

# Devcon Plastic Steel Epoxy (S5) Hardener

## ITW POLYMERS & FLUIDS

Chemwatch: 02-0802

Version No: 3.1.1.1

Safety Data Sheet according to WHS and ADG requirements

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Initial Date: Not Available

S.GHS.AUS.EN

### SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### Product Identifier

<b>Product name</b>	Devcon Plastic Steel Epoxy (S5) Hardener
<b>Other means of identification</b>	Not Available

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

<b>Relevant identified uses</b>	Hardener component of two part epoxy system.
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#### Details of the supplier of the safety data sheet

<b>Registered company name</b>	ITW POLYMERS & FLUIDS
<b>Address</b>	100 Hassall Street, Wetherill Park Not Available 2164 NSW Australia
<b>Telephone</b>	+61 2 9757 8800
<b>Fax</b>	+61 2 9757 3855
<b>Website</b>	www.itwpf.com.au
<b>Email</b>	Not Available

#### Emergency telephone number

<b>Association / Organisation</b>	Not Available	Not Available
<b>Emergency telephone numbers</b>	1800 039 008	+800 2436 2255
<b>Other emergency telephone numbers</b>	+61 3 9573 3112	Not Available

#### CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
1800 039 008	1800 039 008	+612 9186 1132

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. NON-DANGEROUS GOODS.** According to the WHS Regulations and the ADG Code.

<b>Poisons Schedule</b>	Not Applicable
<b>Classification <sup>[1]</sup></b>	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Skin Sensitizer Category 1, Reproductive Toxicity Category 1B, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 3
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

#### Label elements

<b>GHS label elements</b>	
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## Devcon Plastic Steel Epoxy (S5) Hardener

SIGNAL WORD **DANGER****Hazard statement(s)**

<b>H302</b>	Harmful if swallowed.
<b>H315</b>	Causes skin irritation.
<b>H319</b>	Causes serious eye irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H360</b>	May damage fertility or the unborn child.
<b>H335</b>	May cause respiratory irritation.
<b>H412</b>	Harmful to aquatic life with long lasting effects.

**Precautionary statement(s) Prevention**

<b>P201</b>	Obtain special instructions before use.
<b>P271</b>	Use only outdoors or in a well-ventilated area.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
<b>P281</b>	Use personal protective equipment as required.

**Precautionary statement(s) Response**

<b>P308+P313</b>	IF exposed or concerned: Get medical advice/attention.
<b>P362</b>	Take off contaminated clothing and wash before reuse.
<b>P302+P352</b>	IF ON SKIN: Wash with plenty of soap and water.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Precautionary statement(s) Storage**

<b>P405</b>	Store locked up.
<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.

**Precautionary statement(s) Disposal**

<b>P501</b>	Dispose of contents/container in accordance with local regulations.
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**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
68513-05-3	10-20	<u>tall oil/ tetraethylenepentamine polyamides</u>
Not Available	5-10	pacm oligomers
100-51-6	1-5	<u>benzyl alcohol</u>
112-57-2	1-5	<u>tetraethylenepentamine</u>
25154-52-3	1-5	<u>nonylphenol</u>
84852-15-3	1-5	<u>4-nonylphenol, branched</u>
90-72-2	1-5	<u>2,4,6-tris(dimethylamino)methylphenol</u>
14808-60-7	<1	<u>silica crystalline - quartz</u>
	balance	ingredients proprietary nonhazardous

**SECTION 4 FIRST AID MEASURES****Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally</li> </ul>
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	<ul style="list-style-type: none"> <li>▶ 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>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <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>
<b>Inhalation</b>	<ul style="list-style-type: none"> <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, without delay.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></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>▶ Seek medical advice.</li> </ul>

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

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]

**SECTION 5 FIREFIGHTING MEASURES****Extinguishing media**

	<ul style="list-style-type: none"> <li>▶ Foam.</li> <li>▶ Dry chemical powder.</li> <li>▶ BCF (where regulations permit).</li> <li>▶ Carbon dioxide.</li> </ul>
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**Special hazards arising from the substrate or mixture**

<b>Fire Incompatibility</b>	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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**Advice for firefighters**

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <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 water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <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> </ul>

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- ▶ On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include:
- , carbon dioxide (CO<sub>2</sub>)
  - , nitrogen oxides (NO<sub>x</sub>)
  - , hydrogen chloride
  - , other pyrolysis products typical of burning organic material.
- May emit poisonous fumes.  
May emit corrosive fumes.

### SECTION 6 ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Remove all ignition sources.</li> <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> </ul>
<b>Major Spills</b>	<p>Moderate hazard.</p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> </ul>
	Personal Protective Equipment advice is contained in Section 8 of the SDS.

### SECTION 7 HANDLING AND STORAGE

#### Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></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>▶ Prevent concentration in hollows and sumps.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> </ul>

#### Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Metal can or drum</li> <li>▶ Packaging as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <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> </ul>

### SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Control parameters

##### OCCUPATIONAL EXPOSURE LIMITS (OEL)

##### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	silica crystalline - quartz	Silica - Crystalline: Quartz (respirable dust) / Quartz (respirable dust)	0.1 mg/m <sup>3</sup>	Not Available	Not Available	Not Available

##### EMERGENCY LIMITS

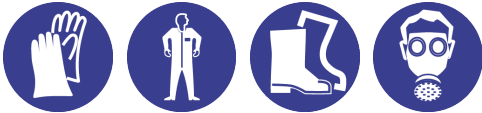
Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
benzyl alcohol	Benzyl alcohol	30 ppm	52 ppm	740 ppm
tetraethylenepentamine	Tetraethylenepentamine	15 mg/m <sup>3</sup>	130 mg/m <sup>3</sup>	790 mg/m <sup>3</sup>
nonylphenol	Nonyl phenol (mixed isomers)	2.5 mg/m <sup>3</sup>	27 mg/m <sup>3</sup>	110 mg/m <sup>3</sup>

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nonylphenol	Nonyl phenol, 4- (branched)	0.2 mg/m3	2.3 mg/m3	260 mg/m3
4-nonylphenol, branched	Nonyl phenol, 4- (branched)	0.2 mg/m3	2.3 mg/m3	260 mg/m3
2,4,6-tris[(dimethylamino)methyl]phenol	Tris(dimethylaminomethyl)phenol, 2,4,6-	3.6 mg/m3	40 mg/m3	240 mg/m3
silica crystalline - quartz	Silica, crystalline-quartz; (Silicon dioxide)	0.075 mg/m3	33 mg/m3	200 mg/m3

Ingredient	Original IDLH	Revised IDLH
tall oil/ tetraethylenepentamine polyamides	Not Available	Not Available
pacm oligomers	Not Available	Not Available
benzyl alcohol	Not Available	Not Available
tetraethylenepentamine	Not Available	Not Available
nonylphenol	Not Available	Not Available
4-nonylphenol, branched	Not Available	Not Available
2,4,6-tris[(dimethylamino)methyl]phenol	Not Available	Not Available
silica crystalline - quartz	N.E. mg/m3 / N.E. ppm	50 mg/m3

## Exposure controls

<b>Appropriate engineering controls</b>	<p>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.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> <p>Refer also to protective measures for the other component used with the product. Read both SDS before using; store and attach SDS together.</p>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</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>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <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> </ul> <p>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.</p> <p>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.</p> <p>Personal hygiene is a key element of effective hand care.</p>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C. apron.</li> <li>▶ Barrier cream.</li> </ul>
<b>Thermal hazards</b>	Not Available

## Respiratory protection

Type ABK-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

<b>Appearance</b>	Amber liquid with ammonia-like, fishy odour.		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	1.016
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	Not Available	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	131	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Not Available	<b>pH as a solution (1%)</b>	>10 (5% slurry)
<b>Vapour density (Air = 1)</b>	>1	<b>VOC g/L</b>	Not Available

### SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

### SECTION 11 TOXICOLOGICAL INFORMATION

#### Information on toxicological effects

<b>Inhaled</b>	<p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>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".</p>
<b>Ingestion</b>	<p>Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.</p> <p>Ingestion may result in nausea, abdominal irritation, pain and vomiting</p>
<b>Skin Contact</b>	<p>This material can cause inflammation of the skin on contact in some persons.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>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.</p>
<b>Eye</b>	<p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p>
<b>Chronic</b>	<p>Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.</p> <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general</p>

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population.  
 Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.  
 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.  
 There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.  
 Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.  
 There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.  
 Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity.

Devcon Plastic Steel Epoxy (S5) Hardener	TOXICITY	IRRITATION
	Not Available	Not Available
tall oil/ tetraethylenepentamine polyamides	TOXICITY	IRRITATION
	Oral (rat) LD50: >5000 mg/kg <sup>[2]</sup>	Eyes (rabbit) (-) moderate Skin (rabbit) (-) moderate
benzyl alcohol	TOXICITY	IRRITATION
	dermal (rat) LD50: 1000000 ppm <sup>[2]</sup>	Eye (rabbit): 0.75 mg open SEVERE
	Inhalation (rat) LC50: >4.178 mg/L/4hr <sup>[2]</sup>	Skin (man): 16 mg/48h-mild
Oral (rat) LD50: 1560 mg/kg <sup>[2]</sup>	Skin (rabbit):10 mg/24h open-mild	
tetraethylenepentamine	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 660 mg/kg <sup>[2]</sup>	Eye (rabbit): 100 mg/24h moderate
	Oral (rat) LD50: 3990 mg/kg <sup>[2]</sup>	Eye (rabbit): 5 mg moderate Skin (rabbit): 495 mg SEVERE Skin (rabbit): 5 mg/24h SEVERE
nonylphenol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 2030.86 mg/kg <sup>[2]</sup>	Eye (rabbit): 0.5 mg (open)-SEVERE
	Oral (rat) LD50: 580 mg/kg <sup>[2]</sup>	Skin (rabbit): 500 mg(open)-mod Skin(rabbit):10mg/24h(open)-SEVERE
4-nonylphenol, branched	TOXICITY	IRRITATION
	Oral (rat) LD50: 1246 mg/kg <sup>[1]</sup>	Eye (rabbit): 100 mg - SEVERE Skin (rabbit): 500 mg/24h-SEVERE
2,4,6-tris[(dimethylamino)methyl]phenol	TOXICITY	IRRITATION
	dermal (rat) LD50: >973 mg/kg <sup>[1]</sup>	Eye (rabbit): 0.05 mg/24h - SEVERE
	Inhalation (rat) LC50: >0.5 mg/l/1 hr <sup>[2]</sup>	Skin (rabbit): 2 mg/24h - SEVERE
Oral (rat) LD50: 1200 mg/kg <sup>[2]</sup>		
silica crystalline - quartz	TOXICITY	IRRITATION
	Not Available	Not Available

**Legend:**

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

**BENZYL ALCOHOL**

Unlike benzylic alcohols, the beta-hydroxyl group of the members of benzyl alkyl alcohols contributes to break down reactions but do not undergo phase II metabolic activation. Though structurally similar to cancer causing ethyl benzene, phenethyl alcohol is only of negligible concern due to limited similarity in their pattern of activity.

For benzoates:

Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol are considered to be unharmed and of low acute toxicity. They may cause slight irritation by oral, dermal or inhalation exposure except sodium benzoate which doesn't irritate the skin. Studies showed increased mortality, reduced weight gain, liver and kidney

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	<p>effects at higher doses, also, lesions of the brains, thymus and skeletal muscles may occur with benzyl alcohol.</p> <p>Adverse reactions to fragrances in perfumes and in fragranced cosmetic products include allergic contact dermatitis, irritant contact dermatitis, photosensitivity, immediate contact reactions (contact urticaria), and pigmented contact dermatitis. Airborne and conjugal contact dermatitis occur.</p> <p>Intolerance to perfumes, by inhalation, may occur if the perfume contains a sensitising principal. Symptoms may vary from general illness, coughing, phlegm, wheezing, chest-tightness, headache, exertional dyspnoea, acute respiratory illness, hayfever, and other respiratory diseases (including asthma).</p> <p>Fragrance allergens act as haptens, i.e. low molecular weight chemicals that are immunogenic only when attached to a carrier protein. However, not all sensitising fragrance chemicals are directly reactive, but require previous activation. A prohaptens is a chemical that itself is non- or low-sensitising, but that is transformed into a hapten outside the skin by simple chemical transformation (air oxidation, photoactivation) and without the requirement of specific enzymatic systems. A prohaptens is a chemical that itself is non- or low-sensitising but that is transformed into a hapten in the skin (bioactivation) usually via enzyme catalysis.</p> <p>A member or analogue of a group of benzyl derivatives generally regarded as safe (GRAS) based in part on their self-limiting properties as flavouring substances in food; their rapid absorption, metabolic detoxification, and excretion in humans and other animals, their low level of flavour use, the wide margin of safety between the conservative estimates of intake and the no-observed-adverse effect levels determined from chronic and subchronic studies and the lack of significant genotoxic and mutagenic potential. This evidence of safety is supported by the fact that the intake of benzyl derivatives as natural components of traditional foods is greater than the intake as intentionally added flavouring substances.</p> <p>All members of this group are aromatic primary alcohols, aldehydes, carboxylic acids or their corresponding esters or acetals.</p> <p>The aryl alkyl alcohol (AAA) fragrance ingredients are a diverse group of chemical structures with similar metabolic and toxicity profiles.</p> <p>The AAA fragrances demonstrate low acute and subchronic dermal and oral toxicity.</p> <p>At concentrations likely to be encountered by consumers, AAA fragrance ingredients are non-irritating to the skin.</p> <p>The potential for eye irritation is minimal.</p>
TETRAETHYLENEPENTAMINE	<p>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.</p>
NONYLPHENOL	<p>for nonylphenol:</p> <p>Nonylphenol was studied for oral toxicity in rats in a 28-day repeat dose toxicity test at doses of 0, 4, 15, 60 and 250 mg/kg/day. Changes suggesting renal dysfunction were mainly noted in both sexes given 250 mg/kg. Liver weights were increased in males given 60 mg/kg and in both sexes given 250 mg/kg group. Histopathologically, hypertrophy of the centrilobular hepatocytes was noted in both sexes given 250 mg/kg.</p> <p>These substances are intravenous anaesthetic agents. They have a very low level of acute toxicity; they may cause skin irritation. ♦ Repeated exposure may irritate the stomach. There is no evidence of this group of substances causing mutation or adverse effects on reproduction. However, at high doses, there may be reduction of newborn weight and reduced survival in early lactation period.</p>
4-NONYLPHENOL, BRANCHED	<p>Gastrointestinal changes, liver changes, effects on newborn recorded.</p>
2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL	<p>While it is difficult to generalise about the full range of potential health effects posed by exposure to the many different amine compounds, characterised by those used in the manufacture of polyurethane and polyisocyanurate foams, it is agreed that overexposure to the majority of these materials may cause adverse health effects.</p> <ul style="list-style-type: none"> <li>▶ Many amine-based compounds can induce histamine liberation, which, in turn, can trigger allergic and other physiological effects, including bronchoconstriction or bronchial asthma and rhinitis.</li> <li>▶ Systemic symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, tachycardia (rapid heartbeat), itching, erythema (reddening of the skin), urticaria (hives), and facial edema (swelling). Systemic effects (those affecting the body) that are related to the pharmacological action of amines are usually transient.</li> </ul> <p>No significant acute toxicological data identified in literature search.</p>
SILICA CRYSTALLINE - QUARTZ	<p><b>WARNING:</b> For inhalation exposure <u>ONLY</u>: This substance has been classified by the IARC as Group 1: <b>CARCINOGENIC TO HUMANS</b></p> <p>The International Agency for Research on Cancer (IARC) has classified occupational exposures to <b>respirable</b> (&lt;5 µm) crystalline silica as being carcinogenic to humans. This classification is based on what IARC considered sufficient evidence from epidemiological studies of humans for the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Crystalline silica is also known</p>



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	to cause silicosis, a non-cancerous lung disease. Intermittent exposure produces; focal fibrosis, (pneumoconiosis), cough, dyspnoea, liver tumours.
<b>TALL OIL/ TETRAETHYLENEPENTAMINE POLYAMIDES &amp; BENZYL ALCOHOL &amp; TETRAETHYLENEPENTAMINE</b>	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.
<b>TALL OIL/ TETRAETHYLENEPENTAMINE POLYAMIDES &amp; TETRAETHYLENEPENTAMINE</b>	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.
<b>TALL OIL/ TETRAETHYLENEPENTAMINE POLYAMIDES &amp; TETRAETHYLENEPENTAMINE</b>	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
<b>TALL OIL/ TETRAETHYLENEPENTAMINE POLYAMIDES &amp; BENZYL ALCOHOL</b>	The material may cause 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.
<b>TALL OIL/ TETRAETHYLENEPENTAMINE POLYAMIDES &amp; TETRAETHYLENEPENTAMINE</b>	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.
<b>TALL OIL/ TETRAETHYLENEPENTAMINE POLYAMIDES &amp; TETRAETHYLENEPENTAMINE &amp; NONYLPHENOL &amp; 4-NONYLPHENOL, BRANCHED &amp; 2,4,6- TRIS[(DIMETHYLAMINO)METHYL]PHENOL</b>	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.
<b>TALL OIL/ TETRAETHYLENEPENTAMINE POLYAMIDES &amp; TETRAETHYLENEPENTAMINE</b>	Tetraethylenepentamine (TEPA) has a low acute toxicity when taken orally and a higher toxicity via the dermal route most likely due to the corrosive nature of TEPA to the skin against neutralization by stomach acid. TEPA may be corrosive to the skin and eyes. Long term dermal application may cause thickening of the epidermis and other skin changes. There were no evidence of reproductive toxicity but there may be foetal toxicity at high doses most likely due to copper deficiency and zinc toxicity.
<b>TETRAETHYLENEPENTAMINE &amp; NONYLPHENOL &amp; 4-NONYLPHENOL, BRANCHED &amp; 2,4,6- TRIS[(DIMETHYLAMINO)METHYL]PHENOL</b>	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.
<b>NONYLPHENOL &amp; 4-NONYLPHENOL, BRANCHED &amp; 2,4,6- TRIS[(DIMETHYLAMINO)METHYL]PHENOL</b>	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

<b>Acute Toxicity</b>	✓	<b>Carcinogenicity</b>	⊘
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	✓
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	✓
<b>Respiratory or Skin sensitisation</b>	✓	<b>STOT - Repeated Exposure</b>	⊘
<b>Mutagenicity</b>	⊘	<b>Aspiration Hazard</b>	⊘

**Legend:** ✓ – Data required to make classification available  
 ✗ – Data available but does not fill the criteria for classification  
 ⊘ – Data Not Available to make classification

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**Toxicity**

NOT AVAILABLE

Ingredient	Endpoint	Test Duration (hr)	Effect	Value	Species	BCF
tall oil/ tetraethylenepentamine polyamides	LC50	96	Not Available	0.19mg/L	Fish	Not Available
tall oil/ tetraethylenepentamine polyamides	EC50	48	Not Available	0.18mg/L	Crustacea	Not Available
tall oil/ tetraethylenepentamine polyamides	EC50	24	Not Available	0.42mg/L	Crustacea	Not Available
benzyl alcohol	LC50	96	Not Available	10mg/L	Fish	Not Available
benzyl alcohol	EC03	168	Not Available	=16mg/L	Algae or other aquatic plants	Not Available
tetraethylenepentamine	LC50	96	Not Available	1.27628mg/L	Fish	Not Available
tetraethylenepentamine	EC50	48	Not Available	=24.1mg/L	Crustacea	Not Available
tetraethylenepentamine	EC50	72	Not Available	=2.1mg/L	Algae or other aquatic plants	Not Available
tetraethylenepentamine	EC50	72	Not Available	=6.8mg/L	Algae or other aquatic plants	Not Available
tetraethylenepentamine	NOEC	72	Not Available	=0.5mg/L	Algae or other aquatic plants	Not Available
nonylphenol	LC50	96	Not Available	0.00095mg/L	Fish	Not Available
nonylphenol	EC50	48	Not Available	0.104mg/L	Crustacea	Not Available
nonylphenol	EC50	96	Not Available	0.027mg/L	Algae or other aquatic plants	Not Available
nonylphenol	BCF	504	Not Available	0.081mg/L	Fish	Not Available
nonylphenol	EC50	384	Not Available	0.012mg/L	Crustacea	Not Available
nonylphenol	NOEC	96	Not Available	0.001mg/L	Crustacea	Not Available
4-nonylphenol, branched	LC50	96	Not Available	0.017mg/L	Fish	Not Available
4-nonylphenol, branched	EC50	48	Not Available	0.0844mg/L	Crustacea	Not Available
4-nonylphenol, branched	EC50	96	Not Available	0.027mg/L	Algae or other aquatic plants	Not Available
4-nonylphenol, branched	BCF	24	Not Available	0.193mg/L	Fish	Not Available
4-nonylphenol, branched	EC10	96	Not Available	0.012mg/L	Algae or other aquatic plants	Not Available
4-nonylphenol, branched	NOEC	672	Not Available	>0.0019mg/L	Fish	Not Available
2,4,6-tris[(dimethylamino)methyl]phenol	LC50	96	Not Available	223.143mg/L	Fish	Not Available
2,4,6-tris[(dimethylamino)methyl]phenol	EC50	96	Not Available	34.812mg/L	Algae or other aquatic plants	Not Available
2,4,6-tris[(dimethylamino)methyl]phenol	EC50	96	Not Available	1616.048mg/L	Algae or other aquatic plants	Not Available

**DO NOT** discharge into sewer or waterways.

**Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
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Continued...

## Devcon Plastic Steel Epoxy (S5) Hardener

benzyl alcohol	LOW	LOW
tetraethylenepentamine	LOW	LOW
nonylphenol	HIGH	HIGH
4-nonylphenol, branched	HIGH	HIGH
2,4,6-tris[(dimethylamino)methyl]phenol	HIGH	HIGH

**Bioaccumulative potential**

Ingredient	Bioaccumulation
benzyl alcohol	LOW (LogKOW = 1.1)
tetraethylenepentamine	LOW (LogKOW = -3.1604)
nonylphenol	LOW (BCF = 271)
4-nonylphenol, branched	LOW (BCF = 271)
2,4,6-tris[(dimethylamino)methyl]phenol	LOW (LogKOW = 0.773)

**Mobility in soil**

Ingredient	Mobility
benzyl alcohol	LOW (KOC = 15.66)
tetraethylenepentamine	LOW (KOC = 1098)
nonylphenol	LOW (KOC = 56010)
4-nonylphenol, branched	LOW (KOC = 56010)
2,4,6-tris[(dimethylamino)methyl]phenol	LOW (KOC = 15130)

**SECTION 13 DISPOSAL CONSIDERATIONS****Waste treatment methods**

Product / Packaging disposal	
	<ul style="list-style-type: none"> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Management Authority for disposal.</li> <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**

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Source	Ingredient	Pollution Category
	Devcon Plastic Steel Epoxy (S5) Hardener	

**SECTION 15 REGULATORY INFORMATION**

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

TALL OIL/ TETRAETHYLENAPENTAMINE POLYAMIDES(68513-05-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

BENZYL ALCOHOL(100-51-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

**TETRAETHYLENEPENTAMINE(112-57-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

**NONYLPHENOL(25154-52-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

**4-NONYLPHENOL, BRANCHED(84852-15-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

**2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL(90-72-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

**SILICA CRYSTALLINE - QUARTZ(14808-60-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (benzyl alcohol; 4-nonylphenol, branched; tetraethylenepentamine; 2,4,6-tris[(dimethylamino)methyl]phenol; silica crystalline - quartz; nonylphenol)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (tall oil/ tetraethylenepentamine polyamides)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
<b>Legend:</b>	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

**SECTION 16 OTHER INFORMATION****Other information****Ingredients with multiple cas numbers**

Name	CAS No
tall oil/ tetraethylenepentamine polyamides	68513-05-3, 68953-36-6, 68555-22-6, 1226892-45-0
nonylphenol	25154-52-3, 84852-15-3, 139-84-4, 136-83-4
silica crystalline - quartz	14808-60-7, 122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9, 70594-95-5, 87347-84-0

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.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net](http://www.chemwatch.net)

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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**Devcon Plastic Steel Epoxy (S5) Hardener**

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TEL (+61 3) 9572 4700.

## Devcon Plastic Steel Epoxy (S5) Resin

## ITW POLYMERS &amp; FLUIDS

Chemwatch: 02-0801

Version No: 3.1.1.1

Safety Data Sheet according to WHS and ADG requirements

Issue Date: 16/11/2016

Print Date: 06/01/2017

Initial Date: Not Available

S.GHS.AUS.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

## Product Identifier

Product name	Devcon Plastic Steel Epoxy (S5) Resin
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ diglycidyl ether resin, liquid)
Other means of identification	Not Available

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

Relevant identified uses	Resin component of two part epoxy system. NOTE: The product is unregulated for Road and Rail transport when transported in (a) packagings; (b) IBCs; or (c) any other receptacle not exceeding 500 kg(L).
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## Details of the supplier of the safety data sheet

Registered company name	ITW POLYMERS & FLUIDS
Address	100 Hassall Street, Wetherill Park Not Available 2164 NSW Australia
Telephone	+61 2 9757 8800
Fax	+61 2 9757 3855
Website	www.itwpcf.com.au
Email	Not Available

## Emergency telephone number

Association / Organisation	Not Available	Not Available
Emergency telephone numbers	1800 039 008	+800 2436 2255
Other emergency telephone numbers	+61 3 9573 3112	Not Available

## CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
1800 039 008	1800 039 008	+612 9186 1132

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>	Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Skin Sensitizer Category 1, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

## Label elements

Devcon Plastic Steel Epoxy (S5) Resin

<b>GHS label elements</b>	
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<b>SIGNAL WORD</b>	<b>WARNING</b>
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**Hazard statement(s)**

<b>H315</b>	Causes skin irritation.
<b>H319</b>	Causes serious eye irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H411</b>	Toxic to aquatic life with long lasting effects.

**Precautionary statement(s) Prevention**

<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
<b>P261</b>	Avoid breathing mist/vapours/spray.
<b>P273</b>	Avoid release to the environment.
<b>P272</b>	Contaminated work clothing should not be allowed out of the workplace.

**Precautionary statement(s) Response**

<b>P362</b>	Take off contaminated clothing and wash before reuse.
<b>P302+P352</b>	IF ON SKIN: Wash with plenty of soap and water.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P333+P313</b>	If skin irritation or rash occurs: Get medical advice/attention.

**Precautionary statement(s) Storage**

Not Applicable

**Precautionary statement(s) Disposal**

<b>P501</b>	Dispose of contents/container in accordance with local regulations.
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**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

**Substances**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
25068-38-6	30-60	<u>bisphenol A/ diglycidyl ether resin, liquid</u>
7439-89-6	1-10	<u>iron</u>
100-51-6	1-5	<u>benzyl alcohol</u>
7440-21-3	1-5	<u>silicon powder amorphous</u>
14808-60-7	0.1-1	<u>silica crystalline - quartz</u>
	balance	ingredients nonhazardous

**SECTION 4 FIRST AID MEASURES**

**Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <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>
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## Devcon Plastic Steel Epoxy (S5) Resin

<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <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>
<b>Inhalation</b>	<ul style="list-style-type: none"> <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> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></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>▶ Seek medical advice.</li> </ul>

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

Treat symptomatically.

**SECTION 5 FIREFIGHTING MEASURES****Extinguishing media**

	<ul style="list-style-type: none"> <li>▶ Foam.</li> <li>▶ Dry chemical powder.</li> <li>▶ BCF (where regulations permit).</li> <li>▶ Carbon dioxide.</li> </ul>
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**Special hazards arising from the substrate or mixture**

<b>Fire Incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result</li> </ul>
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**Advice for firefighters**

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <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 water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <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> </ul> <p>Combustion products include:</p> <ul style="list-style-type: none"> <li>, carbon dioxide (CO<sub>2</sub>)</li> <li>, aldehydes</li> <li>, other pyrolysis products typical of burning organic material.</li> </ul>

**SECTION 6 ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

<b>Minor Spills</b>	<p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid contact with skin and eyes.</li> <li>▶ Wear impervious gloves and safety goggles.</li> <li>▶ Trowel up/scrape up.</li> </ul>
<b>Major Spills</b>	<p>Environmental hazard - contain spillage. Moderate hazard.</p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> </ul>



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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></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>▶ Prevent concentration in hollows and sumps.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> </ul>

### Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Metal can or drum</li> <li>▶ Packaging as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid cross contamination between the two liquid parts of product (kit).</li> <li>▶ If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur.</li> <li>▶ This excess heat may generate toxic vapour</li> <li>▶ Avoid reaction with amines, mercaptans, strong acids and oxidising agents</li> </ul>

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	iron	Fume (thermally generated) (respirable dust)	2 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
Australia Exposure Standards	silicon powder amorphous	Silicon	10 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
Australia Exposure Standards	silica crystalline - quartz	Silica - Crystalline: Quartz (respirable dust) / Quartz (respirable dust)	0.1 mg/m <sup>3</sup>	Not Available	Not Available	Not Available

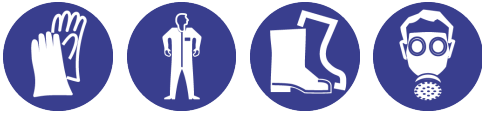
#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
bisphenol A/ diglycidyl ether resin, liquid	Epoxy resin includes EPON 1001, 1007, 820, ERL-2795	90 mg/m <sup>3</sup>	990 mg/m <sup>3</sup>	5,900 mg/m <sup>3</sup>
iron	Iron	3.2 mg/m <sup>3</sup>	35 mg/m <sup>3</sup>	150 mg/m <sup>3</sup>
benzyl alcohol	Benzyl alcohol	30 ppm	52 ppm	740 ppm
silicon powder amorphous	Silicon	45 mg/m <sup>3</sup>	100 mg/m <sup>3</sup>	630 mg/m <sup>3</sup>
silica crystalline - quartz	Silica, crystalline-quartz; (Silicon dioxide)	0.075 mg/m <sup>3</sup>	33 mg/m <sup>3</sup>	200 mg/m <sup>3</sup>

Ingredient	Original IDLH	Revised IDLH
bisphenol A/ diglycidyl ether resin, liquid	Not Available	Not Available
iron	Not Available	Not Available
benzyl alcohol	Not Available	Not Available
silicon powder amorphous	Not Available	Not Available
silica crystalline - quartz	N.E. mg/m <sup>3</sup> / N.E. ppm	50 mg/m <sup>3</sup>

### Exposure controls

## Devcon Plastic Steel Epoxy (S5) Resin

<b>Appropriate engineering controls</b>	<p>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.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> <p>Refer also to protective measures for the other component used with the product. Read both SDS before using; store and attach SDS together.</p>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</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>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ When handling liquid-grade epoxy resins wear chemically protective gloves (e.g nitrile or nitrile-butadiene rubber), boots and aprons.</li> <li>▶ <b>DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin).</b></li> <li>▶ <b>DO NOT use barrier creams containing emulsified fats and oils as these may absorb the resin; silicone-based barrier creams should be reviewed prior to use.</b></li> </ul> <p>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.</p> <p>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.</p> <p>Personal hygiene is a key element of effective hand care.</p> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <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> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C. apron.</li> <li>▶ Barrier cream.</li> </ul>
<b>Thermal hazards</b>	Not Available

**Respiratory protection**

Type AX-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**

<b>Appearance</b>	Dark grey paste with slight odour; insoluble in water.		
<b>Physical state</b>	<b>Non Slump Paste</b>	<b>Relative density (Water = 1)</b>	1.62
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	232	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	Not Available	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Applicable	<b>Explosive properties</b>	Not Available

Continued...

## Devcon Plastic Steel Epoxy (S5) Resin

<b>Flammability</b>	Not Available	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	VOC 0
<b>Vapour pressure (kPa)</b>	Negligible	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Partly miscible	<b>pH as a solution (1%)</b>	7 (5% slurry)
<b>Vapour density (Air = 1)</b>	>1	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

<b>Inhaled</b>	Not normally a hazard due to non-volatile nature of product
<b>Ingestion</b>	Accidental ingestion of the material may be damaging to the health of the individual. Ingestion may result in nausea, abdominal irritation, pain and vomiting
<b>Skin Contact</b>	<p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. This material can cause inflammation of the skin on contact in some persons.</p> <p>Epoxy materials may cause allergic and/or contact dermatitis responses, which may occur on exposure or may become apparent only after repeated exposures. Sensitisation is possible. Photoallergic dermatitis may result from contact with the material. This type of response can be elicited only in individuals who have been previously allergically sensitised to the chemical agent and appropriate radiation.</p> <p>The material may accentuate any pre-existing dermatitis condition</p>
<b>Eye</b>	This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.
<b>Chronic</b>	<p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity.</p>

<b>Devcon Plastic Steel Epoxy (S5) Resin</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>bisphenol A/ diglycidyl ether resin, liquid</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: >800 mg/kg <sup>[1]</sup>	Eye (rabbit): 100mg - Mild
	Oral (rat) LD50: 13447 mg/kg <sup>[1]</sup>	
<b>iron</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: 7500 mg/kg <sup>[1]</sup>	Not Available
<b>benzyl alcohol</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: 1000000 ppm <sup>[2]</sup>	Eye (rabbit): 0.75 mg open SEVERE
	Inhalation (rat) LC50: >4.178 mg/L/4hr <sup>[2]</sup>	Skin (man): 16 mg/48h-mild
	Oral (rat) LD50: 1560 mg/kg <sup>[2]</sup>	Skin (rabbit):10 mg/24h open-mild
<b>silicon powder amorphous</b>	<b>TOXICITY</b>	<b>IRRITATION</b>

Continued...

## Devcon Plastic Steel Epoxy (S5) Resin

	Dermal (rabbit) LD50: >5000 mg/kg <sup>[1]</sup>	Not Available
	Oral (rat) LD50: 3160 mg/kg <sup>[2]</sup>	
<b>silica crystalline - quartz</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available

**Legend:**

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.\* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

<b>BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID</b>	<p>The chemical structure of hydroxylated diphenylalkanes or bisphenols consists of two phenolic rings joined together through a bridging carbon. This class of endocrine disruptors that mimic oestrogens is widely used in industry, particularly in plastics</p> <p>Bisphenol A (BPA) and some related compounds exhibit oestrogenic activity in human breast cancer cell line MCF-7, but there were remarkable differences in activity. Several derivatives of BPA exhibited significant thyroid hormonal activity towards rat pituitary cell line GH3, which releases growth hormone in a thyroid hormone-dependent manner. However, BPA and several other derivatives did not show such activity.</p> <p>The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p> <p>In mice, dermal application of bisphenol A diglycidyl ether (BADGE) (1, 10, or 100 mg/kg) for 13 weeks produced mild to moderate chronic active dermatitis. At the high dose, spongiosis and epidermal micro abscess formation were observed. In rats, dermal application of BADGE (10, 100, or 1000 mg/kg) for 13 weeks resulted in a decrease in body weight at the high dose. The no-observable effect level (NOEL) for dermal exposure was 100 mg/kg for both sexes.</p> <p>Foetotoxicity has been observed in animal studies Oral (rabbit, female) NOEL 180 mg/kg (teratogenicity); NOEL (maternal 60 mg/kg</p>
<b>BENZYL ALCOHOL</b>	<p>Unlike benzylic alcohols, the beta-hydroxyl group of the members of benzyl alkyl alcohols contributes to break down reactions but do not undergo phase II metabolic activation. Though structurally similar to cancer causing ethyl benzene, phenethyl alcohol is only of negligible concern due to limited similarity in their pattern of activity.</p> <p>For benzoates: Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol are considered to be unharmed and of low acute toxicity. They may cause slight irritation by oral, dermal or inhalation exposure except sodium benzoate which doesn't irritate the skin. Studies showed increased mortality, reduced weight gain, liver and kidney effects at higher doses, also, lesions of the brains, thymus and skeletal muscles may occur with benzyl alcohol.</p> <p>Adverse reactions to fragrances in perfumes and in fragranced cosmetic products include allergic contact dermatitis, irritant contact dermatitis, photosensitivity, immediate contact reactions (contact urticaria), and pigmented contact dermatitis. Airborne and conjugal contact dermatitis occur.</p> <p>Intolerance to perfumes, by inhalation, may occur if the perfume contains a sensitising principal. Symptoms may vary from general illness, coughing, phlegm, wheezing, chest-tightness, headache, exertional dyspnoea, acute respiratory illness, hayfever, and other respiratory diseases (including asthma).</p> <p>Fragrance allergens act as haptens, i.e. low molecular weight chemicals that are immunogenic only when attached to a carrier protein. However, not all sensitising fragrance chemicals are directly reactive, but require previous activation. A prehapten is a chemical that itself is non- or low-sensitising, but that is transformed into a hapten outside the skin by simple chemical transformation (air oxidation, photoactivation) and without the requirement of specific enzymatic systems. A prohaptent is a chemical that itself is non- or low-sensitising but that is transformed into a hapten in the skin (bioactivation) usually via enzyme catalysis.</p> <p>The material may cause 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.</p> <p>A member or analogue of a group of benzyl derivatives generally regarded as safe (GRAS) based in part on their self-limiting properties as flavouring substances in food; their rapid absorption, metabolic detoxification, and excretion in humans and other animals, their low level of flavour use, the wide margin of safety between the conservative estimates of intake and the no-observed-adverse effect levels determined from chronic and subchronic studies and the lack of significant genotoxic and mutagenic potential. This evidence of safety is supported by the fact that the intake of benzyl derivatives as natural components of traditional foods is greater than the intake as intentionally added flavouring substances.</p> <p>All members of this group are aromatic primary alcohols, aldehydes, carboxylic acids or their corresponding esters or acetals.</p> <p>The aryl alkyl alcohol (AAA) fragrance ingredients are a diverse group of chemical structures with similar metabolic and toxicity profiles.</p> <p>The AAA fragrances demonstrate low acute and subchronic dermal and oral toxicity.</p> <p>At concentrations likely to be encountered by consumers, AAA fragrance ingredients are non-irritating to the skin. The potential for eye irritation is minimal.</p>
<b>SILICON POWDER AMORPHOUS</b>	<p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of</p>

## Devcon Plastic Steel Epoxy (S5) Resin

	<p>preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.</p> <p>Intraperitoneal injection of silicon produced only minor local trauma and foreign body reaction. Parenterally administered elemental silica is considered biologically inert.</p> <p>Dogs and rats fed 800 mg silicon/kg/day (as the dioxide) for 1 month showed no clinical signs or histological changes. The compound was largely eliminated in the faeces.</p> <p>The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p>
<b>SILICA CRYSTALLINE - QUARTZ</b>	<p><b>WARNING:</b> For inhalation exposure <u>ONLY</u>: This substance has been classified by the IARC as Group 1: <b>CARCINOGENIC TO HUMANS</b></p> <p>The International Agency for Research on Cancer (IARC) has classified occupational exposures to <b>respirable</b> (&lt;5 um) crystalline silica as being carcinogenic to humans . This classification is based on what IARC considered sufficient evidence from epidemiological studies of humans for the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Crystalline silica is also known to cause silicosis, a non-cancerous lung disease.</p> <p>Intermittent exposure produces; focal fibrosis, (pneumoconiosis), cough, dyspnoea, liver tumours.</p>
<b>Devcon Plastic Steel Epoxy (S5) Resin &amp; BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID &amp; BENZYL ALCOHOL</b>	<p>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.</p>

<b>Acute Toxicity</b>	☹	<b>Carcinogenicity</b>	☹
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	☹
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	☹
<b>Respiratory or Skin sensitisation</b>	✓	<b>STOT - Repeated Exposure</b>	☹
<b>Mutagenicity</b>	☹	<b>Aspiration Hazard</b>	☹

**Legend:** ✓ – Data required to make classification available  
 ✗ – Data available but does not fill the criteria for classification  
 ☹ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

## NOT AVAILABLE

Ingredient	Endpoint	Test Duration (hr)	Effect	Value	Species	BCF
bisphenol A/ diglycidyl ether resin, liquid	LC50	96	Not Available	1.2mg/L	Fish	Not Available
bisphenol A/ diglycidyl ether resin, liquid	EC50	72	Not Available	9.4mg/L	Algae or other aquatic plants	Not Available
bisphenol A/ diglycidyl ether resin, liquid	EC50	24	Not Available	3.6mg/L	Crustacea	Not Available
bisphenol A/ diglycidyl ether resin, liquid	NOEC	72	Not Available	2.4mg/L	Algae or other aquatic plants	Not Available
iron	LC50	96	Not Available	0.05mg/L	Fish	Not Available
iron	EC50	96	Not Available	3.7mg/L	Algae or other aquatic plants	Not Available
iron	BCF	24	Not Available	0.000002mg/L	Crustacea	Not Available
iron	EC50	504	Not Available	4.49mg/L	Crustacea	Not Available
iron	NOEC	504	Not Available	0.52mg/L	Fish	Not Available
benzyl alcohol	LC50	96	Not Available	10mg/L	Fish	Not Available
benzyl alcohol	EC03	168	Not Available	=16mg/L	Algae or other aquatic plants	Not Available

Continued...

## Devcon Plastic Steel Epoxy (S5) Resin

silicon powder amorphous	EC50	72	Not Available	ca.250mg/L	Algae or other aquatic plants	Not Available
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Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.

**DO NOT discharge into sewer or waterways.**

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
bisphenol A/ diglycidyl ether resin, liquid	HIGH	HIGH
benzyl alcohol	LOW	LOW

### Bioaccumulative potential

Ingredient	Bioaccumulation
bisphenol A/ diglycidyl ether resin, liquid	LOW (LogKOW = 2.6835)
benzyl alcohol	LOW (LogKOW = 1.1)

### Mobility in soil

Ingredient	Mobility
bisphenol A/ diglycidyl ether resin, liquid	LOW (KOC = 51.43)
benzyl alcohol	LOW (KOC = 15.66)

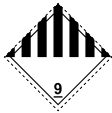

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Management Authority for disposal.</li> <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>
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## SECTION 14 TRANSPORT INFORMATION

### Labels Required

	
Marine Pollutant	
HAZCHEM	•3Z

### Land transport (ADG)

UN number	3082
Packing group	III
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ diglycidyl ether resin, liquid)
Environmental hazard	No relevant data
Transport hazard class(es)	Class : 9 Subrisk : Not Applicable
Special precautions for user	Special provisions : 274 331 335 375 AU01

## Devcon Plastic Steel Epoxy (S5) Resin

Limited quantity	5 L
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Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;

- (a) packagings;  
 (b) IBCs; or  
 (c) any other receptacle not exceeding 500 kg(L).  
 - Australian Special Provisions (SP AU01) - ADG Code 7th Ed.

**Air transport (ICAO-IATA / DGR)**

<b>UN number</b>	3082	
<b>Packing group</b>	III	
<b>UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s. * (contains bisphenol A/ diglycidyl ether resin, liquid)	
<b>Environmental hazard</b>	No relevant data	
<b>Transport hazard class(es)</b>	ICAO/IATA Class	9
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	9L
<b>Special precautions for user</b>	Special provisions	A97 A158 A197
	Cargo Only Packing Instructions	964
	Cargo Only Maximum Qty / Pack	450 L
	Passenger and Cargo Packing Instructions	964
	Passenger and Cargo Maximum Qty / Pack	450 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y964
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G

**Sea transport (IMDG-Code / GGVSee)**

<b>UN number</b>	3082	
<b>Packing group</b>	III	
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ diglycidyl ether resin, liquid)	
<b>Environmental hazard</b>	Marine Pollutant	
<b>Transport hazard class(es)</b>	IMDG Class	9
	IMDG Subrisk	Not Applicable
<b>Special precautions for user</b>	EMS Number	F-A, S-F
	Special provisions	274 335 969
	Limited Quantities	5 L

**Transport in bulk according to Annex II of MARPOL and the IBC code**

Source	Ingredient	Pollution Category
	Devcon Plastic Steel Epoxy (S5) Resin	

**SECTION 15 REGULATORY INFORMATION****Safety, health and environmental regulations / legislation specific for the substance or mixture****BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID(25068-38-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Hazardous Substances Information System - Consolidated Lists  
 Australia Inventory of Chemical Substances (AICS)

**IRON(7439-89-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards  
 Australia Inventory of Chemical Substances (AICS)

Continued...

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

**BENZYL ALCOHOL(100-51-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

**SILICON POWDER AMORPHOUS(7440-21-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

**SILICA CRYSTALLINE - QUARTZ(14808-60-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (benzyl alcohol; silicon powder amorphous; bisphenol A/ diglycidyl ether resin, liquid; silica crystalline - quartz; iron)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (silicon powder amorphous; bisphenol A/ diglycidyl ether resin, liquid; iron)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
<b>Legend:</b>	<i>Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)</i>

## SECTION 16 OTHER INFORMATION

### Other information

#### Ingredients with multiple cas numbers

Name	CAS No
bisphenol A/ diglycidyl ether resin, liquid	25068-38-6, 25085-99-8
silica crystalline - quartz	14808-60-7, 122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9, 70594-95-5, 87347-84-0

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.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net](http://www.chemwatch.net)

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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