

## Section 1 Identification of Chemical Product and Company

Code	Description	Size	Colour
01493	Gorilla Carpet Gripper Adhesive	500 ml	Brown

Recommended use:	Adhesive	
HSNO Group Standard	HSR002679	
UN number, shipping name and packaging group:		
Suppliers contact details:	Soudal Ltd	Freephone: 0800 70 10 80
	14 Avalon Drive	Phone: (07) 847 5540
	Nawton	
	Hamilton 3200	Email: sales@soudal.co.nz
	New Zealand	Website: <a href="http://www.soudal.co.nz">www.soudal.co.nz</a>
<b>POISON CENTRE NUMBER: 0800 764 766 (24 hours)</b>		

## Section 2 Hazards Identification

### Statement of Hazardous Nature

This product is classified as:

**HAZARDOUS SUBSTANCE** according to the criteria of HSNO.

**NOT REGULATED** under NZS5433:2007 Transport of Dangerous Goods on Land

### Hazardous Substances and New Organisms (HSNO) classification:

Classification	Hazard statements
<b>Acute Inhalation Toxicity Category 4 6.1D</b>	H332 Harmful if inhaled
<b>Skin Effects Category 2 6.3A</b>	H315 Causes skin irritation
<b>Eye Effects Category 2 6.4A</b>	H319 Causes serious eye irritation
<b>Respiratory Sensitisation Category 1 6.5A</b>	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
<b>Skin Sensitisation Category 1 6.5B</b>	H317 May cause an allergic skin reaction
<b>Carcinogenicity Category 2 6.7B</b>	H351 Suspected of causing cancer
<b>Reproductive Toxicity Category 2 6.8B</b>	H362 Suspected of damaging fertility or the unborn child
<b>STOT – RE Category 2 6.9B</b>	H372 Causes damage to organs through prolonged or repeated inhalation
<b>STOT – SE RTI Category 3 6.9</b>	H335 May cause respiratory irritation
<b>Acute Aquatic Hazard Category 3 9.1C</b>	H402 Harmful to aquatic life
<b>Chronic Aquatic Hazard Category 3 9.1C</b>	H412 Harmful to aquatic life with long lasting effects

HSNO Signal Word:

**DANGER**



**Precautionary Statements:**

- P271 Use only outdoors or in a well-ventilated place
- P263 Avoid contact during pregnancy and while nursing
- P284 In case of inadequate ventilation wear respiratory protection
- P280 Wear protective gloves/ Protective clothing/ face protection
- P270 Do not eat, drink or smoke when using this product
- P272 Contaminated work clothing should not be allowed out of the workplace
- P273 Avoid release to the environment
- P405 Store locked up
- P403+P233 Store in a well-ventilated place. Keep container tightly closed

**Section 3. Composition/Information on Ingredients**

Ingredient	CAS No.	Individual HSNO classification	Concentration (% by Wt.)
Polymethylene polyphenylisocyanate	9016-87-9	Acute Inhalation Toxicity Category 4; Skin Effects Category 3; Eye Effects Category 2; STOT – RE Category 1; STOT – SE Category 1	50 – 60
Xylene	1330-20-7	Flammable Liquid Category 3; Acute Oral Toxicity Category 4; Acute Dermal Toxicity Category 4; Acute Inhalation Toxicity Category 5; Skin Effects Category 2; Eye Effects Category 2; Reproductive Toxicity Category 2; STOT – SE Category 2; STOT – RE Category 2; Acute Aquatic Hazard Category 2; Chronic Aquatic Hazard Category 2; Vertebrate Hazard Category 3	1 – 10
Ethylbenzene	100-41-4	Flammable Liquid Category 2; Acute Oral Toxicity Category 5; Acute Inhalation Toxicity Category 4; Skin Effects Category 3; Eye Effects Category 2; Carcinogenicity Category 2; Reproductive Toxicity Category 2; STOT – SE Category 2; STOT – RE Category 2; Acute Aquatic Hazard Category 2; Chronic Aquatic Hazard Category 2; Soil Hazard Category 4	1 – 10
Ingredients not contributing to classification			balance

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

**Section 4 First Aid Measures**

**NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111**

**Eye contact:**

Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Skin contact:**

Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.

**Inhalation:**

Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted.

**Ingestion:**

If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness, i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

Seek medical advice. Avoid giving milk or oils. Avoid giving alcohol.

**General advice and advice for physicians:**

Treat symptomatically.

**Section 5 Fire-Fighting Measures**

**Extinguishing media:**

Foam, Carbon Dioxide, Dry Powder

**Fire/ Explosion Hazard**

Combustible. Burns with acrid black smoke and poisonous fumes. Due to reaction with water producing CO<sub>2</sub>-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Combustion yields traces of highly toxic hydrogen cyanide HCN, plus toxic nitrogen oxides NO<sub>x</sub> and carbon monoxide. May burn but does not ignite easily. Fire may produce irritating, poisonous or corrosive gases. Runoff may create fire or explosion hazard. May decompose explosively when heated or involved in fire. Contact with gas may cause burns, severe injury and/ or frostbite. POISONOUS: MAY BE FATAL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN

**Advice for fire-fighters:**

Alert Fire & Emergency New Zealand and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Equipment should be thoroughly decontaminated after use.

**Section 6 Accidental Release Measures**

**Minor Spills**

Environmental hazard – contain spillage. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Shut off all possible sources of ignition and increase ventilation. Wipe up. If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely.

**Major Spills**

Environmental hazard – contain spillage. Clear area of personnel. Alert Fire & Emergency New Zealand and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment as required. Prevent spillage from entering drains or water ways. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal. Wash area and prevent runoff into drains or waterways. If contamination of drains or waterways occurs, advise emergency services.

**Section 7 Handling and Storage**

**Handling:**

Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

**Storage:**

Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. The storage compound should be kept clear and access restricted to authorised personnel only. Check storage areas for hazardous concentrations of gases prior to entry. Observe manufacturer's storage and handling recommendations contained within this SDS.

**Section 8 Exposure Controls/Personal Protection**

**Exposure Limits**




CAS no.	Substance or ingredient	WES-TWA		WES-STEL	
9016-87-9	Polymethyleme polyphenylisocyanate	0.02 mg/m <sup>3</sup>		0.07 mg/m <sup>3</sup>	
1330-20-7	Xylene	217 mg/m <sup>3</sup>	50 ppm		
100-41-4	Ethylbenzene	434 mg/m <sup>3</sup>	100 ppm	543 mg/m <sup>3</sup>	125 ppm

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

**Engineering Controls:**

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

**Exposure controls:**

Control	Protective measure
Eye	Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] 
Respiratory	Not generally required, but if concentration exceeds exposure limits then a Type A filter of sufficient capacity is recommended 
Skin	No special equipment needed when handling small quantities. OTHERWISE: For potentially moderate exposures: Wear general Butyl or Neoprene protective gloves. For potentially heavy exposures: Wear chemical protective gloves, eg. PVC, and safety footwear. 

**Section 9 Physical and Chemical Properties**

**General substance properties:**

Property	Details
Appearance	Liquid
Odour	Characteristic
pH	No data
Vapour pressure	kPa
Vapour Density	> 1 heavier than air
Viscosity	Not applicable
Boiling Point	No data °C
Volatile materials	No data %
Water solubility	miscible
Freezing/melting point	No data.
Specific gravity/density	1.1 g/ml
Flash point	No data °C
Auto-ignition temperature	No data °C
Upper and lower flammability limits	Lower % Upper %

<b>Corrosiveness</b>	No data.
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## Section 10 Stability and Reactivity

**Stability:**

Stable under normal conditions.

**Conditions to avoid:**

Ignition sources; elevated temperatures

**Incompatible materials to avoid:**

Avoid oxidising agents and some acids

**Hazardous decomposition products:**

Combustion products include carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), silicone dioxide and other pyrolysis products typical of burning organic material.

## Section 11 Toxicological Information

**Summary of Toxicity**

Test	Data and symptoms of exposure
<b>Inhaled</b>	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. The vapour/mist may be highly irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia. Gastrointestinal disturbances are characterised by nausea and vomiting. Pulmonary sensitisation may produce asthmatic reactions ranging from minor breathing difficulties to severe allergic attacks; this may occur following a single acute exposure or may develop without warning for several hours after exposure. Sensitized people can react to very low doses and should not be allowed to work in situations allowing exposure to this material. Continued exposure of sensitised persons may lead to possible long-term respiratory impairment. Inhalation hazard is increased at higher temperatures. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal. The acute toxicity of inhaled alkylbenzene is best described by central nervous system depression. These compounds may also act as general anaesthetics. Whole body symptoms of poisoning include light-headedness, nervousness, apprehension, a feeling of well-being, confusion, dizziness, drowsiness, ringing in the ears, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, depression of breathing, and arrest. Heart stoppage may result from cardiovascular collapse. A slow heart rate and low blood pressure may also occur. Alkylbenzenes are not generally toxic except at high levels of exposure. Their breakdown products have low toxicity and are easily eliminated from the body. Headache, fatigue, tiredness, irritability and digestive disturbances (nausea, loss of appetite and bloating) are the most common symptoms of xylene overexposure. Injury to the heart, liver, kidneys and nervous system has also been noted amongst workers. Xylene is a central nervous system depressant
<b>Oral</b>	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
<b>Dermal</b>	Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Open cuts abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. This material can cause inflammation of the skin on contact in some persons.
<b>Eye</b>	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
<b>Chronic</b>	There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing

and related whole-body problems. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Main route of exposure to the gas in the workplace is by inhalation. Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates. The chemistry of reaction of isocyanates, as evidenced by MDI, in biological milieu is such that in the event of a true exposure of small MDI doses to the mouth, reactions will commence at once with biological macromolecules in the buccal region and will continue along the digestive tract prior to reaching the stomach. Reaction products will be a variety of polyureas and macromolecular conjugates with for example mucus, proteins and cell components. This is corroborated by the results from an MDI inhalation study. Following an inhalation exposure of rats to radiolabelled MDI, 79% of the dose was excreted in faeces. The faecal excretion in these animals was considered entirely due to ingestion of radioactivity from grooming and ingestion of deposited material from the nasopharyngeal region via the mucociliary escalator, i.e. not following systemic absorption. The faecal Version radioactivity was tentatively identified as mixed molecular weight polyureas derived from MDI. Diamine was not present. Thus, for MDI and diisocyanates in general the oral gavage dosing route is inappropriate for toxicological studies and risk assessment. It is expected that oral gavage dosing will result in a similar outcome to that produced by TDI or MDI, that is (1) reaction with stomach contents and (2) polymerization to solid polyureas. Reaction with stomach contents is very plausibly described in case reports of accidental ingestion of polymeric MDI based glue in domestic animals. Extensive polymerization and CO<sub>2</sub> liberation resulting in an expansion of the gastric content is described in the stomach, without apparent acute chemical toxicity. Polyurea formation in organic and aqueous phases has been described. In this generally accepted chemistry of hydrolysis of an isocyanate the initially produced carbamate decarboxylates to an amine which. The amine, as a reactive intermediate, then reacts very readily with the present isocyanate to produce a solid and inert polyurea. This urea formation acts as a pH buffer in the stomach, thus promoting transformation of the diisocyanate into polyurea, even under the acidic conditions. At the resorptive tissues in the small intestine, these high molecular reaction products are likely to be of very low bioavailability, which is substantiated by the absence of systemic toxicity in acute oral bioassays with rats at the OECD limit dose (LC<sub>50</sub>>2 g/kg bw). The respiratory tract may be regarded as the main entry for systemically available isocyanates as evidenced following MDI. exposures. A detailed summary on urinary, plasma and in vitro metabolite studies is provided below. Taken together, all available studies provide convincing evidence that MDI-protein adduct and MDI-metabolite formation proceeds: via formation of a labile isocyanate glutathione (GSH)-adduct, then transfer to a more stable adduct with larger proteins, and without formation of free MDA. MDA reported as a metabolite is actually formed by analytical workup procedures (strong acid or base hydrolysis) and is not an identified metabolite in urine or blood. Animal testing shows that polymeric MDI can damage the nasal cavities and lungs, causing inflammation and increased cell growth. Isocyanate vapours are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, incoordination, anxiety, depression and paranoia.

Ingredient	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
Polymethylene polyphenylisocyanate	>2000 mg/kg	9400 mg/kg	0.49 mg/L/7hr
Xylene	3623-8700 mg/kg	>1700 mg/kg	4994 mg/L/4hr
Ethyl benzene	3500 mg/kg	> 5000 mg/kg	17.75 mg/L/2hr

## Section 12 Ecological Information

Harmful to aquatic life with long lasting effects. Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high-water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Ingredient	Fish	Crustacea	Algae
Polymethylene polyphenylisocyanate	LC <sub>50 96hr</sub> >1 mg/L		EC <sub>50 96hr</sub> 1 - 640 mg/L
Xylene	LC <sub>50 96hr</sub> 2.8 mg/L	EC <sub>50 48hr</sub> 1.8 mg/L	EC <sub>50 96hr</sub> 3.2 mg/L NOEC <sub>73hr</sub> 0.44 mg/L
Ethylbenzene	LC <sub>50 96hr</sub> 0.0043 mg/L	EC <sub>50 48hr</sub> 1.184 mg/L NOEC <sub>168hr</sub> 0.96 mg/L	EC <sub>50 96hr</sub> 3.6 mg/L

	Persistence H <sub>2</sub> O/ Soil	Persistence Air	Bioaccumulation	Mobility
Xylene	HIGH	LOW	MEDIUM	
Ethylbenzene	HIGH	LOW	LOW	LOW

## Section 13 Disposal Considerations

## SAFETY DATASHEET

Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the product.

DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible or consult manufacturer for recycling options. Consult Land Waste Authority for disposal. Bury or incinerate residue at an approved site. Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled. The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous. Only dispose to the environment if a tolerable exposure limit has been set for the substance. Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

### Section 14 Transport Information

NOT REGULATED

### Section 15 Regulatory Information

#### HSNO approval number and Group Standard:

HSR002679 Surface Coatings & Colourants (Toxic [6.7])

#### Group Standard conditions and other regulations:

Condition	Requirement
SDS	Safety data sheet must be available to a person handling the substance within 10 minutes.
Emergency plan	Required when quantities exceed 1,000 Lt
Certified handler	Not required
Tracking	Not applicable
Bunding and secondary containment	Not applicable
Signage	Required when present in quantities exceeding 1,000 Lt
Location Compliance Certificate	Not requirtrted
Hazardous Area	Not required
Fire extinguisher	Not required

#### National Inventories

Australia	AICS	Y
Canada	DSL	Y
Canada	NDSL	N
China	IECSC	Y
Europe	EINEC/ELINCS/NLP	N
Japan	ENCS	Y
Korea	KECI	Y
New Zealand	NZIOC	Y
Philippines	PICCS	Y
USA	TSCA	Y
Taiwan	TCSI	Y
Mexico	INSQ	Y
Vietnam	NCI	Y
Russia	ARIPS	Y

### Section 16 Other Information

**Revision History**

July 2020	Reformulated and reformatted
May 2016	Updated pictograms
Apr 2016	Additional First Aid instructions
Feb 2016	Initial Preparation

**Abbreviations:**

Abbreviation	Description
CAS number	Number assigned to chemical in the Chemical Abstracts Service registry
HAZCHEM code	Code used by fire-fighters to determine correct method of action in the case of fire
HSNO	Hazardous Substances and New Organisms (Act)
ICAO Technical Instructions	International Civil Aviation Organization Technical Instructions
IMDG code	International Maritime Dangerous Goods code controlled by the International Maritime Organization (IMO)
LC <sub>50</sub>	Lethal concentration 50% - concentration fatal to 50% of the tested population
LD <sub>50</sub>	Lethal dose 50% - dose fatal to 50% of the tested population
NZS 5433	New Zealand Standard 5433 (Standard for the Transport of Dangerous Goods on Land)
SDS	Safety data sheet
STEL	Short term exposure limit
TWA	Time weighted average (typically measured as 8 hours)
UN number	United nations number
WES	Workplace exposure standard

**References**

Chemical properties and HSNO classifications derived from the New Zealand chemical classification information database (CCID). [www.epa.govt.nz](http://www.epa.govt.nz).  
 Workplace exposure limits derived from Workplace Exposure Standards and Biological Exposure Indices 11th Edition (November 2019).

***The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material in combination with any other material or in any process, unless specified in the text.***

This SDS was prepared by Collievale Enterprises Ltd in accord with the Hazardous Substances (Safety Data Sheets) Notice 2017

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End of SDS