# **ITW POLYMERS & FLUIDS**

Chemwatch: **5347-46** Version No: **6.1** Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements Issue Date: 23/12/2022 Print Date: 01/10/2024 S.GHS.AUS.EN

# SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### **Product Identifier**

Product name	Devcon Megawear Hardener
Chemical Name	triethylenetetramine
Synonyms	Not Available
Proper shipping name	TRIETHYLENETETRAMINE
Chemical formula	Not Applicable
Other means of identification	Not Available

# Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Hardener component of a two part wear resistant epoxy coating.
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### Details of the manufacturer or supplier of the safety data sheet

Registered company name	ITW POLYMERS & FLUIDS	ITW Polymers & Fluids (NZ)
Address	100 Hassall Street, Wetherill Park NSW 2164 Australia	Unit 2/38 Trugood Drive, East Tamaki, Auckland 2013 New Zealand
Telephone	+61 2 9757 8800	0800 476 265
Fax	+61 2 9757 3855	+64 9 273 6489
Website	www.itwpf.com.au	www.itwpf.co.nz
Email	Not Available	Not Available

#### **Emergency telephone number**

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)	ITW Polymers & Fluids (NZ)	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone numbers	+61 1800 951 288	0800 2436 2255	+61 1800 951 288
Other emergency telephone numbers	+61 3 9573 3188	Not Available	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01

# **SECTION 2 Hazards identification**

### Classification of the substance or mixture

# HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	S5
Classification <sup>[1]</sup>	Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 1B, Sensitisation (Skin) Category 1A, Serious Eye Damage/Eye Irritation Category 1, Reproductive Toxicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements



Signal word Danger

#### Hazard statement(s)

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

#### Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.	
P102	Keep out of reach of children.	
P103	Read carefully and follow all instructions.	

### Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P280	Wear protective gloves, protective clothing, eye protection and face protection.

### Precautionary statement(s) Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.		
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].		
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		
P308+P313	IF exposed or concerned: Get medical advice/ attention.		

# Precautionary statement(s) Storage

P405 Store locked up.
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### Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
112-24-3	60-100	triethylenetetramine
Not Available	balance	ingredients determined not to be hazardous
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available	

# **SECTION 4 First aid measures**

### Description of first aid measures

Eye Contact

- If this product comes in contact with the eyes:
  - Wash out immediately with fresh running water.

	<ul> <li>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.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<ul> <li>If skin contact occurs:</li> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>
Inhalation	<ul> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor.</li> <li>Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.</li> <li>Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).</li> <li>As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.</li> <li>Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.</li> <li>This must definitely be left to a doctor or person authorised by him/her.</li> <li>(ICSC13719)</li> </ul>
Ingestion	<ul> <li>For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>Urgent hospital treatment is likely to be needed.</li> <li>If swallowed do NOT induce vomiting.</li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>Observe the patient carefully.</li> <li>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>Transport to hospital or doctor without delay.</li> </ul>

#### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short-term repeated exposures to highly alkaline materials:

- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into
- the tissue.

Alkalis continue to cause damage after exposure.

INGESTION:

#### Milk and water are the preferred diluents

- No more than 2 glasses of water should be given to an adult.
- Neutralising agents should never be given since exothermic heat reaction may compound injury.
- \* Catharsis and emesis are absolutely contra-indicated.

\* Activated charcoal does not absorb alkali.

\* Gastric lavage should not be used.

Supportive care involves the following:

- Withhold oral feedings initially.
- If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:

Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

If exposure has been severe and/or symptoms marked, observation in hospital for 48 hours should be considered due to possibility of delayed pulmonary oedema.

### **SECTION 5 Firefighting measures**

#### Extinguishing media

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

#### Special hazards arising from the substrate or mixture

Fire Incompatibility	<ul> <li>Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result</li> </ul>
Advice for firefighters	
Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Combustible.</li> <li>Slight fire hazard when exposed to heat or flame.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>On combustion, may emit toxic fumes of carbon monoxide (CO).</li> <li>Combustion products include:</li> <li>carbon dioxide (CO2)</li> <li>nitrogen oxides (NOx)</li> <li>other pyrolysis products typical of burning organic material.</li> <li>May emit corrosive fumes.</li> </ul>
HAZCHEM	2X

#### **SECTION 6 Accidental release measures**

# Personal precautions, protective equipment and emergency procedures

See section 8

# **Environmental precautions**

See section 12

### Methods and material for containment and cleaning up

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

# **SECTION 7 Handling and storage**

### Precautions for safe handling

Safe handling	<ul> <li>DO NOT USE brass or copper containers / stirrers</li> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.</li> </ul>	
Other information	<ul> <li>for bulk storages:</li> <li>If slight coloration of the ethyleneamine is acceptable, storage tanks may be made of carbon steel or black iron, provided they are free of rust and mill scale. However, if the amine is stored in such tanks, color may develop due to iron contamination. If iron contamination cannot be tolerated, tanks constructed of types 304 or 316 stainless steel should be used. (Note: Because they are quickly corroded by amines, do not use copper, copper alloys, brass, or bronze in tanks or lines.)</li> <li>This product should be stored under a dry inert gas blanket, such as nitrogen, to minimize contamination resulting from contact with air and water</li> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store near acids, or oxidising agents</li> <li>No smoking, naked lights, heat or ignition sources.</li> </ul>	

### Conditions for safe storage, including any incompatibilities

Suitable container	▶ Lined metal can, lined metal pail/ can.
	▶ Plastic pail.
	Polyliner drum.

Continued...

### **Devcon Megawear Hardener**

<ul> <li>Packing as recommended by manufacturer.</li> </ul>
<ul> <li>Packing as recommended by manufacturer.</li> <li>Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> <li>Avoid contact with copper, aluminium and their alloys.</li> <li>Avoid reaction with oxidising agents</li> <li>Triethylenetetramine (TETA):         <ul> <li>aqueous solutions are strong organic bases</li> <li>reacts with nitrogen containing compounds; may cause violent decomposition</li> <li>reacts violently with strong oxidisers, nitroparaffins, nitrogen tetroxide, permanganates, peroxides, ammonium persulfate, bromine dioxide, sulfuric acid, nitric acid</li> <li>is incompatible with organic anhydrides (eg maleic anhydride), acrylates, alcohols, aldehydes, alkylene oxides, substituted allyls, cellulose nitrate, cresols, caprolactam solutions, epichlorohydrin, ethylene dichloride, glycols, halons, halogenated hydrocarbons isocvanates ketones methyl trichloroacetate nitrates phenols urea vinyl acetate</li> </ul> </li> </ul>
<ul> <li>allyls, cellulose nitrate, cresols, caprolactam solutions, epichlorohydrin, ethylene dichloride, glycols, halons, halogenated hydrocarbons, isocyanates, ketones, methyl trichloroacetate, nitrates, phenols, urea, vinyl acetate</li> <li>increases the explosive sensitivity of nitromethane</li> <li>attacks aluminium, cobalt, copper, lad, nickel, tin zinc, and their alloys, and some plastics, rubber and coatings</li> <li>reacts with halon fire extinguishers</li> </ul>

# **SECTION 8 Exposure controls / personal protection**

### **Control parameters**

# Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

### Not Available

Ingredient	Original IDLH	Revised IDLH
triethylenetetramine	Not Available	Not Available

# Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
triethylenetetramine	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

### Exposure controls

Appropriate engineering controls	General exhaust is adequate under normal operating conditions. Refer also to protective measures for the other component used with the product. Read both SDS before using; store and attach SDS together.
Individual protection measures, such as personal protective equipment	
Eye and face protection	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>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.</li> </ul>
Skin protection	See Hand protection below
Hands/feet protection	<ul> <li>NOTE:</li> <li>The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> <li>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</li> <li>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</li> <li>Personal hygiene is a key element of effective hand care.</li> <li>Leather wear not recommended: Contaminated leather footwear, watch bands, should be destroyed, i.e. burnt, as they cannot be adequately decontaminated</li> <li>When handling liquid-grade epoxy resins wear chemically protective gloves , boots and aprons.</li> <li>The performance, based on breakthrough times ,of:</li> <li>Ethyl Vinyl Alcohol (EVAL laminate) is generally excellent</li> <li>Butyl Rubber ranges from excellent to good</li> <li>Nitrile Butyl Rubber (NBR) from excellent to fair.</li> <li>Neoprene from excellent to fair</li> <li>Polyvinyl (PVC) from excellent to poor</li> <li>As defined in ASTM F-739-96</li> <li>Excellent breakthrough time &gt; 480 min</li> </ul>

	<ul> <li>Good breakthrough time &gt; 20 min</li> <li>Fair breakthrough time &lt; 20 min</li> <li>Poor glove material degradation</li> <li>Gloves should be tested against each resin system prior to making a selection of the most suitable type. Systems include both the resin and any hardener, individually and collectively)</li> <li>DO NOT use cotton or leather (which absorb and concentrate the resin), natural rubber (latex), medical or polyethylene gloves (which absorb the resin).</li> <li>Neoprene gloves</li> </ul>
Body protection	See Other protection below
Other protection	<ul> <li>Overalls.</li> <li>PVC Apron.</li> <li>PVC protective suit may be required if exposure severe.</li> <li>Eyewash unit.</li> </ul>

# **Respiratory protection**

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

# **SECTION 9 Physical and chemical properties**

# Information on basic physical and chemical properties

Appearance	Pale yellow, alkaline liquid with mild, ammonia type odour; mixes with water.		
Physical state	Liquid	Relative density (Water = 1)	~1.0
Odour	Not Available	Partition coefficient n- octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	300
pH (as supplied)	14	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	-35	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	266 decomposes	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	135 (TCC)	Taste	Not Available
Evaporation rate	0.01 BuAc=1Slow	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	6.5	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	<0.0013 @ 20 C	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	10
Vapour density (Air = 1)	5.04	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

# **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

# **SECTION 11 Toxicological information**

# Information on toxicological effects

Inhaled	Inhalation of epoxy resin amine hardeners (including polyamines and amine adducts) may produce bronchospasm and coughing episodes lasting several days after cessation of the exposure. Even faint traces of these vapours may trigger an intense reaction in individuals showing "amine asthma". Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane. Inhalation hazard is increased at higher temperatures.
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea. The vomitus may contain blood and mucous. Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the oesophagus and stomach may experience burning pain; vomiting and diarrhoea may follow.
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption. Amine epoxy-curing agents (hardeners) may produce primary skin irritation and sensitisation dermatitis in predisposed individuals. Cutaneous reactions include erythema, intolerable itching and severe facial swelling. Skin contact with alkaline corrosives may produce severe pain and burns; brownish stains may develop. The corroded area may be soft, gelatinous and necrotic; tissue destruction may be deep. 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.
Eye	Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris. Mild cases often resolve; severe cases can be prolonged with complications such as persistent swelling, scarring, permanent cloudiness, bulging of the eye, cataracts, eyelids glued to the eyeball and blindness. Vapours of volatile amines irritate the eyes, causing excessive secretion of tears, inflammation of the conjunctiva and slight swelling of the cornea, resulting in "halos" around lights. This effect is temporary, lasting only for a few hours. However this condition can reduce the efficiency of undertaking skilled tasks, such as driving a car. Direct eye contact with liquid volatile amines may produce eye damage, permanent for the lighter species.
Chronic	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue.

Devcon Megawear Hardener	ΤΟΧΙΟΙΤΥ	IRRITATION
	Not Available	Not Available
	ΤΟΧΙΟΙΤΥ	IRRITATION
triethylenetetramine	Dermal (rabbit) LD50: 805 mg/kg <sup>[2]</sup>	Eye (rabbit):20 mg/24 h - moderate
	Oral (Rat) LD50: 1591.4 mg/kg <sup>[1]</sup>	Eye (rabbit); 49 mg - SEVERE
		Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (rabbit): 490 mg open SEVERE
		Skin (rabbit): 5 mg/24 SEVERE
		Skin: adverse effect observed (corrosive) <sup>[1]</sup>
Legend:	1. Value obtained from Europe ECHA Registered Substances - Unless otherwise specified data extracted from RTECS - Regis	Acute toxicity 2. Value obtained from manufacturer's SDS. ter of Toxic Effect of chemical Substances

TRIETHYLENETETRAMINE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. Ethyleneamines are very reactive and can cause chemical burns, skin rashes and asthma-like symptoms. It is readily absorbed through the skin and may cause eye blindness and irreparable damage. As such, they require careful handling. In general, the low-molecular weight polyamines have been positive in the Ames assay (for genetic damage); however, this is probably due to their ability to chelate copper. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. For alkyl polyamines: The alkyl polyamines cluster consists of two terminal primary and at least one secondary amine groups and are derivatives of low molecular weight ethylenediamine, propylenediamine or hexanediamine. Toxicity depends on route of exposure. Cluster members have been shown to cause skin irritation or sensitisation, eye irritation and genetic defects, but have not been shown to cause cancer.

	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non- allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. Triethylenetetramine is a severe irritant to skin and eyes and may induce skin sensitisation. Acute exposure to saturated vapour via inhalation was tolerated without impairment but exposure to aerosol may lead to reversible irritations of the mucous membranes in the airways. Studies done on experimental animals showed that it does not cause cancer or foetal developmental defects. Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).			
Acute Toxicity	✓	Carcinogenicity	×	
Skin Irritation/Corrosion	*	Reproductivity	×	
Serious Eye Damage/Irritation	~	STOT - Single Exposure	×	
Respiratory or Skin sensitisation	~	STOT - Repeated Exposure	*	
Mutagenicity	×	Aspiration Hazard	×	

Legend: X – Data either not available or does not fill the criteria for classification

— Data available to make classification

SECTION 12 Ecological information

### Toxicity

Devcon Megawear Hardener	Endpoint Test Duration (hr) Species		Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
triethylenetetramine	Endpoint	Test Duration (hr)	Species	Value	Source
	BCF	1008h	Fish	<0.5	7
	EC50	72h	Algae or other aquatic plants	2.5mg/l	1
	EC50	48h	Crustacea	31.1mg/l	1
	ErC50	72h	Algae or other aquatic plants	2.5mg/l	1
	LC50	96h	Fish	180mg/l	1
	EC10(ECx)	72h	Algae or other aquatic plants	0.67mg/l	1
	EC50	96h	Algae or other aquatic plants	3.7mg/L	4
Legend:	Extracted from 4. US EPA, Ec Bioconcentrati	1. IUCLID Toxicity Data 2. Europe EC. otox database - Aquatic Toxicity Data 5 on Data 7. METI (Japan) - Bioconcentr	HA Registered Substances - Ecotoxicologica 5. ECETOC Aquatic Hazard Assessment Data ation Data 8. Vendor Data	l Information - Aqua a 6. NITE (Japan) -	atic Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Prevent, by any means available, spillage from entering drains or water courses. **DO NOT** discharge into sewer or waterways.

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
triethylenetetramine	LOW	LOW

# **Bioaccumulative potential**

Ingredient	Bioaccumulation
triethylenetetramine	LOW (BCF = 5)

### Mobility in soil

Ingredient	Mobility
triethylenetetramine	LOW (Log KOC = 309.9)

#### Waste treatment methods

Product / Packaging	<ul> <li>Recycle wherever possible or consult manufacturer for recycling options.</li> <li>Consult State Land Waste Management Authority for disposal.</li> </ul>
disposal	<ul> <li>Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.</li> <li>Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.</li> </ul>

# **SECTION 14 Transport information**

# Labels Required

	B
Marine Pollutant	NO
HAZCHEM	2X

# Land transport (ADG)

14.1. UN number or ID number	2259		
14.2. UN proper shipping name	TRIETHYLENETETRAMINE		
14.3. Transport hazard class(es)	Class Subsidiary Hazard	8 Not Applicable	
14.4. Packing group	II		
14.5. Environmental hazard	Not Applicable		
14.6. Special precautions for user	Special provisions Limited quantity	Not Applicable	

# Air transport (ICAO-IATA / DGR)

14.1. UN number	2259			
14.2. UN proper shipping name	Triethylenetetramine			
14.3. Transport hazard class(es)	ICAO/IATA Class	CAO/IATA Class 8		
	ERG Code	ard     Not Applicable       8L		
14.4. Packing group	Ш			
14.5. Environmental hazard	Not Applicable			
	Special provisions		Not Applicable	
	Cargo Only Packing Instructions		855	
	Cargo Only Maximum Qty / Pack		30 L	
14.6. Special precautions for user	Passenger and Cargo Packing Instructions		851	
	Passenger and Cargo Maximum Qty / Pack		1 L	
	Passenger and Cargo Limited Quantity Packing Instructions		Y840	
	Passenger and Cargo Limited Maximum Qty / Pack		0.5 L	

# Sea transport (IMDG-Code / GGVSee)

14.1. UN number	2259		
14.2. UN proper shipping name	TRIETHYLENETETRAMINE		
14.3. Transport hazard class(es)	IMDG Class		
	IMDG Subsidiary Hazard	lot Applicable	

14.4. Packing group	П		
14.5 Environmental hazard	Not Applicable		
14.6. Special precautions for user	EMS Number	F-A , S-B	
	Special provisions	Not Applicable	
	Limited Quantities	1 L	

### 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
triethylenetetramine	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
triethylenetetramine	Not Available

# **SECTION 15 Regulatory information**

### Safety, health and environmental regulations / legislation specific for the substance or mixture

#### triethylenetetramine is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

- Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) Schedule 4
- Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

#### Additional Regulatory Information

Not Applicable

### **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (triethylenetetramine)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

# **SECTION 16 Other information**

Revision Date	23/12/2022
Initial Date	01/04/2019

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
5.1	03/09/2020	Classification change due to full database hazard calculation/update.
6.1	23/12/2022	Classification review due to GHS Revision change.

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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