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

Product Identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>Davco Epoxy Grout Part B Hardener</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>Not Available</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

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

Use according to manufacturer's directions. Requires that the two parts be mixed by hand or mixer before use, in accordance with manufacturers directions. Mix only as much as is required. Do not return the mixed material to the original containers. The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing.

Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Registered company name</th>
<th>Parex Group (ParexGroup)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>67 Elizabeth Street Wetherill Park NSW 2164 Australia</td>
</tr>
<tr>
<td>Telephone</td>
<td>+61 2 9616 3000</td>
</tr>
<tr>
<td>Fax</td>
<td>+61 2 9725 5551</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.davco.com.au">www.davco.com.au</a></td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:marketing@davco.com.au">marketing@davco.com.au</a></td>
</tr>
</tbody>
</table>

Emergency telephone number

<table>
<thead>
<tr>
<th>Association / Organisation</th>
<th>Not Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency telephone numbers</td>
<td>1800 039 008</td>
</tr>
<tr>
<td>Other emergency telephone numbers</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

CHEMWATCH EMERGENCY RESPONSE

<table>
<thead>
<tr>
<th>Primary Number</th>
<th>Alternative Number 1</th>
<th>Alternative Number 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800 039 008</td>
<td>1800 039 008</td>
<td>+612 9186 1132</td>
</tr>
</tbody>
</table>

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

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

CHEMWATCH HAZARD RATINGS

<table>
<thead>
<tr>
<th>Flammability</th>
<th>1</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Body Contact</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Chronic</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Poisons Schedule

S5

Classification [1]

Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Skin Sensitizer Category 1

Legend:


Label elements

Hazard pictogram(s)
### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

#### Substances

See section below for composition of Mixtures

#### Mixtures

<table>
<thead>
<tr>
<th>CAS No</th>
<th>% (weight)</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>112-24-3</td>
<td>&lt;10</td>
<td>triethylenetetramine</td>
</tr>
</tbody>
</table>

### SECTION 4 FIRST AID MEASURES

#### Description of first aid measures

**Eye Contact**

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

**Skin Contact**

- 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.

**Inhalation**

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
  - Other measures are usually unnecessary.

**Ingestion**

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

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5 FIREFIGHTING MEASURES

#### Extinguishing media

- Water spray or fog.
- Alcohol stable foam.
- Dry chemical powder.
- Carbon dioxide.
- Do not use a water jet to fight fire.

Special hazards arising from the substrate or mixture

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

Fire Fighting
- 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.
- Avoid spraying water onto liquid pools.
- **DO NOT** approach containers suspected to be hot.

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).
- May emit acid smoke.
- Mists containing combustible materials may be explosive.
- Combustion products include:
  - carbon dioxide (CO2)
  - nitrogen oxides (NOx)
  - other pyrolysis products typical of burning organic material.
- May emit poisonous fumes.
- May emit corrosive fumes.

**HAZCHEM** Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
See section 8

Environmental precautions
See section 12

Methods and material for containment and cleaning up

**Minor Spills**
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 cellulose 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). Inorganic absorbents or water may be used to clean up the amine waste.
- 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.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.

**Major Spills**
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.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, naked lights or ignition sources.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

**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.
- **DO NOT** enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.

**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.
- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.

**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.
Davco Epoxy Grout Part B Hardener

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCIDENTAL EXPOSURE LIMITS (OEL)

<table>
<thead>
<tr>
<th>Material name</th>
<th>TEEL-1</th>
<th>TEEL-2</th>
<th>TEEL-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethylenetetramine</td>
<td>3 ppm</td>
<td>14 ppm</td>
<td>83 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Original IDLH</th>
<th>Revised IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethylenetetramine</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Exposure controls

Appropriate engineering controls

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

The basic types of engineering controls are:

- Process controls which involve changing the way a job activity or process is done to reduce the risk.
- Enclosure and/or isolation of emission source which keeps a selected hazard “physically” away from the worker and ventilation that strategically “adds” and “removes” air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

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


Personal 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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available.

- Eye wash unit.
- Skin cleansing cream.
- Barrier cream.
- P.V.C. apron.
- Overalls.

Skin protection

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. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.

- When handling liquid-grade epoxy resins wear chemically protective gloves (e.g nitrile or nitrile-butatoluene rubber), boots and aprons.
- DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin).

- DO NOT use barrier creams containing emulsified fats and oils as these may absorb the resin; silicone-based barrier creams should be reviewed prior to use.

Respiratory protection

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

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

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: Davco Epoxy Grout Part B Hardener

<table>
<thead>
<tr>
<th>Material</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL</td>
<td>A</td>
</tr>
<tr>
<td>NEOPRENE</td>
<td>A</td>
</tr>
<tr>
<td>NITRILE</td>
<td>A</td>
</tr>
<tr>
<td>PE/EVAL/PE</td>
<td>A</td>
</tr>
<tr>
<td>VITON</td>
<td>A</td>
</tr>
</tbody>
</table>

Respiratory protection

<table>
<thead>
<tr>
<th>Required minimum protection factor</th>
<th>Maximum gas/vapour concentration present in air p.p.m.</th>
<th>Half-Face Respirator</th>
<th>Full-Face Respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 10</td>
<td>1000</td>
<td>AK-AUS / Class 1 P2</td>
<td>-</td>
</tr>
<tr>
<td>up to 50</td>
<td>1000</td>
<td>-</td>
<td>AK-AUS / Class 1 P2</td>
</tr>
<tr>
<td>up to 50</td>
<td>5000</td>
<td>Airline *</td>
<td>-</td>
</tr>
</tbody>
</table>

Continued...
SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| **Appearance** | Light yellow / cream liquid with a mild odour; miscible with water. |
| **Physical state** | Liquid | Relative density (Water = 1) | 0.97-1.00 |
| **Odour** | Not Available | Partition coefficient n-octanol / water | Not Available |
| **Odour threshold** | 10 approx | Auto-ignition temperature (°C) | Not Available |
| **pH (as supplied)** | 10 approx | Decomposition temperature | >200 |
| **Melting point / freezing point (°C)** | Not Available | Viscosity (cSt) | 65000-110000 mPa.s |
| **Initial boiling point and boiling range (°C)** | >150 | Molecular weight (g/mol) | Not Applicable |
| **Flash point (°C)** | >100 (PMCC) | Taste | Not Available |
| **Evaporation rate** | Not Available | Explosive properties | Not Available |
| **Flammability** | Not Available | Oxidising properties | Not Available |
| **Upper Explosive Limit (%)** | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| **Lower Explosive Limit (%)** | Not Available | Volatile Component (%vol) | Not Available |
| **Vapour pressure (kPa)** | Not Available | Gas group | Not Available |
| **Solubility in water (g/L)** | Miscible | pH as a solution (1%) | Not Available |
| **Vapour density (Air = 1)** | Not Available | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

Reactivity

> See section 7

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

Conditions to avoid

See section 7

Incompatible materials

See section 7

Hazardous decomposition products

See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

**Inhaled**

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. 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".

**Ingestion**

Accidental ingestion of the material may be damaging to the health of the individual. Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea. The vomitus may contain blood and mucus.

**Skin Contact**

This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. Amine epoxy-curing agents (hardeners) may produce primary skin irritation and sensitisation dermatitis in predisposed individuals. Cutaneous reactions include erythema, intense itching and severe facial swelling. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye
This material can cause eye irritation and damage in some persons.

Chronic
Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Secondary amines may react with nitrites to form potentially carcinogenic N-nitrosamines. Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis). Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material.

<table>
<thead>
<tr>
<th>Davco Epoxy Grout Part B Hardener</th>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral (rat) LD50: &gt;5000 mg/kg[2]</td>
<td>Eye: Moderate</td>
<td>Skin: Moderate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Davco Epoxy Grout Part B Hardener &amp; TRIETHYLENETETRAMINE</th>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal (rabbit) LD50: 805 mg/kg[2]</td>
<td>Eye (rabbit): 20 mg/24h - moderate</td>
<td></td>
</tr>
<tr>
<td>Oral (rat) LD50: 2500 mg/kg[2]</td>
<td>Eye (rabbit): 49 mg - SEVERE</td>
<td></td>
</tr>
<tr>
<td>Skin (rabbit): 490 mg open SEVERE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin (rabbit): 5 mg/24 SEVERE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Triethylenetetramine

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

The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.

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 airway disease in a non-asthmatic 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. RADS (or asthma) following an inhalation injury is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases.

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

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. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact.

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.

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.

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 bursal developmental defects.

### SECTION 12 ECOLOGICAL INFORMATION

#### Toxicity

<table>
<thead>
<tr>
<th>Davco Epoxy Grout Part B Hardener</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Davco Epoxy Grout Part B Hardener &amp; TRIETHYLENETETRAMINE</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>96</td>
<td>Fish</td>
<td>180mg/L</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
For ethylenamines:
Adsoption of the ethylenamines correlates closely with both the cation exchange capacity (CEC) and organic content of the soil. Soils with increased CEC and organic content exhibited higher affinities for these amines. This dependence of adsorption on CEC and organic content is most likely due to the strong electrostatic interaction between the positively charged amine and the negatively charged soil surface.

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 are 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. Models indicate that the members of this cluster are likely to partition predominately to soil and water. All chemicals in this cluster are expected to have low environmental persistence and a low potential for bioaccumulation.

For Triethylenetetramine (TETA):
Log Pow (unprotonated form): -1.4; Vapor pressure: ca. 1 Pa at 20 C. Ethylenediamine: Koc 4769; Diethylenetriamine: Koc 19111.

Environmental Fate: High adsorption of ethylenediamine and diethylenetriamine is most likely due to electrostatic interaction. TETA has a high potential for geoaccumulation. TETA is not readily or inherently biodegradable and can be regarded as non-biodegradable.

Aquatice Fate: TETA is completely miscible with water forming an alkaline solution (pH 10 at 10 g/L).

DO NOT discharge into sewer or waterways.

### Persistence and degradability

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>triethylenetetramine</td>
<td>LOW</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Bioaccumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>triethylenetetramine</td>
<td>LOW (LogKOW = -2.6464)</td>
</tr>
</tbody>
</table>

### Mobility in soil

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>triethylenetetramine</td>
<td>LOW (KOC = 309.9)</td>
</tr>
</tbody>
</table>

### SECTION 13 DISPOSAL CONSIDERATIONS

#### Waste treatment methods

- 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.

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. A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type.

- 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

#### Labels Required

<table>
<thead>
<tr>
<th>Marine Pollutant</th>
<th>HAZCHEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

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

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

---

**Legend:**
Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 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

<table>
<thead>
<tr>
<th>EC50</th>
<th>NOEC</th>
<th>EC50</th>
<th>NOEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td></td>
<td>2.1.1.1</td>
<td>1</td>
</tr>
<tr>
<td>72</td>
<td></td>
<td>2.5mg/L</td>
<td>1</td>
</tr>
<tr>
<td>2.1.1.1</td>
<td></td>
<td>&lt;2.5mg/L</td>
<td>1</td>
</tr>
</tbody>
</table>

For Crustacea:
EC50 31.1mg/L
NOEC <2.5mg/L

For Algae or other aquatic plants:
EC50 2.5mg/L
NOEC 72
Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

TRIETHYLENETETRAMINE(112-24-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

<table>
<thead>
<tr>
<th>National Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia - AICS</td>
<td>Y</td>
</tr>
<tr>
<td>Canada - DSL</td>
<td>Y</td>
</tr>
<tr>
<td>Canada - NDSL</td>
<td>N (triethylenetetramine)</td>
</tr>
<tr>
<td>China - IECSC</td>
<td>Y</td>
</tr>
<tr>
<td>Europe - EINEC / ELINCS / NLP</td>
<td>Y</td>
</tr>
<tr>
<td>Japan - ENCS</td>
<td>Y</td>
</tr>
<tr>
<td>Korea - KECI</td>
<td>Y</td>
</tr>
<tr>
<td>New Zealand - NZIoC</td>
<td>Y</td>
</tr>
<tr>
<td>Philippines - PICCS</td>
<td>Y</td>
</tr>
<tr>
<td>USA - TSCA</td>
<td>Y</td>
</tr>
</tbody>
</table>

Legend: Y = All ingredients are on the inventory
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

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
OSF: Odour Safety Factor
NOAEL: No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LCS: Limit Of Detection
OTV: Odour Threshold Value
BGF: BioConcentration Factors
BEI: Biological Exposure Index

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