

# Z-POXY 5 MINS

## ChemWatch Review SDS

Chemwatch Hazard Alert Code: 2

Chemwatch: 35786

Version No: 8.1

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

Issue Date: 11/10/2019

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S.GHS.AUS.EN

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

#### Product Identifier

|                               |  |
|-------------------------------|--|
| Product name                  | Z-POXY 5 MINS  |
| Chemical Name                 | bisphenol A/ diglycidyl ether polymer, high molecular weight   |
| Synonyms                      | (C15H16O2.C3H5ClO)x; (C21-H24-O4)x; high molecular weight epichlorohydrin / bisphenol A - type epoxide resin; bisphenol A/ epichlorohydrin resin; polyhydroxyether poly(hydroxyether) resin; 4,4'-isopropylidenedi-, polymer with 1-chloro-2,3-epoxypropane; bisphenol A - epichlorohydrin resin; bisphenol A epichlorohydrin condensate; phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane; oxirane, 2,2'-[1-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis.; homopolymer; Phenoxy Resin PKHH PKHC PKHJ |
| Proper shipping name          | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains bisphenol A/ diglycidyl ether polymer, high molecular weight)   |
| Chemical formula              | C16H20ClO3   |
| Other means of identification | Not Available  |
| CAS number                    | 25068-38-6   |

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

|                          |  |
|--------------------------|--|
| Relevant identified uses | High molecular weight epoxy resin, used as component of adhesive and coating formulations. |
|--------------------------|--|

#### Details of the supplier of the safety data sheet

|                         |   |
|-------------------------|---|
| Registered company name | TR (Chemicals Australia)                    |
| Address                 | 262 Highett Road Highett VIC 3190 Australia |
| Telephone               | +61 3 9532 1277                             |
| Fax                     | +61 3 9532 0802                             |
| Website                 | Not Available                               |
| Email                   | trchems@one.net.au                          |

#### Emergency telephone number

|                                   |                              |
|-----------------------------------|------------------------------|
| Association / Organisation        | CHEMWATCH EMERGENCY RESPONSE |
| Emergency telephone numbers       | +61 1800 951 288             |
| Other emergency telephone numbers | +61 2 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

|                    |  |
|--------------------|--|
| Poisons Schedule   | Not Applicable   |
| Classification [1] | Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Sensitisation (Skin) Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 2 |
| Legend:            | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI  |

#### Label elements

|                     |   |
|---------------------|---|
| Hazard pictogram(s) |  |
| Signal word         | Warning   |

#### Hazard statement(s)

|      |  |
|------|--|
| H315 | Causes skin irritation.                          |
| H319 | Causes serious eye irritation.                   |
| H317 | May cause an allergic skin reaction.             |
| H411 | Toxic to aquatic life with long lasting effects. |

**Precautionary statement(s) Prevention**

|             |  |
|-------------|--|
| <b>P280</b> | Wear protective gloves, protective clothing, eye protection and face protection. |
| <b>P261</b> | Avoid breathing dust/fumes.  |
| <b>P273</b> | Avoid release to the environment.  |
| <b>P264</b> | Wash all exposed external body areas thoroughly after handling.                  |

**Precautionary statement(s) Response**

|                       |  |
|-----------------------|--|
| <b>P302+P352</b>      | IF ON SKIN: Wash with plenty of water and soap.  |
| <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.   |
| <b>P337+P313</b>      | If eye irritation persists: Get medical advice/attention.  |

**Precautionary statement(s) Storage**

Not Applicable

**Precautionary statement(s) Disposal**

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

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

| CAS No        | %[weight] | Name  |
|---------------|-----------|---|
| 25068-38-6    | >=98      | <u>bisphenol A/ diglycidyl ether polymer, high molecular weight</u> |
| Not Available |           | residual processing solvents as                                     |
| 108-88-3      | <=1       | <u>toluene</u>  |
| 71-36-3       | <=1       | <u>n-butanol</u>  |
| 106-89-8      |           | <u>epichlorohydrin</u>  |

**Legend:** 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L;  
\* EU IOELVs available

**Mixtures**

See section above for composition of Substances

**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> |
| <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, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>   |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ Immediately give a glass of water.</li> <li>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>   |

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

Treat symptomatically.

**SECTION 5 Firefighting measures****Extinguishing media**

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

**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 |
|-----------------------------|--|

**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 breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> </ul> |
|----------------------|---|

|                              |   |
|------------------------------|---|
|                              | <ul style="list-style-type: none"> <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 solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.</li> <li>Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).</li> <li>Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.</li> </ul> <p>Combustion products include:<br/>carbon monoxide (CO)<br/>carbon dioxide (CO<sub>2</sub>)<br/>aldehydes<br/>other pyrolysis products typical of burning organic material.</p> <p><b>NOTE:</b> Burns with intense heat. Produces melting, flowing, burning liquid and dense acrid black smoke.</p> |
| <b>HAZCHEM</b>               | 2Z  |

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

|                     |   |
|---------------------|---|
| <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 glasses.</li> <li>Use dry clean up procedures and avoid generating dust.</li> </ul>                 |
| <b>Major Spills</b> | <p>Environmental hazard - contain spillage.<br/>Moderate hazard.</p> <ul style="list-style-type: none"> <li><b>CAUTION:</b> Advise personnel in area.</li> <li>Alert Emergency Services and tell them location and nature of hazard.</li> <li>Control personal contact by wearing protective clothing.</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>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> <li>Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions)</li> <li>Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.</li> <li>Establish good housekeeping practices.</li> <li>Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.</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>Store in a cool, dry area protected from environmental extremes.</li> <li>Store away from incompatible materials and foodstuff containers.</li> </ul>  |

### Conditions for safe storage, including any incompatibilities

|                                |  |
|--------------------------------|--|
| <b>Suitable container</b>      | <ul style="list-style-type: none"> <li>Polyethylene or polypropylene container.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>   |
| <b>Storage incompatibility</b> | <p>Glycidyl ethers:</p> <ul style="list-style-type: none"> <li>may form unstable peroxides on storage in air, light, sunlight, UV light or other ionising radiation, trace metals - inhibitor should be maintained at adequate levels</li> <li>may polymerise in contact with heat, organic and inorganic free radical producing initiators</li> <li>may polymerise with evolution of heat in contact with oxidisers, strong acids, bases and amines</li> <li>react violently with strong oxidisers, permanganates, peroxides, acyl halides, alkalis, ammonium persulfate, bromine dioxide</li> <li>attack some forms of plastics, coatings, and rubber</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 |
|--------|------------|---------------|-----|------|------|-------|
|--------|------------|---------------|-----|------|------|-------|

Continued...

| Source                       | Ingredient      | Material name   | TWA                | STEL                | Peak               | Notes         |
|------------------------------|-----------------|-----------------|--------------------|---------------------|--------------------|---------------|
| Australia Exposure Standards | toluene         | Toluene         | 50 ppm / 191 mg/m3 | 574 mg/m3 / 150 ppm | Not Available      | Not Available |
| Australia Exposure Standards | n-butanol       | n-Butyl alcohol | Not Available      | Not Available       | 50 ppm / 152 mg/m3 | Not Available |
| Australia Exposure Standards | epichlorohydrin | Epichlorohydrin | 2 ppm / 7.6 mg/m3  | Not Available       | Not Available      | Not Available |

#### Emergency Limits

| Ingredient   | TEEL-1        | TEEL-2        | TEEL-3        |
|--|---------------|---------------|---------------|
| bisphenol A/ diglycidyl ether polymer, high molecular weight | 90 mg/m3      | 990 mg/m3     | 5,900 mg/m3   |
| toluene  | Not Available | Not Available | Not Available |
| n-butanol  | 60 ppm        | 800 ppm       | 8000** ppm    |
| epichlorohydrin  | Not Available | Not Available | Not Available |


| Ingredient   | Original IDLH | Revised IDLH  |
|--|---------------|---------------|
| bisphenol A/ diglycidyl ether polymer, high molecular weight | Not Available | Not Available |
| toluene  | 500 ppm       | Not Available |
| n-butanol  | 1,400 ppm     | Not Available |
| epichlorohydrin  | 75 ppm        | Not Available |

#### Occupational Exposure Banding

| Ingredient   | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|--|-----------------------------------|----------------------------------|
| bisphenol A/ diglycidyl ether polymer, high molecular weight | E                                 | ≤ 0.01 mg/m <sup>3</sup>         |

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

#### Exposure controls

|   |   |
|---|---|
| <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. 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>   |
| <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>            | <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> <p>Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.</p> <ul style="list-style-type: none"> <li>▶ polychloroprene.</li> <li>▶ nitrile rubber.</li> <li>▶ butyl rubber.</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> <li>▶ Skin cleansing cream.</li> </ul>  |

#### Recommended material(s)

##### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the: "Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

Z-POXY 5 MINS

#### Respiratory protection

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

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES                      | A P1 Air-line*       | -                    | A PAPR-P1              |

Continued...

| Material          | CPI |
|-------------------|-----|
| TEFLON            | B   |
| BUTYL             | C   |
| CPE               | C   |
| HYPALON           | C   |
| NATURAL RUBBER    | C   |
| NATURAL+NEOPRENE  | C   |
| NEOPRENE          | C   |
| NEOPRENE/NATURAL  | C   |
| NITRILE           | C   |
| NITRILE+PVC       | C   |
| PE                | C   |
| PE/EVAL/PE        | C   |
| PVA               | C   |
| PVC               | C   |
| SARANEX-23 2-PLY  | C   |
| SARANEX-23        | C   |
| VITON             | C   |
| VITON/CHLOROBUTYL | C   |
| VITON/NEOPRENE    | C   |
| VITON/NITRILE     | C   |

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

| up to 50 x ES  | Air-line** | A P2       | A PAPR-P2 |
|----------------|------------|------------|-----------|
| up to 100 x ES | -          | A P3       | -         |
|                |            | Air-line*  | -         |
| 100+ x ES      | -          | Air-line** | A PAPR-P3 |

\* - Negative pressure demand \*\* - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- Use approved positive flow mask if significant quantities of dust becomes airborne.
- Try to avoid creating dust conditions.

## SECTION 9 Physical and chemical properties

### Information on basic physical and chemical properties

|   |  |  |                |
|---|--|--|----------------|
| <b>Appearance</b>                                   | White translucent pellets; insoluble in water. Faint odour. Material contains residual processing solvents, Toluene and n-butanol Soluble only in very strong polar solvent mixes. |  |                |
| <b>Physical state</b>                               | Divided Solid  | <b>Relative density (Water = 1)</b>            | 1.19           |
| <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>          | 180  | <b>Viscosity (cSt)</b>                         | Not Applicable |
| <b>Initial boiling point and boiling range (°C)</b> | >260   | <b>Molecular weight (g/mol)</b>                | 14-16000 Mn.   |
| <b>Flash point (°C)</b>                             | >93  | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Applicable   | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Not Applicable   | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Applicable   | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Applicable |
| <b>Lower Explosive Limit (%)</b>                    | Not Applicable   | <b>Volatile Component (%vol)</b>               | < 2 residuals  |
| <b>Vapour pressure (kPa)</b>                        | Not Available  | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water</b>                          | Immiscible   | <b>pH as a solution (Not Available%)</b>       | Not Applicable |
| <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>There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.</p> <p>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.</p> <p>Not normally a hazard due to non-volatile nature of product</p>  |
| <b>Ingestion</b>    | <p>Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident.</p> <p>High molecular weight material; on single acute exposure would be expected to pass through gastrointestinal tract with little change / absorption. Occasionally accumulation of the solid material within the alimentary tract may result in formation of a bezoar (concretion), producing discomfort. Animal testing showed that a single dose of bisphenol A diglycidyl ether (BADGE) given by mouth, caused an increase in immature sperm.</p>  |
| <b>Skin Contact</b> | <p>The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.</p> <p>Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</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>There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.</p>  |
| <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>There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.</p> <p>Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung.</p> <p>Glycidyl ethers can cause genetic damage and cancer.</p> <p>Bisphenol A may have effects similar to female sex hormones and when administered to pregnant women, may damage the foetus. It may also damage male reproductive organs and sperm.</p> <p>Bisphenol A diglycidyl ethers (BADGEs) produce a sensitization dermatitis (skin inflammation) characterized by eczema with blisters and papules, with considerable itching of the back of the hand. This may persist for 10-14 days after withdrawal from exposure and recur immediately on re-exposure. The dermatitis may last longer following each exposure, but is unlikely to become more intense. Lower molecular weight species produce sensitization more readily.</p> |

|   |  |   |
|---|--|---|
| <b>bisphenol A/ diglycidyl ether polymer, high molecular weight</b> | <b>TOXICITY</b>  | <b>IRRITATION</b>   |
|   | dermal (rat) LD50: >1200 mg/kg <sup>[2]</sup>                    | Eye (rabbit): 100 mg - mild                                       |
|   | Oral (Mouse) LD50; >500 mg/kg <sup>[2]</sup>                     |   |
| <b>toluene</b>  | <b>TOXICITY</b>  | <b>IRRITATION</b>   |
|   | Dermal (rabbit) LD50: 12124 mg/kg <sup>[2]</sup>                 | Eye (rabbit): 2mg/24h - SEVERE                                    |
|   | Inhalation(Rat) LC50; >13350 ppm4h <sup>[2]</sup>                | Eye (rabbit):0.87 mg - mild                                       |
|   | Oral (Rat) LD50: 636 mg/kg <sup>[2]</sup>                        | Eye (rabbit):100 mg/30sec - mild                                  |
|   |  | Eye: adverse effect observed (irritating) <sup>[1]</sup>          |
|   |  | Skin (rabbit):20 mg/24h-moderate                                  |
|   |  | Skin (rabbit):500 mg - moderate                                   |
|   | Skin: adverse effect observed (irritating) <sup>[1]</sup>        |   |
|   | Skin: no adverse effect observed (not irritating) <sup>[1]</sup> |   |
| <b>n-butanol</b>  | <b>TOXICITY</b>  | <b>IRRITATION</b>   |
|   | Dermal (rabbit) LD50: 3400 mg/kg <sup>[2]</sup>                  | Eye (human): 50 ppm - irritant                                    |
|   | Inhalation(Rat) LC50; 8000 ppm4h <sup>[2]</sup>                  | Eye (rabbit): 1.6 mg-SEVERE                                       |
|   | Oral (Rat) LD50; 790 mg/kg <sup>[2]</sup>                        | Eye (rabbit): 24 mg/24h-SEVERE                                    |
|   |  | Eye: adverse effect observed (irreversible damage) <sup>[1]</sup> |
|   |  | Skin (rabbit): 405 mg/24h-moderate                                |
|   | Skin: adverse effect observed (irritating) <sup>[1]</sup>        |   |
| <b>epichlorohydrin</b>  | <b>TOXICITY</b>  | <b>IRRITATION</b>   |
|   | Dermal (rabbit) LD50: 515 mg/kg <sup>[2]</sup>                   | Eye (rabbit): 23 mg   |
|   | Inhalation(Rat) LC50; 1082.5 ppm4h <sup>[1]</sup>                | Eye (rabbit):100 mg/24 hr-moderate                                |
|   | Oral (Rat) LD50; 90 mg/kg <sup>[2]</sup>                         | Skin (rabbit): 10 mg/24 hr (open)                                 |

**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 POLYMER, HIGH MOLECULAR WEIGHT</b>                                       | <p>for RTECS No: SL 6475000: (liquid grade) Equivocal tumourigen by RTECS criteria Somnolence, dyspnea, peritonitis<br/>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.<br/>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.<br/>Animal testing over 13 weeks showed bisphenol A diglycidyl ether (BADGE) caused mild to moderate, chronic, inflammation of the skin.<br/>Reproductive and Developmental Toxicity: Animal testing showed BADGE given over several months caused reduction in body weight but had no reproductive effects.<br/>Cancer-causing potential: It has been concluded that bisphenol A diglycidyl ether cannot be classified with respect to its cancer-causing potential in humans.<br/>Genetic toxicity: Laboratory tests on genetic toxicity of BADGE have so far been negative.<br/>Immunotoxicity: Animal testing suggests regular injections of diluted BADGE may result in sensitization.<br/>Consumer exposure: Consumer exposure to BADGE is almost exclusively from migration of BADGE from can coatings into food. Testing has not found any evidence of hormonal disruption.</p> |
| <b>TOLUENE</b>  | <p>For toluene:<br/>Acute toxicity: Humans exposed to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis (sleepiness) and death. When inhaled or swallowed, toluene can cause severe central nervous system depression, and in large doses has a narcotic effect. 60mL has caused death. Death of heart muscle fibres, liver swelling, congestion and bleeding of the lungs and kidney injury were all found on autopsy.<br/>Exposure to inhalation at a concentration of 600 parts per million for 8 hours resulted in the same and more serious symptoms including euphoria (a feeling of well-being), dilated pupils, convulsions and nausea.</p>   |
| <b>N-BUTANOL</b>  | <p>For n-butanol:<br/>Acute toxicity: In animal testing, n-butanol (BA) was only slightly toxic, following exposure by swallowing, skin contact or irritation. Animal testing and human experience suggest that n-butanol is moderately irritating to the skin but severely irritating to the eye. Human studies show that BA is not likely to cause skin sensitization. Warning of exposure occurs before irritation of the nose, because n-butanol has an odour which can be detected below concentration levels cause irritation.<br/>Repeat dose toxicity: Animal testing showed temporarily reduction in activity and food intake following repeated exposure to BA, but otherwise there was no evidence of chronic toxicity.<br/>Reproductive toxicity: Several animal studies indicate BA does not possess reproductive toxicity, and does not affect fertility.<br/>Developmental toxicity: BA only caused developmental changes and toxic effects on the foetus near or at levels that were toxic to the mother.<br/>Genetic toxicity: Testing shows that BA does not possess genetic toxicity.<br/>Cancer-causing potential: Based on negative results from testing for potential of n-butanol to cause mutations and chromosomal aberrations, BA has a very small potential for causing cancer.</p>   |
| <b>EPICHLOROHYDRIN</b>  | <p>Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) share many common characteristics with respect to animal toxicology. One such oxirane is ethyloxirane; data presented here may be taken as representative.<br/>For 1,2-butylene oxide (ethyloxirane):<br/>In animal testing, ethyloxirane increased the incidence of tumours of the airways in animals exposed via inhalation. However, tumours were not observed in mice chronically exposed via skin. Two structurally related substances, oxirane (ethylene oxide) and methyloxirane (propylene oxide), which are also direct-acting alkylating agents, have been classified as causing cancer.<br/><b>WARNING:</b> This substance has been classified by the IARC as Group 2A: Probably Carcinogenic to Humans.<br/>Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen<br/>[National Toxicology Program: U.S. Dep. of Health &amp; Human Services 2002]<br/>Intraperitoneal (Guinea pig) LD50: 118 mg/kg</p>  |
| <b>BISPHENOL A/ DIGLYCIDYL ETHER POLYMER, HIGH MOLECULAR WEIGHT &amp; EPICHLOROHYDRIN</b>                 | <p>The following information refers to contact allergens as a group and may not be specific to this product.<br/>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>BISPHENOL A/ DIGLYCIDYL ETHER POLYMER, HIGH MOLECULAR WEIGHT &amp; N-BUTANOL &amp; EPICHLOROHYDRIN</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>BISPHENOL A/ DIGLYCIDYL ETHER POLYMER, HIGH MOLECULAR WEIGHT &amp; TOLUENE &amp; N-BUTANOL</b>         | <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>  |
| <b>N-BUTANOL &amp; EPICHLOROHYDRIN</b>  | <p>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.</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 either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## SECTION 12 Ecological information

### Toxicity

Continued...

| bisphenol A/ diglycidyl ether polymer, high molecular weight | Endpoint | Test Duration (hr) | Species   | Value  | Source |
|--|----------|--------------------|-----------|--------|--------|
|  | EC50     | 48h                | Crustacea | ~2mg/l | 2      |
| EC50(ECx)  | 48h      | Crustacea          | ~2mg/l    | 2      |        |

| toluene | Endpoint  | Test Duration (hr) | Species                       | Value       | Source |
|---------|-----------|--------------------|-------------------------------|-------------|--------|
|         | NOEC(ECx) | 168h               | Crustacea                     | 0.74mg/L    | 5      |
|         | LC50      | 96h                | Fish                          | 5-35mg/l    | 4      |
|         | EC50      | 48h                | Crustacea                     | 3.78mg/L    | 5      |
|         | EC50      | 96h                | Algae or other aquatic plants | >376.71mg/L | 4      |

| n-butanol | Endpoint  | Test Duration (hr)            | Species                       | Value       | Source |
|-----------|-----------|-------------------------------|-------------------------------|-------------|--------|
|           | NOEC(ECx) | 504h                          | Crustacea                     | 4.1mg/l     | 2      |
|           | LC50      | 96h                           | Fish                          | 100-500mg/l | 4      |
|           | EC50      | 72h                           | Algae or other aquatic plants | >500mg/l    | 1      |
|           | EC50      | 48h                           | Crustacea                     | >500mg/l    | 1      |
| EC50      | 96h       | Algae or other aquatic plants | 225mg/l                       | 2           |        |

| epichlorohydrin | Endpoint  | Test Duration (hr)            | Species                       | Value        | Source |
|-----------------|-----------|-------------------------------|-------------------------------|--------------|--------|
|                 | NOEC(ECx) | 72h                           | Algae or other aquatic plants | 1.7mg/l      | 2      |
|                 | LC50      | 96h                           | Fish                          | 9.1-12.3mg/l | 4      |
|                 | EC50      | 72h                           | Algae or other aquatic plants | 7.1mg/l      | 2      |
|                 | EC50      | 48h                           | Crustacea                     | 23.9mg/l     | 2      |
| EC50            | 96h       | Algae or other aquatic plants | 9.8-17mg/l                    | 4            |        |

**Legend:** *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

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.

For bisphenol A and related bisphenols:

Environmental fate:

Biodegradability (28 d) 89% - Easily biodegradable

Bioconcentration factor (BCF) 7.8 mg/l

Bisphenol A, its derivatives and analogues, can be released from polymers, resins and certain substances by metabolic products

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII

As an environmental contaminant, bisphenol A interferes with nitrogen fixation at the roots of leguminous plants associated with the bacterial symbiont *Sinorhizobium meliloti*. Despite a half-life in the soil of only 1-10 days, its ubiquity makes it an important pollutant. According to Environment Canada, "initial assessment shows that at low levels, bisphenol A can harm fish and organisms over time. Studies also indicate that it can currently be found in municipal wastewater." However, a study conducted in the United States found that 91-98% of bisphenol A may be removed from water during treatment at municipal water treatment plants.

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

#### Persistence and degradability

| Ingredient      | Persistence: Water/Soil   | Persistence: Air                |
|-----------------|---------------------------|---------------------------------|
| toluene         | LOW (Half-life = 28 days) | LOW (Half-life = 4.33 days)     |
| n-butanol       | LOW (Half-life = 54 days) | LOW (Half-life = 3.65 days)     |
| epichlorohydrin | LOW (Half-life = 56 days) | MEDIUM (Half-life = 60.75 days) |

#### Bioaccumulative potential

| Ingredient      | Bioaccumulation  |
|-----------------|------------------|
| toluene         | LOW (BCF = 90)   |
| n-butanol       | LOW (BCF = 0.64) |
| epichlorohydrin | LOW (BCF = 1.02) |

#### Mobility in soil

| Ingredient      | Mobility             |
|-----------------|----------------------|
| toluene         | LOW (KOC = 268)      |
| n-butanol       | MEDIUM (KOC = 2.443) |
| epichlorohydrin | LOW (KOC = 4.491)    |

## SECTION 13 Disposal considerations

#### Waste treatment methods

| Product / Packaging disposal |  |
|------------------------------|--|
|                              | <ul style="list-style-type: none"> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> </ul> |



Continued...



|  |  |
|--|--|
|  | <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> </ul> <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▶ Reduction</li> <li>▶ Reuse</li> <li>▶ Recycling</li> <li>▶ Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> </ul> |
|--|--|

## SECTION 14 Transport information

### Labels Required

|                         |   |
|-------------------------|---|
|                         |  |
| <b>Marine Pollutant</b> |  |
| <b>HAZCHEM</b>          | 2Z  |

### Land transport (ADG)

|                                     |  |                      |
|-------------------------------------|--|----------------------|
| <b>UN number</b>                    | 3077   |                      |
| <b>UN proper shipping name</b>      | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains bisphenol A/ diglycidyl ether polymer, high molecular weight) |                      |
| <b>Transport hazard class(es)</b>   | Class  | 9                    |
|                                     | Subrisk  | Not Applicable       |
| <b>Packing group</b>                | III  |                      |
| <b>Environmental hazard</b>         | Environmentally hazardous  |                      |
| <b>Special precautions for user</b> | Special provisions   | 274 331 335 375 AU01 |
|                                     | Limited quantity   | 5 kg                 |

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>                    | 3077   |                         |
| <b>UN proper shipping name</b>      | Environmentally hazardous substance, solid, n.o.s. * (contains bisphenol A/ diglycidyl ether polymer, high molecular weight) |                         |
| <b>Transport hazard class(es)</b>   | ICAO/IATA Class  | 9                       |
|                                     | ICAO / IATA Subrisk  | Not Applicable          |
|                                     | ERG Code   | 9L                      |
| <b>Packing group</b>                | III  |                         |
| <b>Environmental hazard</b>         | Environmentally hazardous  |                         |
| <b>Special precautions for user</b> | Special provisions   | A97 A158 A179 A197 A215 |
|                                     | Cargo Only Packing Instructions  | 956                     |
|                                     | Cargo Only Maximum Qty / Pack  | 400 kg                  |
|                                     | Passenger and Cargo Packing Instructions   | 956                     |
|                                     | Passenger and Cargo Maximum Qty / Pack   | 400 kg                  |
|                                     | Passenger and Cargo Limited Quantity Packing Instructions  | Y956                    |
|                                     | Passenger and Cargo Limited Maximum Qty / Pack   | 30 kg G                 |

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

|                  |      |
|------------------|------|
| <b>UN number</b> | 3077 |
|------------------|------|

|                                     |  |                     |
|-------------------------------------|--|---------------------|
| <b>UN proper shipping name</b>      | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains bisphenol A/ diglycidyl ether polymer, high molecular weight) |                     |
| <b>Transport hazard class(es)</b>   | IMDG Class   | 9                   |
|                                     | IMDG Subrisk   | Not Applicable      |
| <b>Packing group</b>                | III  |                     |
| <b>Environmental hazard</b>         | Marine Pollutant   |                     |
| <b>Special precautions for user</b> | EMS Number   | F-A, S-F            |
|                                     | Special provisions   | 274 335 966 967 969 |
|                                     | Limited Quantities   | 5 kg                |

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

Not Applicable

**Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code**

| Product name   | Group         |
|--|---------------|
| bisphenol A/ diglycidyl ether polymer, high molecular weight | Not Available |
| toluene  | Not Available |
| n-butanol  | Not Available |
| epichlorohydrin  | Not Available |

**Transport in bulk in accordance with the ICG Code**

| Product name   | Ship Type     |
|--|---------------|
| bisphenol A/ diglycidyl ether polymer, high molecular weight | Not Available |
| toluene  | Not Available |
| n-butanol  | Not Available |
| epichlorohydrin  | Not Available |

**SECTION 15 Regulatory information****Safety, health and environmental regulations / legislation specific for the substance or mixture****bisphenol A/ diglycidyl ether polymer, high molecular weight 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)

Chemical Footprint Project - Chemicals of High Concern List  
 International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

**toluene 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  
 Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

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

**n-butanol 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

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6  
 Australian Inventory of Industrial Chemicals (AIIC)

**epichlorohydrin 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 7  
 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 2A: Probably carcinogenic to humans

**National Inventory Status**

| National Inventory                              | Status   |
|---|--|
| Australia - AIIC / Australia Non-Industrial Use | Yes  |
| Canada - DSL                                    | Yes  |
| Canada - NDSL                                   | No (bisphenol A/ diglycidyl ether polymer, high molecular weight; toluene; n-butanol; epichlorohydrin) |
| China - IECSC                                   | Yes  |
| Europe - EINEC / ELINCS / NLP                   | Yes  |
| Japan - ENCS                                    | Yes  |
| Korea - KECI                                    | Yes  |
| New Zealand - NZIoC                             | Yes  |

| National Inventory  | Status  |
|---------------------|---|
| Philippines - PICCS | Yes   |
| USA - TSCA          | Yes   |
| Taiwan - TCSI       | Yes   |
| Mexico - INSQ       | No (bisphenol A/ diglycidyl ether polymer, high molecular weight) |
| Vietnam - NCI       | Yes   |
| Russia - FBEPH      | Yes   |

**Legend:** Yes = All CAS declared ingredients are on the inventory  
No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## SECTION 16 Other information

|                      |            |
|----------------------|------------|
| <b>Revision Date</b> | 11/10/2019 |
| <b>Initial Date</b>  | 28/03/2003 |

## SDS Version Summary

| Version | Date of Update | Sections Updated  |
|---------|----------------|---|
| 7.1     | 23/03/2015     | Acute Health (swallowed), Chronic Health, Disposal, Environmental, Exposure Standard, Ingredients, Personal Protection (hands/feet), Storage (storage incompatibility), Supplier Information, Synonyms, Toxicity and Irritation (Other), Name |
| 8.1     | 11/10/2019     | Expiration. Review and Update   |

## Other information

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

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

## Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average  
 PC—STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit  
 TEEL: Temporary Emergency Exposure Limit.  
 IDLH: Immediately Dangerous to Life or Health Concentrations  
 ES: Exposure Standard  
 OSF: Odour Safety Factor  
 NOAEL :No Observed Adverse Effect Level  
 LOAEL: Lowest Observed Adverse Effect Level  
 TLV: Threshold Limit Value  
 LOD: Limit Of Detection  
 OTV: Odour Threshold Value  
 BCF: BioConcentration Factors  
 BEI: Biological Exposure Index  
 AIIC: Australian Inventory of Industrial Chemicals  
 DSL: Domestic Substances List  
 NDSL: Non-Domestic Substances List  
 IECSC: Inventory of Existing Chemical Substance in China  
 EINECS: European INventory of Existing Commercial chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 NLP: No-Longer Polymers  
 ENCS: Existing and New Chemical Substances Inventory  
 KECI: Korea Existing Chemicals Inventory  
 NZIoC: New Zealand Inventory of Chemicals  
 PICCS: Philippine Inventory of Chemicals and Chemical Substances  
 TSCA: Toxic Substances Control Act  
 TCSI: Taiwan Chemical Substance Inventory  
 INSQ: Inventario Nacional de Sustancias Químicas  
 NCI: National Chemical Inventory  
 FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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