

SAFETY DATA SHEET

DEVCON PLASTIC STEEL EPOXY (S5) HARDENER

Infosafe No.: IA0WK
ISSUED Date : 23/12/2022
ISSUED by: ITW POLYMERS & FLUIDS

Section 1 - Identification

Product Identifier

DEVCON PLASTIC STEEL EPOXY (S5) HARDENER

Company Name

ITW POLYMERS & FLUIDS

Address

100 Hassall Street Wetherill Park
NSW 2164 AUSTRALIA

Telephone/Fax Number

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Emergency Phone Number

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Recommended use of the chemical and restrictions on use

Relevant identified uses: Hardener component of two part epoxy system.

Additional Information

Website: www.itwpf.com.au

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture

Acute toxicity: Category 4 - Oral

Sensitisation - skin: Category 1

Skin corrosion/irritation: Category 2

Eye damage/irritation: Category 1

Reproductive toxicity: Category 1B

Hazardous to the Aquatic Environment - Acute Hazard: Category 3

Hazardous to the Aquatic Environment - Long-Term Hazard: Category 3

Signal Word (s)

DANGER

Hazard Statement (s)

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H360D May damage the unborn child.

H412 Harmful to aquatic life with long lasting effects.

Pictogram (s)

Corrosion, Exclamation mark, Health hazard



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Precautionary Statement – Prevention

P201 Obtain special instructions before use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash all exposed external body areas thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement – Response

P302+P352 IF ON SKIN: Wash with plenty of water.

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.

P310 Immediately call a POISON CENTER/doctor/physician/first aider.

Precautionary Statement – Storage

P405 Store locked up.

Precautionary Statement – Disposal

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

Precautionary Statement – General

Not Applicable

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
tetraethylenepentamine	112-57-2	1-5 %weight
benzyl alcohol	100-51-6	1-5 %weight
4-nonylphenol, branched	84852-15-3	1-5 %weight
nonylphenol	25154-52-3	1-5 %weight
Silica crystalline - quartz	14808-60-7	<1 %weight
Ingredients determined not to be hazardous		balance
Tall oil/ tetraethylenepentamine polyamides	68513-05-3	10-20 %weight
Formaldehyde/ benzenamine, hydrogenated	135108-88-2	5-10 %weight
2,4,6-tris[(dimethylamino)methyl]phenol	90-72-2	1-5 %weight

Other Information

Chemical Name: Not Applicable

Synonyms: Not Available

Substances:

See section below for composition of Mixtures

Section 4 - First Aid Measures

Inhalation

If fumes or combustion products are inhaled remove from contaminated area.

Lay patient down. Keep warm and rested.

Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.

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.

Transport to hospital, or doctor, without delay.

Ingestion

IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.

For advice, contact a Poisons Information Centre or a doctor.

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Urgent hospital treatment is likely to be needed.

In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.

If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.

Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

Skin

If skin contact occurs:

Immediately remove all contaminated clothing, including footwear.

Flush skin and hair with running water (and soap if available).

Seek medical attention in event of irritation.

Eye

If this product comes in contact with the eyes:

Immediately hold eyelids apart and flush the eye continuously with running water.

Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

Transport to hospital or doctor without delay.

Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Indication of immediate medical attention and special treatment needed if necessary

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]

For acute or short term repeated exposures to phenols/ cresols:

Phenol is absorbed rapidly through lungs and skin. [Massive skin contact may result in collapse and death]*

[Ingestion may result in ulceration of upper respiratory tract; perforation of oesophagus and/or stomach, with attendant complications, may occur. Oesophageal stricture may occur.]*

An initial excitatory phase may present. Convulsions may appear as long as 18 hours after ingestion. Hypotension and ventricular tachycardia that require vasopressor and antiarrhythmic therapy, respectively, can occur.

Respiratory arrest, ventricular dysrhythmias, seizures and metabolic acidosis may complicate severe phenol exposures so the initial attention should be directed towards stabilisation of breathing and circulation with ventilation, intubation, intravenous lines, fluids and cardiac monitoring as indicated.

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[Vegetable oils retard absorption; do NOT use paraffin oils or alcohols. Gastric lavage, with endotracheal intubation, should be repeated until phenol odour is no longer detectable; follow with vegetable oil. A saline cathartic should then be given.]*
ALTERNATIVELY: Activated charcoal (1g/kg) may be given. A cathartic should be given after oral activated charcoal.
Severe poisoning may require slow intravenous injection of methylene blue to treat methaemoglobinaemia.
[Renal failure may require haemodialysis.]*
Most absorbed phenol is biotransformed by the liver to ethereal and glucuronide sulfates and is eliminated almost completely after 24 hours. [Ellenhorn and Barceloux: Medical Toxicology] *[Union Carbide]

BIOLOGICAL EXPOSURE INDEX - BEI:

These represent the determinants observed in specimens collected from a healthy worker who has been exposed to the Exposure Standard (ES or TLV):

Determinant / Index / Sampling Time / Comments

1. Total phenol in blood 250 mg/gm creatinine End of shift B, NS

B: Background levels occur in specimens collected from subjects NOT exposed

NS: Non-specific determinant; also seen in exposure to other materials

For exposures to quaternary ammonium compounds;

For ingestion of concentrated solutions (10% or higher): Swallow promptly a large quantity of milk, egg whites / gelatin solution. If not readily available, a slurry

of activated charcoal may be useful. Avoid alcohol. Because of probable mucosal damage omit gastric lavage and emetic drugs.

For dilute solutions (2% or less): If little or no emesis appears spontaneously, administer syrup of Ipecac or perform gastric lavage.

If hypotension becomes severe, institute measures against circulatory shock.

If respiration laboured, administer oxygen and support breathing mechanically. Oropharyngeal airway may be inserted in absence of gag reflex. Epiglottic or

laryngeal edema may necessitate a tracheotomy.

Persistent convulsions may be controlled by cautious intravenous injection of diazepam or short-acting barbiturate drugs. [Gosselin et al, Clinical Toxicology of

Commercial Products]

Section 5 - Firefighting Measures

Suitable Extinguishing Media

Foam.

Dry chemical powder.

BCF (where regulations permit).

Carbon dioxide.

Specific Methods

Alert Fire Brigade and tell them location and nature of hazard.

Wear full body protective clothing with breathing apparatus.

Prevent, by any means available, spillage from entering drains or water course.

Use water delivered as a fine spray to control fire and cool adjacent area.

Specific hazards arising from the chemical

Fire Incompatibility:

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Fire/Explosion Hazard:

Combustible.

Slight fire hazard when exposed to heat or flame.

Heating may cause expansion or decomposition leading to violent rupture of containers.

On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include:

carbon dioxide (CO₂)

hydrogen chloride

phosgene

nitrogen oxides (NO_x)

other pyrolysis products typical of burning organic material.

May emit poisonous fumes.

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May emit corrosive fumes.

Hazchem Code

Not Applicable

Decomposition Temperature

Not Available

Section 6 - Accidental Release Measures

Clean-up Methods - Small Spillages

Environmental hazard - contain spillage.

Small spills should be covered with inorganic absorbents and disposed of properly. Organic absorbents have been known to ignite when contaminated with amines in closed containers. Certain cellulosic materials used for spill cleanup such as wood chips or sawdust have shown reactivity with ethyleneamines and should be avoided. Ethyleneamine leaks will frequently be identified by the odor (ammoniacal) or by the formation of a white, solid, waxy substance (amine carbamates).

Remove all ignition sources.

Clean up all spills immediately.

Avoid breathing vapours and contact with skin and eyes.

Control personal contact with the substance, by using protective equipment.

Clean-up Methods - Large Spillages

Environmental hazard - contain spillage.

Moderate hazard.

Clear area of personnel and move upwind.

Alert Fire Brigade and tell them location and nature of hazard.

Wear breathing apparatus plus protective gloves.

Other Information

Personal Protective Equipment advice is contained in Section 8 (Exposure Controls/Personal Protection) of the SDS.

Section 7 - Handling and Storage

Precautions for Safe Handling

DO NOT allow clothing wet with material to stay in contact with skin

Avoid all personal contact, including inhalation.

Wear protective clothing when risk of exposure occurs.

Use in a well-ventilated area.

Prevent concentration in hollows and sumps.

Other information

For bulk storages:

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.)

This product should be stored under a dry inert gas blanket, such as nitrogen, to minimize contamination resulting from contact with air and water

DO NOT store near acids, or oxidising agents

Store in original containers.

Keep containers securely sealed.

No smoking, naked lights or ignition sources.

Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container:

Metal can or drum

Packaging as recommended by manufacturer.

Check all containers are clearly labelled and free from leaks.

Storage incompatibility

Quaternary ammonium cations are unreactive toward even strong electrophiles, oxidants, and acids. They also are stable toward

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most nucleophiles. The latter is indicated by the stability of the hydroxide salts such as tetramethylammonium hydroxide and tetrabutylammonium hydroxide.

·Quaternary ammonium compounds are deactivated by anionic detergents (including common soaps).

Triethylenetetramine (TETA):

- aqueous solutions are strong organic bases
- reacts with nitrogen containing compounds; may cause violent decomposition
- reacts violently with strong oxidisers, nitroparaffins, nitrogen tetroxide, permanganates, peroxides, ammonium persulfate, bromine dioxide, sulfuric acid, nitric acid
- 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, isocyanates, ketones, methyl trichloroacetate, nitrates, phenols, urea, vinyl acetate
- increases the explosive sensitivity of nitromethane
- attacks aluminium, cobalt, copper, lead, nickel, tin zinc, and their alloys, and some plastics, rubber and coatings
- reacts with halon fire extinguishers

Avoid strong acids, bases.

·Imidazole may be regarded as possessing pyrrole and pyridine like properties and therefore its reactivity might resemble that of the others. In general imidazole, in common with pyrazole, is less reactive than pyrrole and more reactive than benzene.

·One peculiarity of imidazole is the impossibility to distinguish the two nitrogen atoms in solution. The hydrogen moves according to a tautomeric equilibria (that is exactly 50% of each form) from one nitrogen to the other.

Secondary amines form salts with strong acids and can be oxidized to the corresponding nitron using hydrogen peroxide, catalyzed by selenium dioxide

Amines are incompatible with:

- isocyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid halides.
- strong reducing agents such as hydrides, due to the liberation of flammable gas.

Amines possess a characteristic ammonia smell, liquid amines have a distinctive "fishy" smell. Amines are formally derivatives of ammonia, wherein one or more hydrogen atoms have been replaced by a substituent such as an alkyl or aryl group.

Avoid contact with copper, aluminium and their alloys.

Avoid reaction with oxidising agents

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limit values

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) 0.05 mg/m3 Not Available Not Available

EMERGENCY LIMITS:

Ingredient / Material name / TEEL-1 / TEEL-2 / TEEL-3

2,4,6-tris[(dimethylamino)methyl]phenol Not Available 6.5 mg/m3 72 mg/m3 430 mg/m3

tetraethylenepentamine Not Available 15 mg/m3 130 mg/m3 790 mg/m3

benzyl alcohol Not Available 30 ppm 52 ppm 740 ppm

4-nonylphenol, branched Not Available 3.9 mg/m3 43 mg/m3 260 mg/m3

nonylphenol Not Available 3.9 mg/m3 43 mg/m3 260 mg/m3

silica crystalline - quartz Not Available 0.075 mg/m3 33 mg/m3 200 mg/m3

Ingredient / Original IDLH / Revised IDLH

tall oil/ tetraethylenepentamine polyamides Not Available Not Available

formaldehyde/ benzenamine, hydrogenated Not Available Not Available

2,4,6-tris[(dimethylamino)methyl]phenol Not Available Not Available

tetraethylenepentamine Not Available Not Available

benzyl alcohol Not Available Not Available

4-nonylphenol, branched Not Available Not Available

nonylphenol Not Available Not Available

silica crystalline - quartz 25 mg/m3 / 50 mg/m3 Not Available

Engineering Controls

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Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Respiratory Protection

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

Eye and Face Protection

Safety glasses with side shields.

Chemical goggles.

Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

Hand Protection

NOTE:

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.

Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

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.

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.

Personal hygiene is a key element of effective hand care.

When handling liquid-grade epoxy resins wear chemically protective gloves, boots and aprons.

The performance, based on breakthrough times, of:

- Ethyl Vinyl Alcohol (EVAL laminate) is generally excellent
- Butyl Rubber ranges from excellent to good
- Nitrile Butyl Rubber (NBR) from excellent to fair.
- Neoprene from excellent to fair
- Polyvinyl (PVC) from excellent to poor

As defined in ASTM F-739-96

- Excellent breakthrough time > 480 min
- Good breakthrough time > 20 min
- Fair breakthrough time < 20 min
- Poor glove material degradation

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)

·DO NOT use cotton or leather (which absorb and concentrate the resin), natural rubber (latex), medical or polyethylene gloves (which absorb the resin).

Thermal Hazards

Not Available

Body Protection

Overalls.

P.V.C apron.

Barrier cream.

Skin cleansing cream.

Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Liquid	Appearance	Amber coloured liquid with ammonia-like fishy odour; partly mixes with water.
Odour	Ammonia - like	Melting/Freezing Point	Not Available
Boiling Point	Not Available	Decomposition Temperature	Not Available
Solubility in Water	Partly miscible	pH	Not Available (as supplied) >10 (5%) as a solution (1%)
Vapour Pressure	Not Available	Relative Vapour Density (Air=1)	>1
Evaporation Rate	Not Available	Odour Threshold	Not Available
Viscosity	Not Available	Volatile Component	Not Available
Partition Coefficient: n-octanol/water (log value)	Not Available	Surface Tension	Not Available
Flash Point	131°C	Flammability	Not Applicable
Auto-Ignition Temperature	Not Available	Explosion Limit - Upper	Not Available
Explosion Limit - Lower	Not Available	Explosion Properties	Not Available
Molecular Weight	Not Applicable	Oxidising Properties	Not Available
Initial boiling point and boiling range	Not Available	Relative Density	(Water = 1): 1.0160

Other Information

Taste: Not Available

Gas group: Not Available

VOC g/L: Not Available

Section 10 - Stability and Reactivity

Reactivity

See section 7(Handling and Storage)

Chemical Stability

Unstable in the presence of incompatible materials.

Product is considered stable.

Hazardous polymerisation will not occur.

Possibility of hazardous reactions

See section 7(Handling and Storage)

Conditions to Avoid

See section 7(Handling and Storage)

Incompatible Materials

See section 7(Handling and Storage)

Hazardous Decomposition Products

See section 5(Fire Fighting Measures)

Section 11 - Toxicological Information

Toxicology Information

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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

Devcon Plastic Steel Epdxy (S5) Hardener:

For imidazoline surfactants (amidoamine/ imidazoline - AAls)

All substances within the AAI group show the same reactive groups, show similar composition of amide, imidazoline, and some dimer structures of both, with the length of original EA amines used for production as biggest difference. Inherent reactivity and toxicity is not expected to differ much between these substances.

All in vivo skin irritation/corrosion studies performed on AAI substances all indicate them to be corrosive following 4 hour exposure. There do not seem to be big differences in response with the variation on EA length used for the production of the AAI.

The available data available for AAI substances indicate that for AAI based on shorter polyethyleneamines (EA), higher toxicity is observed compared to AAI based on longer EA.

Laboratory testing shows that the fatty acid amide, cocoamide DEA, causes occupational allergic contact dermatitis, and that allergy to this substance is becoming more common.

Alkanolamides are manufactured by condensation of diethanolamine and the methyl ester of long chain fatty acids.

The chemicals in the Fatty Nitrogen Derived (FND) Amides are generally similar in terms of physical and chemical properties, environmental fate and toxicity. Its low acute oral toxicity is well established across all subcategories by the available data and show no apparent organ specific toxicity, mutation, reproductive or developmental defects.

For quaternary ammonium compounds (QACs):

Quaternary ammonium compounds are synthetically made surfactants. Studies show that its solubility, toxicity and irritation depend on chain length and bond type while effect on histamine depends on concentration. QACs may cause muscle paralysis with no brain involvement. There is a significant association between the development of asthma symptoms and the use of QACs as disinfectant.

Most undiluted cationic surfactants satisfy the criteria for classification as Harmful (Xn) with R22 and as Irritant (Xi) for skin and eyes with R38 and R41.

Devcon Plastic Steel Epdxy (S5) Hardener:

Amine adducts have much reduced volatility and are less irritating to the skin and eyes than amine hardeners. However commercial amine adducts may contain a percentage of unreacted amine and all unnecessary contact should be avoided.

Amine adducts are prepared by reacting excess primary amines with epoxy resin.

Devcon Plastic Steel Epdxy (S5) Hardener:

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.

Devcon Plastic Steel Epdxy (S5) Hardener:

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 effects at higher doses, also, lesions of the brains, thymus and skeletal muscles may occur with benzyl alcohol.

Adverse reactions to fragrances in perfumes and fragranced cosmetic products include allergic contact dermatitis, irritant contact dermatitis, sensitivity to light, immediate contact reactions, and pigmented contact dermatitis. Airborne and conjugal contact dermatitis occurs. Contact allergy is a lifelong condition, so symptoms may occur on re-exposure. Allergic contact dermatitis can be severe and widespread, with significant impairment of quality of life and potential consequences for fitness for work.

If the perfume contains a sensitizing component, intolerance to perfumes by inhalation may occur.

Fragrance allergens act as haptens, low molecular weight chemicals that cause an immune response only when attached to a carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but require previous activation. A prehapten is a chemical that itself causes little or no sensitization, but is transformed into a hapten in the skin (bioactivation), usually via enzyme catalysis. It is not always possible to know whether a particular allergen that is not directly reactive acts as a prehapten or a prohaptent, or both.

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.

This is a member or analogue of a group of benzyl derivatives generally regarded as safe (GRAS), based partly on their self-limiting properties as flavouring substances in food. In humans and other animals, they are rapidly absorbed, broken down and excreted, with a wide safety margin. They also lack significant potential to cause genetic toxicity and mutations.

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The intake of benzyl derivatives as natural components of traditional foods is actually higher than the intake as intentionally added flavouring substances.

The aryl alkyl alcohol (AAA) fragrance ingredients have diverse chemical structures, with similar metabolic and toxicity profiles. The AAA fragrances demonstrate low acute and subchronic toxicity by skin contact and swallowing. At concentrations likely to be encountered by consumers, AAA fragrance ingredients are non-irritating to the skin. The potential for eye irritation is minimal.

Devcon Plastic Steel Epxy (S5) Hardener:

Gastrointestinal changes, liver changes, effects on newborn recorded.

Devcon Plastic Steel Epxy (S5) Hardener:

WARNING: For inhalation exposure ONLY: This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS

The International Agency for Research on Cancer (IARC) has classified occupational exposures to respirable (<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 to cause silicosis, a non-cancerous lung disease.

Intermittent exposure produces; focal fibrosis, (pneumoconiosis), cough, dyspnoea, liver tumours.

* Millions of particles per cubic foot (based on impinger samples counted by light field techniques).

NOTE : the physical nature of quartz in the product determines whether it is likely to present a chronic health problem. To be a hazard the material must enter the breathing zone as respirable particles.

Devcon Plastic Steel Epxy (S5) Hardener

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. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important.

Devcon Plastic Steel Epxy (S5) Hardener:

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 moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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.

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.

Devcon Plastic Steel Epxy (S5) Hardener:

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.

Devcon Plastic Steel Epxy (S5) Hardener:

Overexposure to most of these materials may cause adverse health effects.

Many amine-based compounds can cause release of histamines, which, in turn, can trigger allergic and other physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient.

There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing.

Inhalation: Inhaling vapours may result in moderate to severe irritation of the tissues of the nose and throat and can irritate the

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lungs. Higher concentrations of certain amines can produce severe respiratory irritation, characterized by discharge from the nose, coughing, difficulty in breathing and chest pain. Chronic exposure via inhalation may cause headache, nausea, vomiting, drowsiness, sore throat, inflammation of the bronchi and lungs, and possible lung damage.

Devcon Plastic Steel Epxy (S5) Hardener:

No significant acute toxicological data identified in literature search.

Devcon Plastic Steel Epxy (S5) Hardener:

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Devcon Plastic Steel Epxy (S5) Hardener:

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.

Devcon Plastic Steel Epxy (S5) Hardener:

For nonylphenol and its compounds:

Alkylphenols like nonylphenol and bisphenol A have estrogenic effects in the body. They are known as xenoestrogens.

Estrogenic substances and other endocrine disruptors are compounds that have hormone-like effects in both wildlife and humans.

Xenoestrogens usually function by binding to estrogen receptors and acting competitively against natural estrogens.

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.

For nonylphenol:

Animal testing suggests that repeated exposure to nonylphenol may cause liver changes and kidney dysfunction.

Nonylphenol was not found to cause mutations or chromosomal aberrations.

Acute Toxicity: Data available to make classification

Ingestion

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.

Nonionic surfactants may produce localised irritation of the oral or gastrointestinal lining and induce vomiting and mild diarrhoea.

Amines without benzene rings when swallowed are absorbed throughout the gut. Corrosive action may cause damage throughout the gastrointestinal tract.

In animal testing, the symptoms of chlorophenol poisoning include restlessness, increased rate of breathing, rapidly developing motor weakness, tremors, seizures, shortness of breath and coma.

Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea. The vomitus may contain blood and mucus.

Monochlorophenols are slightly less toxic than phenol but more toxic than chlorobenzene while Dichlorophenols may be more potent than phenol in eliciting convulsions. Toxicity increases with chlorination.

Inhalation

The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.

Inhalation of amine vapours may cause irritation of the mucous membrane of the nose and throat, and lung irritation with respiratory distress and cough. Swelling and inflammation of the respiratory tract is seen in serious cases; with headache, nausea, faintness and anxiety.

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".

Skin

This material can cause inflammation of the skin on contact in some persons.

The material may accentuate any pre-existing dermatitis condition

Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.

Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.

Non-ionic surfactants cause less irritation than other surfactants as they have less ability to denature protein in the skin.

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.

Volatile amine vapours produce irritation and inflammation of the skin. Direct contact can cause burns.

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Open cuts, abraded or irritated skin should not be exposed to this material

Animal testing showed that a 30% fatty acid amide was a moderate skin irritant. In products intended for prolonged contact with the skin, the concentration of cocoamide DEA should not exceed 5%.

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.

Cationic surfactants cause skin irritation, and, in high concentrations, caustic burns.

Skin Corrosion/Irritation

Data available to make classification

Eye

If applied to the eyes, this material causes severe eye damage.

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.

Non-ionic surfactants can cause numbing of the cornea, which masks discomfort normally caused by other agents and leads to corneal injury. Irritation varies depending on the duration of contact, the nature and concentration of the surfactant.

Animal testing shows that low concentrations of fatty acid amides, such as cocoamide DEA, are severely irritating to the eyes.

Eye contact with fatty acid diethanolamides and monoethanolamides may seriously damage the eyes.

Many cationic surfactants are very irritating to the eyes at low concentration. Concentrated solutions can cause severe burns with permanent clouding.

Serious Eye Damage/Irritation

Data available to make classification

Respiratory Sensitisation

Data available to make classification

Skin Sensitisation

Data available to make classification

Carcinogenicity

Data available but does not fill the criteria for classification

Reproductive Toxicity

Data available to make classification

STOT - Single Exposure

Data available but does not fill the criteria for classification

STOT - Repeated Exposure

Data available but does not fill the criteria for classification

Aspiration Hazard

Data available but does not fill the criteria for classification

Mutagenicity

Data available but does not fill the criteria for classification

Chronic Effects

Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems.

Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.

Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material.

There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.

Imidazole is structurally related, and has been used to counteract the effects of histamine. Imidazoles have been reported to disrupt male fertility, through disruption of the function of the testes.

Chlorophenols have been associated with cancers of the throat, nose and connective tissue.

Secondary amines may react with nitrites to form potentially carcinogenic N-nitrosamines.

Prolonged or repeated skin contact may cause degreasing, followed by drying, cracking and skin inflammation.

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.

Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.

Section 12 - Ecological Information

Ecotoxicity

Not Available

Ingredient / Endpoint / Test Duration (hr) / Effect / Value / Species / BCF

Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Devcon Plastic Steel Epdxy (S5) Hardener	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems.

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.

Harmful to aquatic organisms.

Surfactants are in general toxic to aquatic organisms due to their surface-active properties. Historically, synthetic surfactants were often composed of branched alkyl chains resulting in poor biodegradability which led to concerns about their environmental effects. Today however, many of them, for example those used in large amounts, globally, as detergents, are linear and therefore readily biodegradable and considered to be of rather low risk to the environment. A linear structure of the hydrophobic chain facilitates the approach of microorganism while branching, in particular at the terminal position, inhibits biodegradation.

For imidazoline surfactants:

Ecotoxicity

Due to intrinsic properties of amine containing cationic surfactants river water ecotoxicity tests deliver more reproducible test results with limited uncertainty. As river water has a mitigating effect on ecotoxicity due to sorption of the amines to DOC and suspended matter a factor of 10 should be applied to the L(E)C50 to correct for the lower ecotoxicity observed.

for amides, fatty acids C18 unsat, reaction products with tetraethylenepentamine (CAS RN: 1225197-81-8)

Fish LC50 (96 h): 190 ug/l

Algae ErC50 (72 h): 612 ug/l; ErC10/ NOEC: 379 ug/l

Daphnia EC50 (48 h): 240, 490 ug/l; (21 d) 75 ug/l

Biodegradability

For amidoamines/imidazolines no ready biodegradability results have been obtained.

This leads to the following environmental classification according for amidoamines/imidazolines

Acute aquatic hazard H400 : Very toxic to aquatic life

M factor acute 10

Chronic(long-term) aquatic hazard Chronic Category 1 H410: Very toxic to aquatic life with longterm effects M factor chronic 1

For Alkylphenols:

Environmental Fate: The alkylphenolics may be divided into three groups. Group I: Ortho-substituted mono-alkylphenols. Group II: Para-substituted mono-alkylphenols. Group III: Di- and tri-substituted mixed alkyl phenols.

for Quaternary Ammonium Compounds (QAC's): QAC's are white, crystalline powders. Low molecular weight QACs are very soluble in water, but slightly or not at all soluble in solvents such as ether, petrol and benzene. As the molecular weight and chain lengths increases, the solubility in polar solvents (e.g. water) decreases and the solubility in non-polar solvents increases.

Environmental Fate: A major part of the QACs is discharged into wastewater and removed in the biological processes of sewage treatment, however; the aerobic and anaerobic biodegradability of QACs is not well investigated.

Fatty acid amides (FAA) are nonionics used in hair shampoo, liquid soaps, shaving creams and other personal care products. FAA consists of a fatty acid, usually derived from coconut oil, which is linked to an amide group by a C-N bond. The amide may be typically either be monoethanolamide (MEA), diethanolamide (DEA), or monoisopropanolamide (MIPA). Tests show that most fatty acid amides (FAA), such as the widely used cocodiethanolamide (cocoamide DEA) and cocomonoethanolamide (cocoamide MEA), are ultimately degraded under aerobic conditions, however test results for the aerobic biodegradability of the ethoxylated FAA are contradictory.

For Fatty Nitrogen-Derived Amides (FND Amides)

Environmental Fate: Models predict that these chemicals are non-volatile, however these predictions are of limited practical use.

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Measured values indicate that FND Amides are insoluble in water, however models predict that they are insoluble to moderately soluble but this is of little value in determining environmental fate and effects. Modelled predictions of photodegradation indicate that these chemicals would be expected to degrade relatively rapidly when exposed to sunlight ($t_{1/2}$ values ranged from 2.2 to 9.5 hours). Due to the surfactant properties and solubility of the FND Amides, hydrolytic stability is of little value in determining environmental fate or effects.

For Alkylphenols and their Ethoxylates, or Propoxylates (APE):

Environmental fate: Alkylphenols are found everywhere in the environment, when released. Releases are generally as wastes; they are extensively used throughout industry and in the home. Alkylphenol ethoxylates are widely used surfactants in domestic and industrial products, which are commonly found in wastewater discharges and in sewage treatment plant effluents. These substances can load considerably in various environmental compartments.

For Chloride: Although inorganic chloride ions are not normally considered toxic they can exist in effluents at acutely toxic levels. Incidental exposure to inorganic chloride may occur in occupational settings where chemicals management policies are improperly applied. The toxicity of chloride salts depends on the counter-ion (cation) present; that of chloride itself is unknown. Chloride toxicity has not been observed in humans except in the special case of impaired sodium chloride metabolism, e.g. in congestive heart failure.

For Surfactants: Kow cannot be easily determined due to hydrophilic/hydrophobic properties of the molecules in surfactants. BCF value: 1-350.

Aquatic Fate: Surfactants tend to accumulate at the interface of the air with water and are not extracted into one or the other liquid phases.

Terrestrial Fate: Anionic surfactants are not appreciably sorbed by inorganic solids.

For alkyl polyamines:

All members of this cluster are miscible or soluble in water.

Environmental Fate: Members of this cluster are expected to have varying degrees of mobility in the soil. While models suggest that they are likely to react rapidly with photochemically produced hydroxyl radicals (with half-lives of an hour), as they do not readily exist in vapour form this is not expected to be a predominant removal pathway for these chemicals. Experimental data and results from estimation models indicate that all members of this cluster have the potential to biodegrade aerobically under environmental conditions.

Contamination of polyhalogenated phenols in their manufacture by toxic species, such as the dibenzo-p-dioxins and dibenzofurans, raise concern in terms of their entry in the food chain.

DO NOT discharge into sewer or waterways.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Persistence and degradability

Ingredient / Persistence: Water/Soil / Persistence: Air

2,4,6-tris[(dimethylamino)methyl]phenol HIGH HIGH

tetraethylenepentamine LOW LOW

benzyl alcohol LOW LOW

4-nonylphenol, branched HIGH HIGH

nonylphenol HIGH HIGH

Mobility

Mobility in soil:

Ingredient / Mobility

2,4,6-tris[(dimethylamino)methyl]phenol LOW (KOC = 15130)

tetraethylenepentamine LOW (KOC = 1098)

benzyl alcohol LOW (KOC = 15.66)

4-nonylphenol, branched LOW (KOC = 56010)

nonylphenol LOW (KOC = 56010)

Bioaccumulative Potential

Ingredient / Bioaccumulation

2,4,6-tris[(dimethylamino)methyl]phenol LOW (LogKOW = 0.773)

tetraethylenepentamine LOW (LogKOW = -3.1604)

benzyl alcohol LOW (LogKOW = 1.1)

4-nonylphenol, branched LOW (BCF = 271)

nonylphenol LOW (BCF = 271)

Section 13 - Disposal Considerations

Waste Disposal

Product / Packaging disposal:

Containers may still present a chemical hazard/ danger when empty.

Return to supplier for reuse/ recycling if possible.

Otherwise:

If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.

Where possible retain label warnings and SDS and observe all notices pertaining to the product.

DO NOT allow wash water from cleaning or process equipment to enter drains.

It may be necessary to collect all wash water for treatment before disposal.

In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.

Where in doubt contact the responsible authority.

Recycle wherever possible or consult manufacturer for recycling options.

Consult State Land Waste Authority for disposal.

Bury or incinerate residue at an approved site.

Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - Transport Information

UN Number

None Allocated

Proper Shipping Name

None Allocated

Transport Hazard Class

None Allocated

Hazchem Code

Not Applicable

IATA UN Number

NCAD

IATA Proper Shipping Name

Not dangerous for conveyance under IATA code

IMDG UN Number

NCAD

IMDG Proper Shipping Name

Not dangerous for conveyance under IMO/IMDG code

Marine Pollutant

NO

Not Applicable

Additional Information

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

Source / Ingredient / Pollution Category

Not Available Devcon Plastic Steel Epdxy (S5) Hardener Not Available

Section 15 - Regulatory Information

Regulatory Information

tall oil/ tetraethylenepentamine polyamides(68513-05-3) is found on the following regulatory lists:

Australian Inventory of Industrial Chemicals (AIIC)

formaldehyde/ benzenamine, hydrogenated(135108-88-2) is found on the following regulatory lists:

Australian Inventory of Industrial Chemicals (AIIC)

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2,4,6-tris[(dimethylamino)methyl]phenol(90-72-2) is found on the following regulatory lists:

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

tetraethylenepentamine(112-57-2) 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 5

Australian Inventory of Industrial Chemicals (AIIC)

benzyl alcohol(100-51-6) is found on the following regulatory lists:

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

4-nonylphenol, branched(84852-15-3) is found on the following regulatory lists:

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

nonylphenol(25154-52-3) is found on the following regulatory lists:

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

silica crystalline - quartz(14808-60-7) is found on the following regulatory lists:

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Model Work Health and Safety Regulations - Hazardous chemicals (other than lead) requiring health monitoring

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

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

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

National Inventory / Status

Australia - AIIC

Canada - DSL Yes

Canada - NDSL No (formaldehyde/ benzenamine, hydrogenated; 2,4,6-tris[(dimethylamino)methyl]phenol; tetraethylenepentamine; benzyl alcohol; silica crystalline - quartz)

China - IECSC Yes

Europe - EINEC / ELINCS / NLP No (formaldehyde/ benzenamine, hydrogenated)

Japan - ENCS No (tall oil/ tetraethylenepentamine polyamides; formaldehyde/ benzenamine, hydrogenated)

Korea - KECI Yes

New Zealand - NZIoC Yes

Philippines - PICCS Yes

USA - TSCA Yes

Legend: Y = All ingredients are on the inventory

Poisons Schedule

N/A

Section 16 - Any Other Relevant Information

Empirical Formula & Structural Formula

Not Applicable

User Codes

User Title Label	User Codes
Wis Numbers	09589014

Other Information

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Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

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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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END OF SDS

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