

Substance Name	**BASE QUANTITIES**		
	Fire and Explosion Effect Type (as applicable)	**Human Health Effect Type (as applicable)**	**Environment Effect Type (as applicable)**
S1	BQ1	BQ1	BQ1
S2	BQ2	BQ2	BQ2
S3	BQ3	BQ3	BQ3
S4, S5, S6, S7 etc.	BQx	BQx	BQx

Example:

For the Fire/Explosion Effects Type [Sub-category Flammables], non-significant off-site effects in a heavy industrial area would be represented by Base Quantity of:

- 100 tonnes of a HSNO Category D flammable liquid which has a low hazard level for the Fire/Explosion Effects Type.
- 30 tonnes of a HSNO Category D flammable liquid which has a medium hazard level for the Fire/Explosion Effects Type.

STEP 4: CALCULATE ADJUSTED QUANTITY (AQ)

Base Quantity (Table 1) x Adjustment Factors (Table 2):

(a) Pre-calibrated Adjustment Factors are multiplied with the assessed Base Quantities to account for substance properties and site-specific environmental circumstances. This multiplication yields the Adjusted Quantity.

(b) Adjustment Factors differ for each of the Effects Types, and take into account the following considerations:

(i) the physical state of the substance;

(ii) the type of storage;

(iii) the type of activity or use;

(iv) separation distances to the site boundary;

(v) the environmental sensitivity of the site location.

Substance Name	**ADJUSTED QUANTITIES**		
	Fire and Explosion Effect Type (as applicable)	**Human Health Effect Type (as applicable)**	**Environment Effect Type (as applicable)**
S1	AQ1	AQ1	AQ1
S2	AQ2	AQ2	AQ2
S3	AQ3	AQ3	AQ3
S4, S5, S6, S7 etc.	AQx	AQx	AQx

Explanation:

Different Adjustment Factors are applied for each Effect Type. For example, for the Fire/Explosion Effects Type, the temperature is relevant, while for the Human Health Effects Type, proximity to a potable water resource is important.

In some instances, more than one Adjustment Factor within each Effects Type will need to be applied to a substance. Where this is the case, the Adjustment Factors are multiplied to generate one combined Adjustment Factor for each Effects Type. The Base Quantity is then multiplied by that combined Adjustment Factor.

STEP 5: CALCULATE AND ADD QUANTITY RATIOS (QR)

This step requires calculation of the Quantity Ratio for each hazardous substance in question. The Quantity Ratio is a dimensionless number. It is obtained by dividing the quantity of a substance that is proposed to be used or stored on a site (Proposed Quantity) by the Adjusted Threshold.

If several hazardous substances are used or stored on a site, the Quantity Ratios calculated for each of these substances are added up for each Effect Type.

Substance Name	**QUANTITY RATIO**		
	Fire and Explosion Effect Type (as applicable)	**Human Health Effect Type (as applicable)**	**Environment Effect Type (as applicable)**
S1	QR1	QR1	QR1
S2	QR2	QR2	QR2
S3	QR3	QR3	QR3
S4, S5, S6, S7 etc.	Sum QRtot	Sum QRtot	Sum QRtot

Explanation:

By using the dimensionless ratio of the proposed quantity of a hazardous substance over the Adjusted Quantity, it is possible to aggregate the effects presented by multiple substances held on the same site. Hence, it becomes possible to assess the cumulative potential effects which may be created by several substances present on the same site.

STEP 6: ASSESS RESOURCE CONSENT STATUS

When assessing the resource consent status of a particular hazardous facility, the summed Quantity Ratios for each Effect Type are compared with relevant Consent Status Indices in the Resource Consent Matrix (***Rule 12.8.6.1.1(a)***). If they are exceeded, a resource consent is required, as specified in the rules of the district plan.

Substance Name	**EXCEEDANCE OF CONSENT STATUS INDEX**		
	Fire and Explosion Effect Type (as applicable)	**Human Health Effect Type (as applicable)**	**Environment Effect Type (as applicable)**
QRS1	YES/NO?	YES/NO?	YES/NO?
QRS1+S2	YES/NO?	YES/NO?	YES/NO?
QRS3+S2+S3	YES/NO?	YES/NO?	YES/NO?
Sum QRtot	YES/NO?	YES/NO?	YES/NO?

Table 1: BASE QUANTITIES FOR ALL EFFECTS TYPES AND HAZARD LEVELS

HSNO CATEGORY	UN CLASS EQUIVALENT	HAZARD LEVEL	UNIT	BASE QUANTITY (B)		
				Fire/ Explosion	Human Health	Environment
EXPLOSIVENESS						
1.1	Class 1.1	High	tonnes	0.1	-	-
1.2	Class 1.2	Medium	tonnes	1	-	-
1.3	Class 1.3	Low	tonnes	3	-	-
GASES						
2.1 A + B (LPG)	Class 2.1	Medium	tonnes	30	-	-
2.1 A + B (excluding LPG)	Class 2.1	High	m^3	10,000*	-	-
FLAMMABLE LIQUIDS						
3 A, 3 B	Class 3PGI and 3PGII	High	tonnes	10	-	-
3 C	Class 3PGIII	Medium	tonnes	30	-	-
3 D		Low	tonnes	100	-	-
FLAMMABLE SOLIDS						
4.1 (all categories)	Class 4.1	Medium	tonnes	10	-	-
4.2 (all categories)	Class 4.2	High	tonnes	1	-	-
4.3 (all categories)	Class 4.3	High	tonnes	1	-	-
OXIDISING						
5.1 (all categories)	Class 5.1	Medium	tonnes (m^3)	10(10,000*)	-	-
5.2 (all categories)	Class 5.2	High	tonnes	1	-	-
TOXIC						
6.1 A	Class 6.1 PGI	High	tonnes	-	0.5	-
6.1 A	Class 2.3 PGI	High	m^3	-	30*	-
6.1 B	Class 6.1 PGII	Medium	tonnes	-	10	-
6.1 B	Class 2.3 PGII	Medium	m^3	-	50*	-
6.7 - 6.9 (chronic toxicity, categories)	OECD	Medium	tonnes	-	10	-
6.1 C	Class 6.1 PGIII	Low	tonnes	-	30	-
6.1 C	Class 2.3 PGIII	Low	m^3	-	500*	-
CORROSIVE						
6.3 - 6.4 (corrosives, all categories)	Class 8	Medium	tonnes (m^3)	-	10	-
ECOTOXIC						
9.1 - 9.4A	(OECD 1)	High	tonnes (m^3)	-	-	1 (30*)
9.1 - 9.4B	(OECD 2)	Medium	tonnes (m^3)	-	-	30 (50*)
9.1 - 9.4C	(OECD 3)	Low	tonnes (m^3)	-	-	100 (500*)

* Base Threshold in m^3 at 101.3kPA and 20^{o}C for permanent or compressed gases.

Table 2: ADJUSTMENT FACTORS

ADJUSTMENT FACTORS FOR EFFECTS GROUPS		
Fire/Explosion	**Human Health**	**Environment**
FF1: SUBSTANCE FORM	**FH1: SUBSTANCE FORM**	**FE1: SUBSTANCE FORM**
Solid = 1 Liquid, powder = 1 Gas (101.3 kPA and 20^{o}C) = 0.1	Solid = 3 Liquid, powder = 1 Gas (101.3 kPA and 20^{o}C) = 0.1	Solid = 3 Liquid, powder = 1 Gas (101.3 kPA and 20^{o}C) = 0.1
FF2: SEPARATION DISTANCE FROM BOUNDARY	**FH2: DISTANCE FROM SITE BOUNDARY (GASES ONLY)**	**FE2: ENVIRONMENTAL SENSITIVITY**
< 30 metres = 1 > 30 metres = 3	< 30 metres = 1 > 30 metres = 3	Normal = 1 Adjacent to water resource1 = 0.3
FF3: TYPE OF ACTIVITY	**FH3: TYPE OF ACTIVITY**	**FE3: TYPE OF ACTIVITY**
Use = 0.3 Above ground storage = 1 Underground storage[2] = 10	Use = 0.3 Above ground storage = 1 Underground storage [2] = 10	Use = 0.3 Above ground storage = 1 Underground storage[2] = 3
Final Fire Explosion Adjustment Factor FF = FF1 x FF2 x FF3	Final Human Health Adjustment Factor FH = FH1 x FH2 x FH3	Final Environment Adjustment Factor FE = FE1 x FE2 x FE3

[1] Water resources include aquifers and water supplies, streams, springs, lakes, wetlands, estuaries and the sea, but does not include entry points to the stormwater drainage network. 'Adjacent' is to be defined in the plan, depending on the type of water resource potentially affected.

[2] Applicable to UN Class 3 substances (flammable liquids only)

APPENDIX A: HFSP CLASSIFICATION OF HAZARDOUS SUBSTANCES

Note: full description of HSNO Classes, Sub-classes and Categories in Regulations

Hazard	HSNO Class + Category	(UN Division)	Description	Effect Type	Hazard Level
Explosiveness	1.1	1.1	Articles and substances having a mass explosion hazard.	Fire/Explosion	High
	1.2	1.2	Articles and substances having a projection hazard, but not a mass explosion hazard.	Fire/Explosion	Medium
	1.3	1.3	Articles and substances having a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard. This division comprises articles and substances that: • give rise to considerable radiant heat, or • burn one after another, producing minor blast and/or projection effects.	Fire/Explosion	Low
	1.4, 1.5, 1.6	1.4, 1.5, 1.6	Not applicable.		

Hazard	HSNO Class + Category	(UN Division)	Description	Effect Type	Hazard Level
Gases	2.1A + 2.1B	2.1	Flammable gases: (i) gases which at 20°C and a standard pressure of 101.3 kPa: • are ignitable when in a mixture of 13% or less by volume with air, or • have a flammable range with air of at least 12% regardless of the lower flammability limit; or, (ii) gases or gas mixtures, other than those of (i) above, that at 20°C and a standard pressure of 101.3 kPa have a flammable range in mixture in air. Flammable aerosols, being a pressurised mixture of containing gas, compressed, liquefied, or dissolved under pressure, with or without a liquid, paste or powder; comprising at least 45% by mass of flammable ingredients, under a pressure greater than 100 kPa, which can be released in a finely divided spray.	Fire/Explosion	High
		LPG	LPG	Fire/Explosion	Medium
		2.2	Not applicable.		

Hazard	HSNO Class + Category	(UN Division)	Description	Effect Type	Hazard Level
Flammability (Liquids)			Flammable liquids comprising liquids, mixtures of liquids, or liquids containing solids in suspension which give off a flammable vapour at specific temperatures.		
	3A	3 PGI	Flash point: < 23°C Initial boiling point: < 35°C	Fire/Explosion	High
	3B	3 PGII	Flash point: < 23°C Initial boiling point: > 35°C	Fire/Explosion	High
	3C	3 PGIII	(a) Flash point: ≥ 23°C; ≤ 60°C (b) Flash point: > 60°C but liquid is at: (i) a temperature ≥ its (flash point - 5°C); or, (ii) elevated temperatures in a liquid state that give off a flammable vapour at or below that elevated temperature.*	Fire/Explosion	Medium
	3D	Combustible Liquids	Flash point: > 60°C but ≤ 93°C	Fire/Explosion	Low

Hazard	HSNO Class + Category	(UN Division)	Description	Effect Type	Hazard Level
Flammability (Solids)	4.1 All Categories	4.1	(a) Flammable solids that are readily combustible or may cause fire easily through an ignition source or friction. (b) Self-reacting substances that are thermally unstable and are liable to undergo a strongly exothermic decomposition even without the participation of oxygen (and related substances). (c) Desensitised explosives: substances which are wetted with water or alcohol or diluted with other substances to suppress their explosive properties.	Fire/Explosion	Medium
	4.2 All Categories	4.2	Substances liable to spontaneous combustion: (a) pyrophoric substances: liquid or solid substances which, even in small quantities, ignite within 5 minutes of coming in contact with air; (b) self-heating substances: solid substances which generate heat when in contact with air without additional energy supply.	Fire/Explosion	High
	4.3 All categories	4.3	Substances, which in contact with water, become spontaneously flammable, or emit flammable gases.	Fire/Explosion	High

Hazard	HSNO Class + Category	(UN Division)	Description	Effect Type	Hazard Level
Oxidising capacity	5.1 All categories	5.1	Oxidising substances: substances which, in themselves are not necessarily combustible, but may cause or contribute to the combustion of other materials by yielding oxygen.	Fire/Explosion	Medium
	5.2 All categories	5.2	Organic peroxides: organic substances that are thermally unstable and may undergo exothermic, self-accelerating decomposition. They may: • be liable to explosive decomposition, • burn rapidly, • be sensitive to impact or friction, • react dangerously with other substances • cause damage to the eyes.	Fire/Explosion	High

Hazard	HSNO Class + Category	(UN Division)	Description		Effect Type	Hazard Level
Toxicity		6.1	Substances which are liable to cause death or injury, or to harm human health if swallowed, inhaled or contacted by the skin.			
	6.1A	6.1 PGI	Oral toxicity LD_{50} (mg/kg): Dermal toxicity LD_{50} (mg/kg): Inhalation toxicity dust/mist LC_{50} (mg/l):	≤ 5 ≤ 50 ≤ 0.05	Human Health	High
	6.1B	6.1 PGII	Oral toxicity LD_{50} (mg/kg): Dermal toxicity LD_{50} (mg/kg): Inhalation toxicity dust/mist LC_{50} (mg/l):	> 5 - 50 > 50 – 200 > 0.05 – 0.5	Human Health	Medium
	6.1C	6.1 PGIII	Oral toxicity LD_{50} (mg/kg): Dermal toxicity LD_{50} (mg/kg): Inhalation toxicity dust/mist LC_{50} (mg/l):	> 50 - 300 > 200 - 1,000 > 0.5 - 1	Human Health	Low
		2.3	Toxic gases: gases which are known to be toxic or corrosive to humans and pose a hazard to health. This division is divided into the following categories:			
	6.1A		Inhalation toxicity gases LC_{50}: < 100 ppm, vapours LC_{50}: < 0.5 mg/l		Human Health	High
	6.1B		Inhalation toxicity gases LC_{50}: ≥ 100 ppm - 500 ppm, vapours LC_{50}: ≥ 0.5 mg/l – 2 mg/l		Human Health	Medium
	6.1C		Inhalation toxicity gases LC_{50}: ≥ 500 ppm - 2,500 ppm, vapours LC_{50}: ≥ 2 mg/l – 10 mg/l		Human Health	Low
	(8A) 6.4 All categories	8	Eye Irritation/Corrosiveness: Chemical Property: 2 > pH > 11.5. Effect: Draize Grade ≥ 1 for either corneal opacity or iritis or Grade 2 for either conjunctival redness or chemosis.		Human Health	Medium
	(8A) 6.3 All categories	8	Skin Irritation/Corrosiveness: Chemical Property: 2 > pH > 11.5. Effect: Draize Grade ≥ 1.5 for erythema or oedema		Human Health	Medium
	6.4	(OECD 1+2)	Respiratory or contact sensitiser		Human Health	Medium

Hazard	HSNO Class + Category	(UN Division)	Description	Effect Type	Hazard Level
	6.7A + 6.7B	(OECD 1+2)	Carcinogenicity: Suspected or presumed carcinogen	Human Health	Medium
	6.9A +6.9B	(OECD 1+2)	Known or presumed, or suspected human target organ toxicity.	Human Health	Medium
	6.6A + 6.6B	(OECD 1+2)	(a) Substances known or regarded as mutagen; or (b) Substances which cause concern for man owing to the possibility that they may induce heritable mutations in the germ cells of human.		Medium
	6.8A + 6.8B	(OECD 1+2)	(a) Known or Presumed Human Reproductive or Developmental Toxicant; or (b) Suspected Human Reproductive or Developmental Toxicant.	Human Health	Medium
	6.8C	(OECD)	Effects on or via Lactation Data showing: (i) a \likelihood that the substance would be present in potentially toxic levels in human breast milk; and/or (ii) clearly defined adverse effect in the offspring of animals due to transfer in the milk; or (iii) clearly defined adverse effect on the quality of the milk in animals; and/or (iv) human evidence indicating a hazard to babies during the lactation period.	Human Health	Medium
		6.2	Not applicable		

Hazard	HSNO Class + Category	(UN Division)	Description	Effect Type	Hazard Level
Eco-toxicity			Ecotoxic substances: any substance exhibiting a toxic effect on ecosystems. This division is divided into three categories.		
	9.1A 9.2A 9.3A 9.4A	(OECD1)	a) very toxic to the aquatic environment; very toxic to the terrestrial environment; very toxic to terrestrial vertebrates; very toxic to beneficial invertebrates.	Environment	High
	9.1B 9.2B 9.3B 9.4B	(OECD2)	b) toxic to the aquatic environment; toxic to the terrestrial environment; toxic to terrestrial vertebrates; toxic to beneficial invertebrates.	Environment	Medium
	9.1C 9.2C 9.3C 9.4C	(OECD3)	c) harmful to the aquatic environment; harmful to the terrestrial environment; harmful to terrestrial vertebrates; harmful to beneficial invertebrates.	Environment	Low

* Note possible change to definition of HSNO Class 3C (b).