

Correlation between GHS and New Zealand HSNO Hazard Classes and Categories

April 2019

These tables show the correlation between:

- the United Nations (UN) Globally Harmonised System (GHS, revision 5, 2013) of classification of chemicals, and
- the hazard classification system specified under the New Zealand Hazardous Substances and New Organisms (HSNO) Act 1996 in the Hazardous Substances (Classification) Notice 2017.

Physical hazards

Class	GHS Category	HSNO classification
Explosives	Unstable explosives	^a
	Division 1.1	1.1 (all categories)
	Division 1.2	1.2 (all categories)
	Division 1.3	1.3 (all categories)
	Division 1.4	1.4 (all categories)
	Division 1.5	1.5D
	Division 1.6	1.6N
Flammable gases (including chemically unstable gases)	Flammable gas category 1	2.1.1A
	Flammable gas category 2	2.1.1B
	Chemically unstable gas category A	^a
	Chemically unstable gas category B	^a
Aerosols	Category 1	2.1.2A ^b
	Category 2	^c
	Category 3	^c

^a Not currently covered under the HSNO classification system

^b HSNO criteria taken from UN Model Regulations 11th Edition (1999)

^c Covered under NZ transport law adoption of the UN Recommendations on the Transport of Dangerous Goods

Physical hazards (continued)

Class	GHS Category	HSNO classification
Oxidizing gases	Category 1	5.1.2A
Gases under pressure	Compressed gas	^c
	Liquefied gas	^c
	Refrigerated liquefied gas	^c
	Dissolved gas	^c
Flammable liquids	Category 1	3.1A
	Category 2	3.1B
	Category 3	3.1C
	Category 4	3.1D
Liquid desensitized explosives	^d	3.2A ^b
	^d	3.2B ^b
	^d	3.2C ^b
Flammable solids	Category 1	4.1.1A
	Category 2	4.1.1B
Self-reactive substances and mixtures	Type A	4.1.2A
	Type B	4.1.2B
	Type C	4.1.2C
	Type D	4.1.2D
	Type E	4.1.2E
	Type F	4.1.2F
	Type G	4.1.2G
Solid desensitized explosives	^d	4.1.3A ^b
	^d	4.1.3B ^b
	^d	4.1.3C ^b
Pyrophoric liquids	Category 1	4.2A
Pyrophoric solids	Category 1	4.2A

^d Criteria adopted in GHS revision 6 (2015)

Physical hazards (continued)

Class	GHS Category	HSNO classification
Self-heating substances and mixtures	Category 1	4.2B
	Category 2	4.2C
Substances and mixtures, which in contact with water, emit flammable gases	Category 1	4.3A
	Category 2	4.3B
	Category 3	4.3C
Oxidizing liquids	Category 1	5.1.1A
	Category 2	5.1.1B
	Category 3	5.1.1C
Oxidizing solids	Category 1	5.1.1A
	Category 2	5.1.1B
	Category 3	5.1.1C
Organic peroxides	Type A	5.2A
	Type B	5.2B
	Type C	5.2C
	Type D	5.2D
	Type E	5.2E
	Type F	5.2F
	Type G	5.2G
Corrosive to metals	Category 1	8.1A

Health hazards

Class	GHS Category	HSNO classification
Acute toxicity: oral	Category 1	6.1A
	Category 2	6.1B
	Category 3	6.1C
	Category 4	6.1D
	Category 5	6.1E
Acute toxicity: skin	Category 1	6.1A
	Category 2	6.1B
	Category 3	6.1C
	Category 4	6.1D
	Category 5	6.1E
Acute toxicity: inhalation	Category 1	6.1A
	Category 2	6.1B
	Category 3	6.1C
	Category 4	6.1D
	Category 5	6.1E
Skin corrosion/irritation	Category 1A	8.2A
	Category 1B	8.2B
	Category 1C	8.2C
	Category 2	6.3A
	Category 3	6.3B
Serious eye damage/eye irritation	Category 1	8.3A
	Category 2 (2A/2B)	6.4A ^e
Respiratory sensitization	Category 1	6.5A
	Sub-category 1A	
	Sub-category 1B	

^e HSNO does not separate reversible eye effects into two sub-categories

Health hazards (continued)

Class	GHS Category	HSNO classification
Skin sensitization	Category 1	6.5B
	Sub-category 1A	
	Sub-category 1B	
Germ cell mutagenicity	Category 1	6.6A
	Category 2	6.6B
Carcinogenicity	Category 1	6.7A
	Category 2	6.7B
Reproductive toxicity	Category 1	6.8A
	Category 2	6.8B
	Effects on or via lactation	6.8C
Specific target organ toxicity (single exposure)	Category 1	6.9A
	Category 2	6.9B
	Category 3	^f
Specific target organ toxicity (repeated exposure)	Category 1	6.9A
	Category 2	6.9B
Aspiration hazard	Category 1	6.1E ^g
	Category 2	6.1E ^g

^f HSNO does not specifically address the GHS category of transient target organ effects. Narcotic effects would normally be classified under 6.9B and respiratory irritation would be classified under 6.1E

^g Aspiration hazard is currently captured under HSNO as an acute toxic hazard where there is evidence in humans of significant acute toxic effects as a result of acute exposure to the substance, or where there is the potential for this, where the substance has not already been assigned to a more hazardous category

Environmental hazards

Class	GHS Category	HSNO classification
Aquatic toxicity (acute)	Category 1	9.1A
	Category 2	9.1D
	Category 3	9.1D
Aquatic toxicity (chronic)	Category 1	9.1A
	Category 2	9.1B
	Category 3	9.1C
	Category 4	9.1D
Ecotoxic to soil environment	^h	9.2A – 9.2D
Ecotoxic to terrestrial vertebrates	^h	9.3A – 9.3C
Ecotoxic to terrestrial invertebrates	^h	9.4A – 9.4C
Hazardous to the ozone layer	Category 1	^{a, i}

^h These categories do not form part of the GHS
ⁱ Covered under the Ozone Layer Protection Act