Bremfix Epoxy Acrylate Styrene Free Bremick Pty Ltd

Chemwatch: 5317-96 Version No: 6.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Chemwatch Hazard Alert Code: 2

Issue Date: **08/11/2023**Print Date: **08/15/2023**L.GHS.AUS/NZ.EN.E

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

Product Identifier

| Product name | Bremfix Epoxy Acrylate Styrene Free |
|-------------------------------|-------------------------------------|
| Chemical Name | Not Applicable |
| Synonyms | Not Available |
| Chemical formula | Not Applicable |
| Other means of identification | Not Available |

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

Relevant identified uses

Chemical anchoring application.
Use according to manufacturer's directions.

Details of the manufacturer or supplier of the safety data sheet

| Registered company name | Bremick Pty Ltd | Bremick |
|-------------------------|---|--|
| Address | Head Office 88 Dalmeny Avenue, Rosebery 2018 National Distribution Centre M5/M7 Logistics Park, Warehouse 4B, 290 Kurrajong Road, Prestons NSW 2170 Australia | Unit F, 373 Neilson Street Penrose Auckland 1061 New Zealand |
| Telephone | +61 2 8332 1501 | +64 525 2244 0800 658 075 |
| Fax | +61 2 9690 1474 | +64 525 1952 |
| Website | www.bremick.com.au | http://bremick.co.nz/ |
| Email | Not Available | nthnzsales@bremick.co.nz |

Emergency telephone number

| Association / Organisation | New Zealand National Poisons Centre |
|-----------------------------------|---|
| Emergency telephone numbers | +64 800 764 766 (Times of operation: 24 hours 7 days) |
| Other emergency telephone numbers | Not Available |

SECTION 2 Hazards identification

Classification of the substance or mixture

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

| Poisons Schedule | S5 |
|-------------------------------|--|
| Classification ^[1] | Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Hazardous to the Aquatic Environment Acute Hazard Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 3 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

Label elements

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Hazard pictogram(s)



Signal word

Warning

Hazard statement(s)

| H315 | Causes skin irritation. |
|------|--|
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H401 | Toxic to aquatic life. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary statement(s) Prevention

| P280 | Wear protective gloves, protective clothing, eye protection and face protection. |
|------|--|
| P261 | Avoid breathing mist/vapours/spray. |
| P273 | Avoid release to the environment. |
| P264 | Wash all exposed external body areas thoroughly after handling. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |

Precautionary statement(s) Response

| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
|----------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

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

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not regulated for transport of Dangerous Goods.

| Classification ^[1] | Acute Toxicity (Oral) Category 4, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2, Germ Cell Mutagenicity Category 2, Reproductive Toxicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2 |
|---|---|
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |
| Determined by Chemwatch using GHS/HSNO criteria | 6.1D (oral), 6.4A, 6.5B (contact), 6.6B, 6.8B, 6.9B |

Label elements

Hazard pictogram(s)





Signal word

Warning

Hazard statement(s)

| H302 | Harmful if swallowed. |
|------|--------------------------------------|
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |

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| H341 | Suspected of causing genetic defects. |
|------|--|
| H361 | Suspected of damaging fertility or the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |

Precautionary statement(s) Prevention

| P201 | Obtain special instructions before use. |
|------|--|
| P260 | Do not breathe mist/vapours/spray. |
| P280 | Wear protective gloves, protective clothing, eye protection and face protection. |
| P264 | Wash all exposed external body areas thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |

Precautionary statement(s) Response

| P308+P313 | IF exposed or concerned: Get medical advice/ attention. |
|----------------|--|
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P314 | Get medical advice/attention if you feel unwell. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P301+P312 | IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell. |
| P330 | Rinse mouth. |

Precautionary statement(s) Storage

P405 Store locked up.

Precautionary statement(s) Disposal

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

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] Name | | |
|--|------------------------|-----------------------------------|--|
| 25013-15-4 | 3-10 | methylstyrene, mixed isomers | |
| 109-16-0 | 3-10 | triethylene glycol dimethacrylate | |
| 27813-02-1 | 3-10 | 2-hydroxypropyl methacrylate | |
| 94-36-0 | 1-10 | dibenzoyl peroxide | |
| 38668-48-3 | <1 | dipropoxy-p-toluidine | |
| 106-51-4 | <1 <u>benzoquinone</u> | | |
| Legend: 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available | | | |

SECTION 4 First aid measures

Description of first aid measures

If this product comes in contact with the eyes:

• Wash out immediately with fresh running water.

Eye Contact

- 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.

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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

Ingestion

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- ▶ Other measures are usually unnecessary.
- ► IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
- ▶ For advice, contact a Poisons Information Centre or a doctor.
- 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.

Indication of any immediate medical attention and special treatment needed

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).

For poisons (where specific treatment regime is absent):

BASIC TREATMENT

Establish a patent airway with suction where necessary.

- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- ▶ Monitor and treat, where necessary, for shock.
- Anticipate seizures.
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- F Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ► Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- ▶ Water spray or fog Large fires only.

Special hazards arising from the substrate or mixture

Fire Incompatibility

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

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Advice for firefighters

- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- ▶ Prevent, by any means available, spillage from entering drains or water course.
- Fight fire from a safe distance, with adequate cover.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control the fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- Do not approach containers suspected to be hot.
 - ▶ Cool fire exposed containers with water spray from a protected location.
 - If safe to do so, remove containers from path of fire.
 - 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 courses.
 - ▶ Use water delivered as a fine spray to control fire and cool adjacent area.
 - ▶ DO NOT approach containers suspected to be hot.
 - ▶ Cool fire exposed containers with water spray from a protected location.
 - If safe to do so, remove containers from path of fire.
 - ► Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard

Fire Fighting

Combustible. Will burn if ignited. Combustion products include: carbon monoxide (CO) carbon dioxide (CO2) nitrogen oxides (NOx)

other pyrolysis products typical of burning organic material.

May emit poisonous fumes.

May emit corrosive fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

| Minor Spills | Clean up all spills immediately. Avoid contact with skin and eyes. Wear impervious gloves and safety goggles. Trowel up/scrape up. Place spilled material in clean, dry, sealed container. Flush spill area with water. |
|--------------|--|
| Major Spills | 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. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Neutralise/decontaminate residue (see Section 13 for specific agent). Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. After clean up operations, decontaminate and launder all protective clothing and equipment before storing and |

▶ If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling

- 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.

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- ▶ DO NOT enter confined spaces until atmosphere has been checked.
- ▶ DO NOT allow material to contact humans, exposed food or food utensils.
- ▶ Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- ▶ Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- ▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
- Store in original containers.
- ► Keep containers securely sealed.
- ▶ 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.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

Other information

- ► Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Storage incompatibility

- Avoid strong acids, bases.
- Avoid reaction with oxidising agents
- Avoid storage with reducing agents.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|------------------------------|-----------------------------|-------------------------|------------------------|------------------|-------------------------------|
| Australia Exposure Standards | methylstyrene, mixed isomers | Vinyl toluene | 50 ppm / 242 mg/m3 | 483 mg/m3 / 100 ppm | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | methylstyrene, mixed isomers | Vinyl toluene | 50 ppm / 242 mg/m3 | 483 mg/m3 / 100 ppm | Not Available | Not Available |
| Australia Exposure Standards | dibenzoyl peroxide | Benzoyl peroxide | 5 mg/m3 | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | dibenzoyl peroxide | Benzoyl peroxide | 5 mg/m3 | Not Available | Not Available | (dsen) - Dermal sensitiser |
| Australia Exposure Standards | benzoquinone | Quinone | 0.1 ppm / 0.44 mg/m3 | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | benzoquinone | p-Benzoquinone (Quinone) | 0.1 ppm / 0.44 mg/m3 | Not Available | Not Available | Not Available |

Emergency Limits

| Ingredient | TEEL-1 | TEEL-2 | TEEL-3 |
|--------------------------------------|----------|-------------|-------------|
| triethylene glycol dimethacrylate | 33 mg/m3 | 360 mg/m3 | 2,100 mg/m3 |
| dibenzoyl peroxide | 15 mg/m3 | 1,200 mg/m3 | 7,000 mg/m3 |
| benzoquinone | 0.3 ppm | 11 ppm | 68 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|--------------------------------------|---------------|---------------|
| methylstyrene, mixed isomers | 400 ppm | Not Available |
| triethylene glycol dimethacrylate | Not Available | Not Available |
| 2-hydroxypropyl methacrylate | Not Available | Not Available |
| dibenzoyl peroxide | 1,500 mg/m3 | Not Available |

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| Ingredient | Original IDLH | Revised IDLH |
|-----------------------|---------------|---------------|
| dipropoxy-p-toluidine | Not Available | Not Available |
| benzoquinone | 100 mg/m3 | Not Available |

Occupational Exposure Banding

| Ingredient | Occupational Exposure Band Rating | Occupational Exposure Band Limit | |
|--------------------------------------|--|----------------------------------|--|
| triethylene glycol dimethacrylate | Е | ≤ 0.1 ppm | |
| 2-hydroxypropyl methacrylate | Е | ≤ 0.1 ppm | |
| dipropoxy-p-toluidine | E | ≤ 0.01 mg/m³ | |
| 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. | | |

MATERIAL DATA

NOTE D: Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed on Annex I

When they are placed on the market in a non-stabilised form, the label must state the name of the substance followed by the words "non-stabilised" European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

Exposure 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. Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Appropriate engineering controls

| Type of Contaminant: | Air Speed: |
|---|---------------------------------|
| solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s (50-100 f/min.) |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.) |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.) |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). | 2.5-10 m/s (500-2000 f/min.) |

Within each range the appropriate value depends on:

| Lower end of the range | Upper end of the range | |
|--|----------------------------------|--|
| 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | |
| 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity | |
| 3: Intermittent, low production. | 3: High production, heavy use | |
| 4: Large hood or large air mass in motion | 4: Small hood-local control only | |

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

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Individual protection measures, such as personal protective equipment

Eye and face protection









- Safety glasses with side shields
- ► Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- 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. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

Skin protection

See Hand protection below

Hands/feet 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.

Body protection

See Other protection below

Other protection

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

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:

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| Material | СРІ |
|------------|-----|
| SARANEX-23 | A |

- * 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.

Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|---------------------------------------|-------------------------|-------------------------|-----------------------------|
| up to 10 x ES | AK-AUS P2 | - | AK-PAPR-AUS / Class 1 P2 |
| up to 50 x ES | - | AK-AUS / Class 1 P2 | - |
| up to 100 x ES | - | AK-2 P2 | AK-PAPR-2 P2 ^ |

^ - Full-face

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(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

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| Appearance | Various coloured paste with characteristic odour; insoluble in water. | | |
|---|---|---|----------------|
| Physical state | Non Slump Paste | Relative density (Water = 1) | 1.56 |
| Odour | Characteristic | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature (°C) | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | Not Available | 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 | Immiscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | 1.85 |

SECTION 10 Stability and reactivity

| Reactivity | See section 7 |
|------------------------------------|---|
| Chemical stability | Product is considered stable and 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 | The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. No report of respiratory illness in humans as a result of exposure to multifunctional acrylates has been found. Similarly evidence of systemic damage does not appear to exist. |
|--------------|---|
| 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. |
| Skin Contact | Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. The material may accentuate any pre-existing dermatitis condition Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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. |
| Еуе | Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. |

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Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

Strong evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure. Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.

Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance who are likely to become hyper-responsive.

Substances than can cuase occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing air-way hyper-responsiveness. The latter substances are not classified as asthmagens or respiratory sensitisers

Wherever it is reasonably practicable, exposure to substances that can cuase occupational asthma should be prevented. Where this is not possible the primary aim is to apply adequate standards of control to prevent workers from becoming hyperresponsive.

Chronic

Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance.

Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests.

Exposure to the material may cause concerns for human fertility, generally on the basis that results in animal studies provide sufficient evidence to cause a strong suspicion of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects, but which are not a secondary non-specific consequence of other toxic effects.

Exposure to the material may cause concerns for humans owing to possible developmental toxic effects, generally on the basis that results in appropriate animal studies provide strong suspicion of developmental toxicity in the absence of signs of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not a secondary non-specific consequence of other toxic effects.

On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

| Bremfix Epoxy Acrylate | TOXICITY | IRRITATION |
|--------------------------------------|--|--|
| Styrene Free | Not Available | Not Available |
| | TOXICITY | IRRITATION |
| methylstyrene, mixed isomers | Inhalation(Mouse) LC50; 3.02 mg/L4h ^[2] | Eye (rabbit): 90 mg - mild |
| isomers | Oral (Rat) LD50: 2255 mg/kg ^[2] | Skin (rabbit): 100% moderate |
| | TOXICITY | IRRITATION |
| triethylene glycol dimethacrylate | dermal (mouse) LD50: >2000 mg/kg ^[1] | Eye: no adverse effect observed (not irritating) ^[1] |
| umemacrylate | Oral (Mouse) LD50; 10750 mg/kg ^[2] | Skin: no adverse effect observed (not irritating) $^{[1]}$ |
| | TOXICITY | IRRITATION |
| 2-hydroxypropyl methacrylate | Oral (Rat) LD50: 5050 mg/kg ^[2] | Eye: adverse effect observed (irritating) ^[1] |
| methacrylate | | Skin: no adverse effect observed (not irritating) ^[1] |
| | TOXICITY | IRRITATION |
| dibenzoyl peroxide | dermal (mammal) LD50: >1000 mg/kg ^[2] | Eye (rabbit): 500 mg/24h - mild |
| | Oral (Rat) LD50: 7710 mg/kg ^[2] | Skin effects (MAK): very weak (@ 50%) |
| | TOXICITY | IRRITATION |
| dipropoxy-p-toluidine | dermal (rat) LD50: >2000 mg/kg ^[1] | Eye (rabbit): slight* * = BAYER |
| | Oral (Rat) LD50: >25<200 mg/kg ^[1] | Skin (rabbit): 4h - Non irrit.* |
| | TOXICITY | IRRITATION |
| benzoquinone | Oral (Rat) LD50: 130 mg/kg ^[2] | Not Available |
| l amand. | 4. Value abtained from Furence FOUA Benistaned Cub | atamana Anuta tanisitu O Malua ahtaina difuma manufaatumuda CDC |

Legend:

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS.

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Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

METHYLSTYRENE, MIXED ISOMERS

Olfaction and eye effects recorded No significant acute toxicological data identified in literature search.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

2-HYDROXYPROPYL METHACRYLATE

for CAS 963-26-2 2-hydroxypropyl methacrylate NOTE: Allergic contact dermatitis is reported following exposure of guinea pigs (mild) and humans (severe). for CAS 27813-02-1 1-hydroxypropyl methacrylate

Where no "official" classification for acrylates and methacrylates exists, there has been cautious attempts to create classifications in the absence of contrary evidence. For example

Monalkyl or monoarylesters of acrylic acids should be classified as R36/37/38 and R51/53 $\,$

Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38

Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH2=CHCOO or CH2=C(CH3)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing.

This position has now been revised and acrylates and methacrylates are no longer de facto carcinogens.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. For benzoyl peroxide:

The acute oral toxicity of benzoyl peroxide is very low: LD50 >2,000 mg/kg bw in mice, and 5,000 mg/kg bw in rats. No deaths occurred in male rats following inhalation of 24.3 mg/L. Visible effects included eye squint, dyspnea, salivation, lacrimation, erythema and changes of respiratory rates and motor activity.

Benzoyl peroxide was slightly irritating to skins in 24 hr-patch tests. Benzoyl peroxide was not irritating to the eyes of rabbits if washed out within 5 minutes after instillation, however, if the chemical was not washed out until 24 hours later, it proved to be irritating.

Positive results from sensitisation tests in guinea pigs and mice, and from a maximization test in human volunteers, indicate that benzoyl peroxide is a skin sensitiser.

DIBENZOYL PEROXIDE

In the combined repeated dose and reproduction/developmental toxicity study (OECD TG 422), benzoyl peroxide did not produce hematological or biochemical adverse effects. Repeated administration by oral gavage up to 1,000 mg/kg bw/day for 29 days resulted in decreased weights of testes and epididymis in male rats. The NOAEL for repeated dose toxicity was 500 mg/kg bw/day.

This substance did not cause gene mutation in bacteria (OECD TG 471 & 472) and *in vitro* chromosomal aberration in CHL (Chinese Hamster Lung) cells. An *in vivo* mammalian erythrocytes micronucleus test (OECD TG 474) produced negative result. The available evidence supports the conclusion that benzoyl peroxide is not a mutagen.

There is no evidence to suggest that benzoyl peroxide is a carcinogen. However, there is some evidence from nonguidelines studies that benzoyl peroxide is a skin tumour promoter.

In the combined repeated dose and reproduction/developmental toxicity study [OECD TG 422], no treatment-related changes in precoital time, rate of copulation, fertility and gestation were noted in any treated group. Adverse effects were shown at the highest dose of 1,000 mg/kg bw/day in parental male rats with the reduction of reproductive organ weight and slight testes degeneration. In parental female rats, no adverse effects were observed during the test period. The NOAEL for reproduction toxicity in male rats was 500 mg/kg bw/day. In the offspring, the only effect seen was that body weight gain of pups at dose of 1,000 mg/kg bw/day was significantly decreased. The NOAEL for developmental toxicity was 500 mg/kg bw/day.

BENZOQUINONE

Rat tumorigen Convulsions, spastic paralysis, spasticity, cyanosis, skin tumours.

METHYLSTYRENE, MIXED ISOMERS & DIBENZOYL PEROXIDE

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

TRIETHYLENE GLYCOL
DIMETHACRYLATE &
2-HYDROXYPROPYL
METHACRYLATE &
DIBENZOYL PEROXIDE

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. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

TRIETHYLENE GLYCOL
DIMETHACRYLATE &
2-HYDROXYPROPYL
METHACRYLATE &
BENZOQUINONE

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. RADS (or asthma) following an irritating inhalation 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. The disorder is characterized by difficulty breathing, cough and mucus production.

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DIBENZOYL PEROXIDE & BENZOQUINONE

The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

| Acute Toxicity | ✓ | Carcinogenicity | × |
|-----------------------------------|----------|--------------------------|---|
| Skin Irritation/Corrosion | ✓ | Reproductivity | ✓ |
| Serious Eye Damage/Irritation | × | STOT - Single Exposure | × |
| Respiratory or Skin sensitisation | × | STOT - Repeated Exposure | × |
| Mutagenicity | ~ | Aspiration Hazard | × |

Legend:

★ – Data either not available or does not fill the criteria for classification

✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

| Bremfix Epoxy Acrylate | Endpoint | Test Duration (hr) | Species | Value | Source |
|---------------------------------|------------------|--------------------|-------------------------------|------------------|----------------|
| Styrene Free | Not Available | Not Available | Not Available | Not Available | Not Availab |
| | Endpoint | Test Duration (hr) | Species | Value | Sourc |
| | EC50 | 72h | Algae or other aquatic plants | 0.319mg/l | 2 |
| methylstyrene, mixed | EC50 | 48h | Crustacea | >1<10mg/l | 4 |
| isomers | EC50 | 96h | Algae or other aquatic plants | 4.122mg/l | 2 |
| | NOEC(ECx) | 504h | Crustacea | 0.07mg/l | 2 |
| | LC50 | 96h | Fish | 5.2mg/l | 2 |
| | Endpoint | Test Duration (hr) | Species | Value | Source |
| triethylene glycol | EC50 | 72h | Algae or other aquatic plants | 72.8mg/l | 2 |
| dimethacrylate | LC50 | 96h | Fish | 16.4mg/l | 2 |
| | NOEC(ECx) | 72h | Algae or other aquatic plants | 18.6mg/l | 2 |
| | Endpoint | Test Duration (hr) | Species | Value | Sour |
| | EC50 | 72h | Algae or other aquatic plants | >97.2mg/l | 2 |
| 2-hydroxypropyl methacrylate | EC50 | 48h | Crustacea | >143mg/l | 2 |
| memaorylate | LC50 | 96h | Fish | >100mg/l | 2 |
| | NOEC(ECx) | 336h | Fish | 25mg/l | 2 |
| | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50 | 72h | Algae or other aquatic plants | 0.042mg/l | 2 |
| dibenzoyl peroxide | EC50 | 48h | Crustacea | 0.11mg/l | 2 |
| | EC10(ECx) | 504h | Crustacea | 0.001mg/l | 2 |
| | LC50 | 96h | Fish | 0.06mg/l | 2 |
| | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50 | 72h | Algae or other aquatic plants | 245mg/l | 2 |
| dipropoxy-p-toluidine | EC50 | 48h | Crustacea | 28.8mg/l | 2 |
| | LC50 | 96h | Fish | 17mg/l | 2 |
| | EC50(ECx) | 48h | Crustacea | 28.8mg/l | 2 |
| | Endpoint | Test Duration (hr) | Species | Value | Source |
| | EC50 | 72h | Algae or other aquatic plants | 1.5mg/l | 2 |
| benzoquinone | EC50 | 48h | Crustacea | 0.13mg/l | 2 |
| | LC50 | 96h | Fish | 0.005-0.03mg/l | 4 |
| | EC50(ECx) | 96h | Fish | 0.045mg/L | 5 |

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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 discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|--------------------------------------|---------------------------|------------------------------|
| triethylene glycol dimethacrylate | LOW | LOW |
| 2-hydroxypropyl methacrylate | LOW | LOW |
| dibenzoyl peroxide | LOW (Half-life = 14 days) | LOW (Half-life = 21.25 days) |
| dipropoxy-p-toluidine | HIGH | HIGH |
| benzoquinone | LOW (Half-life = 10 days) | LOW (Half-life = 0.28 days) |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|--------------------------------------|-----------------------|
| methylstyrene, mixed isomers | LOW (BCF = 110) |
| triethylene glycol dimethacrylate | LOW (LogKOW = 1.88) |
| 2-hydroxypropyl methacrylate | LOW (BCF = 3.2) |
| dibenzoyl peroxide | LOW (LogKOW = 3.46) |
| dipropoxy-p-toluidine | LOW (LogKOW = 2.0121) |
| benzoquinone | LOW (LogKOW = 0.2) |

Mobility in soil

| Ingredient | Mobility |
|--------------------------------------|--------------------|
| triethylene glycol dimethacrylate | LOW (KOC = 10) |
| 2-hydroxypropyl methacrylate | LOW (KOC = 10) |
| dibenzoyl peroxide | LOW (KOC = 771) |
| dipropoxy-p-toluidine | LOW (KOC = 10) |
| benzoquinone | HIGH (KOC = 1.387) |

SECTION 13 Disposal considerations

Waste treatment methods

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.
- ▶ 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.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages

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which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

Only dispose to the environment if a tolerable exposure limit has been set for the substance.

Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

SECTION 14 Transport information

Labels Required

| Marine Pollutant | NO |
|------------------|----------------|
| HAZCHEM | Not Applicable |

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

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

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

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

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

Not Applicable

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

| Product name | Group |
|--------------------------------------|---------------|
| methylstyrene, mixed isomers | Not Available |
| triethylene glycol dimethacrylate | Not Available |
| 2-hydroxypropyl methacrylate | Not Available |
| dibenzoyl peroxide | Not Available |
| dipropoxy-p-toluidine | Not Available |
| benzoquinone | Not Available |

Transport in bulk in accordance with the IGC Code

| Product name | Ship Type |
|--------------------------------------|---------------|
| methylstyrene, mixed isomers | Not Available |
| triethylene glycol dimethacrylate | Not Available |
| 2-hydroxypropyl methacrylate | Not Available |
| dibenzoyl peroxide | Not Available |
| dipropoxy-p-toluidine | Not Available |
| benzoquinone | Not Available |

SECTION 15 Regulatory information

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

This substance is to be managed using the conditions specified in an applicable Group Standard

| HSR Number | Group Standard |
|------------|---|
| HSR002544 | Construction Products Subsidiary Hazard Group Standard 2020 |

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

methylstyrene, mixed isomers is found on the following regulatory lists

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Australian Inventory of Industrial Chemicals (AIIC)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act -Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

triethylene glycol dimethacrylate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

2-hydroxypropyl methacrylate 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)

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

dibenzoyl peroxide 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 2

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

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

Australian Inventory of Industrial Chemicals (AIIC)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

dipropoxy-p-toluidine is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

New Zealand Inventory of Chemicals (NZIoC)

benzoquinone is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Quantities |
|----------------|----------------|
| Not Applicable | Not Applicable |

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Class of substance | Quantities |
|--------------------|----------------|
| Not Applicable | Not Applicable |

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Gas (aggregate water capacity in mL) | Liquid (L) | Solid (kg) | Maximum quantity per package for each classification |
|--------------|--------------------------------------|---------------|---------------|--|
| 6.5A or 6.5B | 120 | 1 | 3 | |

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Tracking Requirements

Not Applicable

National Inventory Status

| National Inventory | Status | | | |
|--|---|--|--|--|
| Australia - AIIC / Australia Non-Industrial Use | Yes | | | |
| Canada - DSL | Yes | | | |
| Canada - NDSL | No (methylstyrene, mixed isomers; triethylene glycol dimethacrylate; 2-hydroxypropyl methacrylate; dibenzoyl peroxide; dipropoxy-p-toluidine; benzoquinone) | | | |
| China - IECSC | Yes | | | |
| Europe - EINEC / ELINCS / NLP | Yes | | | |
| Japan - ENCS | Yes | | | |
| Korea - KECI | Yes | | | |
| New Zealand - NZIoC | Yes | | | |
| Philippines - PICCS | Yes | | | |
| USA - TSCA | Yes | | | |
| Taiwan - TCSI | Yes | | | |
| Mexico - INSQ | No (dipropoxy-p-toluidine) | | | |
| Vietnam - NCI | Yes | | | |
| Russia - FBEPH | No (dipropoxy-p-toluidine) | | | |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. | | | |

SECTION 16 Other information

| Revision Date | 08/11/2023 |
|---------------|------------|
| Initial Date | 09/12/2018 |

SDS Version Summary

| Version | Date of Update | Sections Updated |
|---------|-------------------|--|
| 5.1 | 12/10/2021 | Classification change due to full database hazard calculation/update. |
| 6.1 | 08/11/2023 | Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (skin), Toxicological information - Acute Health (swallowed), First Aid measures - Advice to Doctor, Physical and chemical properties - Appearance, Toxicological information - Chronic Health, Hazards identification - Classification, Disposal considerations - Disposal, Exposure controls / personal protection - Engineering Control, Ecological Information - Environmental, Firefighting measures - Fire Fighter (fire/explosion hazard), Firefighting measures - Fire Fighter (fire fighting), First Aid measures - First Aid (inhaled), First Aid measures - First Aid (swallowed), Handling and storage - Handling Procedure, Composition / information on ingredients - Ingredients, Exposure controls / personal protection - Personal Protection (hands/feet), Accidental release measures - Spills (major), Handling and storage - Storage (storage incompatibility), Identification of the substance / mixture and of the company / undertaking - Use |

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

 $\label{eq:pc-stell} \mbox{PC - STEL: Permissible Concentration-Short Term Exposure Limit}$

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

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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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