



## SDS Service Summary

No.: RSTSSDS2511132201

Date: 26 Dec 2025

Page 1 of 1

SGS Job No. : SZP25-057939  
Product Name : hardener  
Applicant : SHENZHEN JIANGHE NEW MATERIALS TECHNOLOGY CO.,LTD  
Composition/Ingredient of product : See section 3 Composition/information on ingredients on the SDS  
(as per applicant submission)  
Job Receiving Date : 13 Nov 2025  
SDS Preparation Period : 13 Nov 2025-26 Dec 2025  
  
Service Requested : Preparation of Safety Data Sheet (SDS) for the product with submitted information, with calculation of the classification and labeling requirement according to OSHA HazCom Standard (2024) requirements.  
  
Summary : As per request, the contents and formats of the SDS are prepared in accordance with OSHA HazCom Standard (2024) requirements.

### Disclaimer

This Safety Data Sheet (SDS) is provided to applicant to OSHA HazCom Standard (2024) requirements and communicate the hazard information of chemicals through the supply chain to ensure safe use. It is not a test report or a certificate ensuring the safety of a product.

SGS has consolidated product information based on documents provided by Applicant (i.e. product name, the supplier details, product composition, available physical data, etc.) without independent verification from SGS. The information is provided without any warranty, express or implied, regarding its correctness.

*Bella Yao*

Bella Yao  
Project Engineer



SGS-CSTC Standards Technical Services (Qingdao) Co., Ltd

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Member of the SGS Group (SGS SA)

hardener

**SHENZHEN JIANGHE NEW MATERIALS  
TECHNOLOGY CO.,LTD**

Version No:1.0  
Safety Data Sheet according to OSHA HazCom Standard (2024) requirements

Initial Date:14/11/2025  
Revision Date: 26/12/2025

SECTION 1 Identification

|                               |               |
|-------------------------------|---------------|
| Product Identifier            |               |
| Product name                  | hardener      |
| Synonyms                      | Not Available |
| Other means of identification | Not Available |

Recommended use of the chemical and restrictions on use

|                          |                                             |
|--------------------------|---------------------------------------------|
| Relevant identified uses | Use according to manufacturer's directions. |
|--------------------------|---------------------------------------------|

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

|                         |                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------|
| Registered company name | SHENZHEN JIANGHE NEW MATERIALS TECHNOLOGY CO.,LTD                                                            |
| Address                 | UNIT 2114, BUILDING 2, COFCO YUNJING PLAZA HEWAN COMMUNITY, MATIAN SUBDISTRICT, GUANGMING DISTRICT, SHENZHEN |
| Telephone               | 15989551716                                                                                                  |
| Fax                     | Not Available                                                                                                |
| Website                 | Not Available                                                                                                |
| Email                   | jxchenh@163.com                                                                                              |

Emergency phone number

|                                     |                                                   |
|-------------------------------------|---------------------------------------------------|
| Association / Organisation          | SHENZHEN JIANGHE NEW MATERIALS TECHNOLOGY CO.,LTD |
| Emergency telephone number(s)       | 15989551716                                       |
| Other emergency telephone number(s) | Not Available                                     |

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

|                |                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification | Acute Toxicity (Oral) Category 3, Skin Corrosion/Irritation Category 1A, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 3, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Germ Cell Mutagenicity Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 3 |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Label elements

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

Hazard statement(s)

|             |                                                    |
|-------------|----------------------------------------------------|
| <b>H301</b> | Toxic if swallowed.                                |
| <b>H314</b> | Causes severe skin burns and eye damage.           |
| <b>H317</b> | May cause an allergic skin reaction.               |
| <b>H331</b> | Toxic if inhaled.                                  |
| <b>H336</b> | May cause drowsiness or dizziness.                 |
| <b>H341</b> | Suspected of causing genetic defects.              |
| <b>H412</b> | Harmful to aquatic life with long lasting effects. |

**Hazard(s) not otherwise classified**

Not Applicable

**Precautionary statement(s) Prevention**

|             |                                                                                  |
|-------------|----------------------------------------------------------------------------------|
| <b>P201</b> | Obtain special instructions before use.                                          |
| <b>P260</b> | Do not breathe mist/vapours/spray.                                               |
| <b>P264</b> | Wash all exposed external body areas thoroughly after handling.                  |
| <b>P270</b> | Do not eat, drink or smoke when using this product.                              |
| <b>P271</b> | Use only outdoors or in a well-ventilated area.                                  |
| <b>P280</b> | Wear protective gloves, protective clothing, eye protection and face protection. |
| <b>P261</b> | Avoid breathing mist/vapours/spray.                                              |
| <b>P273</b> | Avoid release to the environment.                                                |
| <b>P202</b> | Do not handle until all safety precautions have been read and understood.        |
| <b>P272</b> | Contaminated work clothing must not be allowed out of the workplace.             |

**Precautionary statement(s) Response**

|                       |                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>P301+P310</b>      | IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.                                                     |
| <b>P301+P330+P331</b> | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If more than 15 mins from Doctor, INDUCE VOMITING (if conscious).             |
| <b>P303+P361+P353</b> | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].                         |
| <b>P305+P351+P338</b> | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| <b>P308+P313</b>      | IF exposed or concerned: Get medical advice/ attention.                                                                          |
| <b>P310</b>           | Immediately call a POISON CENTER/doctor/physician/first aider.                                                                   |
| <b>P330</b>           | Rinse mouth.                                                                                                                     |
| <b>P302+P352</b>      | IF ON SKIN: Wash with plenty of water.                                                                                           |
| <b>P363</b>           | Wash contaminated clothing before reuse.                                                                                         |
| <b>P304+P340</b>      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |
| <b>P311</b>           | Call a POISON CENTER/doctor/physician/first aider.                                                                               |
| <b>P312</b>           | Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.                                                            |
| <b>P333+P313</b>      | If skin irritation or rash occurs: Get medical advice/attention.                                                                 |
| <b>P362+P364</b>      | Take off contaminated clothing and wash it before reuse.                                                                         |

**Precautionary statement(s) Storage**

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

**Precautionary statement(s) Disposal**

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

No further product hazard information.

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

See section below for composition of Mixtures

**Mixtures**

| CAS No     | %[weight] | Name                                                                                                                               |
|------------|-----------|------------------------------------------------------------------------------------------------------------------------------------|
| 39423-51-3 | 50-70     | <u>Poly (a- hydrogen -w- (2-aminomethyl ethoxy) -prop ylene oxide, 2-ethyl-2-hydroxymethyl-1, 3-propylene glycol to form ether</u> |

Continued...

| CAS No     | %[weight] | Name                                                        |
|------------|-----------|-------------------------------------------------------------|
| 100-51-6   | 29-49     | <u>benzyl alcohol</u>                                       |
| 57834-33-0 | 1         | <u>Ethyl 4-[(methylphenylamino)methylene]amino]benzoate</u> |

## SECTION 4 First-aid measures

### Description of first aid measures

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>                                                                                             |
| <b>Skin Contact</b> | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately flush body and clothes with large amounts of water, using safety shower if available.</li> <li>▶ Quickly remove all contaminated clothing, including footwear.</li> <li>▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>                                                                                                                                                                                                                                                                                                     |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>                                                                                                                                                                               |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Transport to hospital or doctor without delay.</li> </ul> |

### Most important symptoms and effects, both acute and delayed

See Section 11

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

For amines:

- ▶ Certain amines may cause injury to the respiratory tract and lungs if aspirated. Also, such products may cause tissue destruction leading to stricture. If lavage is performed, endotracheal and/or esophagoscopy control is suggested.
- ▶ No specific antidote is known.
- ▶ Care should be supportive and treatment based on the judgment of the physician in response to the reaction of the patient.

Laboratory animal studies have shown that a few amines are suspected of causing depletion of certain white blood cells and their precursors in lymphoid tissue. These effects may be due to an immunosuppressive mechanism.

Some persons with hyperreactive airways (e.g., asthmatic persons) may experience wheezing attacks (bronchospasm) when exposed to airway irritants.

Lung injury may result following a single massive overexposure to high vapour concentrations or multiple exposures to lower concentrations of any pulmonary irritant material.

Health effects of amines, such as skin irritation and transient corneal edema ("blue haze," "halo effect," "glaucompsia"), are best prevented by means of formal worker education, industrial hygiene monitoring, and exposure control methods. Persons who are highly sensitive to the triggering effect of non-specific irritants should not be assigned to jobs in which such agents are used, handled, or manufactured.

**Medical surveillance programs** should consist of a pre-placement evaluation to determine if workers or applicants have any impairments (e.g., hyperreactive airways or bronchial asthma) that would limit their fitness for work in jobs with potential for exposure to amines. A clinical baseline can be established at the time of this evaluation.

Periodic medical evaluations can have significant value in the early detection of disease and in providing an opportunity for health counseling.

Medical personnel conducting medical surveillance of individuals potentially exposed to polyurethane amine catalysts should consider the following:

- ▶ Health history, with emphasis on the respiratory system and history of infections
- ▶ Physical examination, with emphasis on the respiratory system and the lymphoreticular organs (lymph nodes, spleen, etc.)
- ▶ Lung function tests, pre- and post-bronchodilator if indicated
- ▶ Total and differential white blood cell count
- ▶ Serum protein electrophoresis

Persons who are concurrently exposed to isocyanates also should be kept under medical surveillance.

Pre-existing medical conditions generally aggravated by exposure include skin disorders and allergies, chronic respiratory disease (e.g. bronchitis, asthma, emphysema), liver disorders, kidney disease, and eye disease.

Broadly speaking, exposure to amines, as characterised by amine catalysts, may cause effects similar to those caused by exposure to ammonia. As such, amines should be considered potentially injurious to any tissue that is directly contacted.

Inhalation of aerosol mists or vapors, especially of heated product, can result in chemical pneumonitis, pulmonary edema, laryngeal edema, and delayed scarring of the airway or other affected organs. There is no specific treatment.

Clinical management is based upon supportive treatment, similar to that for thermal burns.

Persons with major skin contact should be maintained under medical observation for at least 24 hours due to the possibility of delayed reactions.

Continued...

**Polyurethane Amine Catalysts: Guidelines for Safe Handling and Disposal Technical Bulletin June 2000****Alliance for Polyurethanes Industry**

For acute or short-term repeated exposures to highly alkaline materials:

- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.

**INGESTION:**

- Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

- Neutralising agents should never be given since exothermic heat reaction may compound injury.

\* Catharsis and emesis are absolutely contra-indicated.

\* Activated charcoal does not absorb alkali.

\* Gastric lavage should not be used.

Supportive care involves the following:

- Withhold oral feedings initially.
- If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

**SKIN AND EYE:**

- Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

Clinical experience of benzyl alcohol poisoning is generally confined to premature neonates in receipt of preserved intravenous salines.

- Metabolic acidosis, bradycardia, skin breakdown, hypotonia, hepatorenal failure, hypotension and cardiovascular collapse are characteristic.
- High urine benzoate and hippuric acid as well as elevated serum benzoic acid levels are found.
- The so-called 'gasping syndrome' describes the progressive neurological deterioration of poisoned neonates.
- Management is essentially supportive.

**SECTION 5 Fire-fighting 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**

|                             |                                                                                                                                          |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Incompatibility</b> | ▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------|

**Special protective equipment and precautions for fire-fighters**

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▸ Wear full body protective clothing with breathing apparatus.</li> <li>▸ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▸ Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>▸ Avoid spraying water onto liquid pools.</li> <li>▸ <b>DO NOT</b> approach containers suspected to be hot.</li> <li>▸ Cool fire exposed containers with water spray from a protected location.</li> <li>▸ If safe to do so, remove containers from path of fire.</li> </ul> |
| <b>Fire/Explosion Hazard</b> | Combustion products include:<br>carbon dioxide (CO <sub>2</sub> )<br>aldehydes<br>nitrogen oxides (NO <sub>x</sub> )<br>other pyrolysis products typical of burning organic material.<br>May emit poisonous fumes.<br>May emit corrosive fumes.<br><b>WARNING:</b> Long standing in contact with air and light may result in the formation of potentially explosive peroxides.                                                                                                                                                                                                                                                                           |

**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 | <p>Environmental hazard - contain spillage.<br/>Slippery when spilt.</p> <ul style="list-style-type: none"> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Major Spills | <p>Environmental hazard - contain spillage.<br/>Slippery when spilt.<br/>Moderate hazard.</p> <ul style="list-style-type: none"> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Absorb remaining product with sand, earth or vermiculite.</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul> |

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

## SECTION 7 Handling and storage

### Precautions for safe handling

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safe handling     | <ul style="list-style-type: none"> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li><b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>Avoid smoking, naked lights or ignition sources.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, <b>DO NOT eat, drink or smoke.</b></li> <li>Keep containers securely sealed when not in use.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.</li> <li><b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> </ul> |
| Other information | <ul style="list-style-type: none"> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>No smoking, naked lights or ignition sources.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### Conditions for safe storage, including any incompatibilities

|                         |                                                                                                                                                                                                                                                               |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable container      | <ul style="list-style-type: none"> <li>Glass container is suitable for laboratory quantities</li> <li>Metal can or drum</li> <li>Packaging as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul> |
| Storage incompatibility | <ul style="list-style-type: none"> <li>Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> <li>Avoid contact with copper, aluminium and their alloys.</li> <li>Avoid reaction with oxidising agents</li> </ul>                       |

## SECTION 8 Exposure controls / personal protection

### Control parameters

Occupational Exposure Limits (OEL)

Continued...

## INGREDIENT DATA

Not Available

| Ingredient                                                                                                                   | Original IDLH | Revised IDLH  |
|------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| Poly (a- hydrogen -w- (2-aminomethyl ethoxy) - propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3- propylene glycol to form ether | Not Available | Not Available |
| benzyl alcohol                                                                                                               | Not Available | Not Available |
| Ethyl 4-[[[(methylphenylamino)methylene]amino]benzoate                                                                       | Not Available | Not Available |

## Exposure controls

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appropriate engineering controls | <p><b>Unless written procedures, specific to the workplace are available, the following is intended as a guide:</b></p> <ul style="list-style-type: none"> <li>▶ For Laboratory-scale handling of Substances assessed to be toxic by inhalation. <b>Quantities of up to 25 grams</b> may be handled in Class II biological safety cabinets *; <b>Quantities of 25 grams to 1 kilogram</b> may be handled in Class II biological safety cabinets* or equivalent containment systems; <b>Quantities exceeding 1 kg</b> may be handled either using specific containment, a hood or Class II biological safety cabinet*;</li> <li>▶ HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours.</li> <li>▶ The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated. Dependent on levels of contamination, PAPR, full face air purifying devices with P2 or P3 filters or air supplied respirators should be evaluated. When handling: <b>Quantities of up to 25 grams</b>, an approved respirator with HEPA filters or cartridges should be considered; <b>Quantities of 25 grams to 1 kilogram</b>, a half-face negative pressure, full negative pressure, or powered helmet-type air purifying respirator should be considered. <b>Quantities in excess of 1 kilogram</b>, a full face negative pressure, helmet-type air purifying, or supplied air respirator should be considered.</li> </ul> <p>Written procedures, specific to a particular work-place, may replace these recommendations</p> <p>* For Class II Biological Safety Cabinets, Types B2 or B3 should be considered. Where only Class I, open fronted Cabinets are available, glove panels may be added, Laminar flow cabinets do not provide sufficient protection when handling these material unless especially designed to do so.</p> <p><b>Pilot Plant and Production</b></p> <ul style="list-style-type: none"> <li>▶ Wear appropriate gloves; lab coat, nylon coveralls or disposable Tyvek suit; safety glasses, safety shoes, and disposable booties. Use good manufacturing practices (i.e., cGMPs).</li> <li>▶ Protective garment (coveralls, Tyvek, lab coat) is not to be worn outside the work area.</li> <li>▶ Clean/dirty/decontamination areas are to be established.</li> <li>▶ Negative/positive air pressure relationships and buffer zones required (i.e., ante-room/degowning room/airlock).</li> <li>▶ Area access is to be restricted.</li> <li>▶ High-energy operations such as milling, particle sizing, spraying or fluidising should be done within an approved emission control or containment system.</li> <li>▶ Develop cleaning procedures and techniques that limit potential exposure</li> </ul> <p><b>For potent pharmacological agents:</b></p> <p><b>Solutions Handling:</b></p> <ul style="list-style-type: none"> <li>▶ Solutions can be handled outside a containment system or without local exhaust ventilation during procedures with no potential for aerosolisation. If the procedures have a potential for aerosolisation, an air-purifying respirator is to be worn by all personnel in the immediate area.</li> <li>▶ Solutions used for procedures where aerosolisation may occur (e.g., vortexing, pumping) are to be handled within a containment system or with local exhaust ventilation.</li> <li>▶ In situations where this is not feasible (may include animal dosing), an air-purifying respirator is to be worn by all personnel in the immediate area. If using a ventilated enclosure that has not been validated, wear a half-mask respirator equipped with HEPA cartridges until the enclosure is validated for use.</li> <li>▶ Ensure gloves are protective against solvents in use.</li> </ul> |
|                                  | <p><b>Individual protection measures, such as personal protective equipment</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Eye and face protection          | <p>When handling very small quantities of the material eye protection may not be required.</p> <p>For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs:</p> <ul style="list-style-type: none"> <li>▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>▶ Face shield. Full face shield may be required for supplementary but never for primary protection of eyes.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. 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].</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Skin protection                  | See Hand protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Hands/feet protection            | <ul style="list-style-type: none"> <li>▶ Elbow length PVC gloves</li> <li>▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

Continued...

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|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> <li>· frequency and duration of contact,</li> <li>· chemical resistance of glove material,</li> <li>· glove thickness and</li> <li>· dexterity</li> </ul> <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> <li>· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>· Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.</li> <li>· Contaminated gloves should be replaced.</li> </ul> <p>As defined in ASTM F-739-96 in any application, gloves are rated as:</p> <ul style="list-style-type: none"> <li>· Excellent when breakthrough time &gt; 480 min</li> <li>· Good when breakthrough time &gt; 20 min</li> <li>· Fair when breakthrough time &lt; 20 min</li> <li>· Poor when glove material degrades</li> </ul> <p>For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.</p> <p>It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.</p> <p>Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.</p> <p>Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:</p> <ul style="list-style-type: none"> <li>· Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.</li> <li>· Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential</li> </ul> <p>Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <ul style="list-style-type: none"> <li>▸ Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference.</li> <li>▸ Double gloving should be considered.</li> <li>▸ PVC gloves.</li> <li>▸ Change gloves frequently and when contaminated, punctured or torn.</li> <li>▸ Wash hands immediately after removing gloves.</li> <li>▸ Protective shoe covers. [AS/NZS 2210]</li> <li>▸ Head covering.</li> <li>▸ Neoprene gloves</li> </ul> |
| <b>Body protection</b>  | See Other protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Other protection</b> | <ul style="list-style-type: none"> <li>▸ For quantities up to 500 grams a laboratory coat may be suitable.</li> <li>▸ For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs.</li> <li>▸ For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.</li> <li>▸ For manufacturing operations, air-supplied full body suits may be required for the provision of advanced respiratory protection.</li> <li>▸ Eye wash unit.</li> <li>▸ Ensure there is ready access to an emergency shower.</li> <li>▸ For Emergencies: Vinyl suit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Respiratory protection

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

- 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

### Information on basic physical and chemical properties

|                   |           |
|-------------------|-----------|
| <b>Appearance</b> | Colorless |
|-------------------|-----------|

|                                                |                |                                                     |               |
|------------------------------------------------|----------------|-----------------------------------------------------|---------------|
| Physical state                                 | Liquid         | Relative density (Water = 1)                        | Not Available |
| Odour                                          | No Odour       | 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 Available |
| Flash point (°C)                               | Not Available  | Taste                                               | Not Available |
| Evaporation rate                               | Not Available  | Explosive properties                                | Not Available |
| Flammability                                   | Not Applicable | 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                            | Not Applicable | pH as a solution (1%)                               | Not Available |
| Vapour density (Air = 1)                       | Not Available  | VOC g/L                                             | Not Available |
| Heat of Combustion (kJ/g)                      | Not Available  | Ignition Distance (cm)                              | Not Available |
| Flame Height (cm)                              | Not Available  | Flame Duration (s)                                  | Not Available |
| Enclosed Space Ignition Time Equivalent (s/m3) | Not Available  | Enclosed Space Ignition Deflagration Density (g/m3) | Not Available |
| Nanoform Solubility                            | Not Available  | Nanoform Particle Characteristics                   | Not Available |
| Particle Size                                  | Not Available  |                                                     |               |

## SECTION 10 Stability and reactivity

|                                    |                                                                                                                                                                                                      |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | See section 7                                                                                                                                                                                        |
| Chemical stability                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| 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

|                                      |                                                                                                            |
|--------------------------------------|------------------------------------------------------------------------------------------------------------|
| a) Acute Toxicity                    | There is sufficient evidence to classify this material as acutely toxic.                                   |
| b) Skin Irritation/Corrosion         | There is sufficient evidence to classify this material as skin corrosive or irritating.                    |
| c) Serious Eye Damage/Irritation     | There is sufficient evidence to classify this material as eye damaging or irritating                       |
| d) Respiratory or Skin sensitisation | There is sufficient evidence to classify this material as sensitising to skin or the respiratory system    |
| e) Mutagenicity                      | There is sufficient evidence to classify this material as mutagenic                                        |
| f) Carcinogenicity                   | Based on available data, the classification criteria are not met.                                          |
| g) Reproductivity                    | Based on available data, the classification criteria are not met.                                          |
| h) STOT - Single Exposure            | There is sufficient evidence to classify this material as toxic to specific organs through single exposure |
| i) STOT - Repeated Exposure          | Based on available data, the classification criteria are not met.                                          |
| j) Aspiration Hazard                 | Based on available data, the classification criteria are not met.                                          |

## hardener

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhaled</b>      | <p>Inhalation hazard is increased at higher temperatures.</p> <p>Inhalation of quantities of liquid mist may be extremely hazardous, even lethal due to spasm, extreme irritation of larynx and bronchi, chemical pneumonitis and pulmonary oedema.</p> <p>Inhalation of benzyl alcohol may affect respiration (paralysis of the respiratory center, respiratory depression, gasping respirations), cardiovascular system (hypotension).</p> <p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects; these may be fatal.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Ingestion</b>    | <p>Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.</p> <p>Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea. The vomitus may contain blood and mucous. If death does not occur within 24 hours there may be an improvement in the patients condition for 2-4 days only to be followed by the sudden onset of abdominal pain, board-like abdominal rigidity or hypo-tension; this indicates that delayed gastric or oesophageal corrosive damage has occurred.</p> <p>Aliphatic and alicyclic amines are generally well absorbed from the gut. Corrosive action may cause tissue damage throughout the gastrointestinal tract. Detoxification is thought to occur in the liver, kidney and intestinal mucosa with the enzymes, monoamine oxidase and diamine oxidase (histaminase) having a significant role.</p>                                                            |
| <b>Skin Contact</b> | <p>Skin contact with the material may be harmful; systemic effects may result following absorption.</p> <p>Volatile amine vapours produce primary skin irritation and dermatitis. Direct local contact, with the lower molecular weight liquids, may produce skin burns. Percutaneous absorption of simple aliphatic amines is known to produce lethal effects often the same as that for oral administration. Cutaneous sensitisation has been recorded chiefly due to ethyleneamines. Histamine release following exposure to many aliphatic amines may result in 'triple response' (white vasoconstriction, red flare and wheal) in human skin.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material.</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, 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.</p> <p>The material can produce severe chemical burns following direct contact with the skin.</p>   |
| <b>Eye</b>          | <p>When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.</p> <p>Direct contact with alkaline corrosives may produce pain and burns. Oedema, destruction of the epithelium, corneal opacification and iritis may occur. In less severe cases these symptoms tend to resolve. In severe injuries the full extent of the damage may not be immediately apparent with late complications comprising a persistent oedema, vascularisation and corneal scarring, permanent opacity, staphyloma, cataract, symblepharon and loss of sight.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Chronic</b>      | <p>Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis.</p> <p>Strong evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure.</p> <p>Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.</p> <p>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.</p> |

| hardener                                                                                                                     | TOXICITY                                            | IRRITATION                                                        |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------|
|                                                                                                                              | Not Available                                       | Not Available                                                     |
| Poly (a- hydrogen -w- (2-aminomethyl ethoxy) - propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3- propylene glycol to form ether | TOXICITY                                            | IRRITATION                                                        |
|                                                                                                                              | Dermal (rabbit) LD50: 561.6 mg/kg <sup>[1]</sup>    | Eye (Rodent - rabbit): 1mg - Severe                               |
|                                                                                                                              | Oral (Rat) LD50: 50-200 mg/kg <sup>[1]</sup>        | Eye (Rodent - rabbit): 1mg - Severe                               |
|                                                                                                                              |                                                     | Eye: adverse effect observed (irreversible damage) <sup>[1]</sup> |
|                                                                                                                              |                                                     | Skin (Rodent - rabbit): 500mg - Severe                            |
|                                                                                                                              |                                                     | Skin (Rodent - rabbit): 500mg - Severe                            |
|                                                                                                                              |                                                     | Skin (Rodent - rabbit): 500mg - Severe                            |
|                                                                                                                              |                                                     | Skin: adverse effect observed (irritating) <sup>[1]</sup>         |
| benzyl alcohol                                                                                                               | TOXICITY                                            | IRRITATION                                                        |
|                                                                                                                              | Dermal (rabbit) LD50: 2000 mg/kg <sup>[2]</sup>     | Eye (Rodent - rat): 0.1mL                                         |
|                                                                                                                              | Inhalation (Rat) LC50: >4.178 mg/L4h <sup>[2]</sup> | Eye: adverse effect observed (irritating) <sup>[1]</sup>          |
|                                                                                                                              | Oral (Rat) LD50: 1230 mg/kg <sup>[2]</sup>          | Skin (Human - man): 16mg/48H - Mild                               |
|                                                                                                                              |                                                     | Skin (Human): 1%/2D                                               |
|                                                                                                                              |                                                     | Skin (Mammal - pig): 100% - Moderate                              |
|                                                                                                                              |                                                     | Skin (Rodent - rabbit): 100mg/24H - Moderate                      |
|                                                                                                                              |                                                     | Skin: no adverse effect observed (not irritating) <sup>[1]</sup>  |

|                                                                                                                                                                                                                                            |                                               |                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------|
| Ethyl 4-<br>[[[(methylphenylamino)methylene]amino]benzoate                                                                                                                                                                                 | TOXICITY                                      | IRRITATION                                                       |
|                                                                                                                                                                                                                                            | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>  |
|                                                                                                                                                                                                                                            | Oral (Rat) LD50: >1000 mg/kg <sup>[2]</sup>   | Skin: no adverse effect observed (not irritating) <sup>[1]</sup> |
| <b>Legend:</b> 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 |                                               |                                                                  |

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| 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

|                                                                                                                                                                                                                                                                                                                                         |               |                    |                               |               |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|-------------------------------|---------------|---------------|
| hardener                                                                                                                                                                                                                                                                                                                                | Endpoint      | Test Duration (hr) | Species                       | Value         | Source        |
|                                                                                                                                                                                                                                                                                                                                         | Not Available | Not Available      | Not Available                 | Not Available | Not Available |
| Poly (a- hydrogen -w- (2-aminomethyl ethoxy) - propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3- propylene glycol to form ether                                                                                                                                                                                                            | Endpoint      | Test Duration (hr) | Species                       | Value         | Source        |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 48h                | Crustacea                     | 13mg/l        | 2             |
|                                                                                                                                                                                                                                                                                                                                         | NOEC(ECx)     | 72h                | Algae or other aquatic plants | 0.1mg/l       | 2             |
|                                                                                                                                                                                                                                                                                                                                         | LC50          | 96h                | Fish                          | >100mg/l      | 2             |
| benzyl alcohol                                                                                                                                                                                                                                                                                                                          | Endpoint      | Test Duration (hr) | Species                       | Value         | Source        |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 72h                | Algae or other aquatic plants | 500mg/l       | 2             |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 48h                | Crustacea                     | 230mg/l       | 2             |
|                                                                                                                                                                                                                                                                                                                                         | NOEC(ECx)     | 336h               | Fish                          | 5.1mg/l       | 2             |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 96h                | Algae or other aquatic plants | 76.828mg/l    | 2             |
|                                                                                                                                                                                                                                                                                                                                         | LC50          | 96h                | Fish                          | 10mg/l        | 2             |
| Ethyl 4-<br>[[[(methylphenylamino)methylene]amino]benzoate                                                                                                                                                                                                                                                                              | Endpoint      | Test Duration (hr) | Species                       | Value         | Source        |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 72h                | Algae or other aquatic plants | 2.53mg/l      | 2             |
|                                                                                                                                                                                                                                                                                                                                         | EC50          | 48h                | Crustacea                     | 2.7mg/l       | 2             |
|                                                                                                                                                                                                                                                                                                                                         | EC50(ECx)     | 72h                | Algae or other aquatic plants | 2.53mg/l      | 2             |
|                                                                                                                                                                                                                                                                                                                                         | ErC50         | 72h                | Algae or other aquatic plants | 29.09mg/l     | 2             |
|                                                                                                                                                                                                                                                                                                                                         | LC50          | 96h                | Fish                          | 1.4mg/l       | 2             |
| <b>Legend:</b> 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 |               |                    |                               |               |               |

DO NOT discharge into sewer or waterways.

Persistence and degradability

|                |                         |                  |
|----------------|-------------------------|------------------|
| Ingredient     | Persistence: Water/Soil | Persistence: Air |
| benzyl alcohol | LOW                     | LOW              |

Bioaccumulative potential

| Ingredient     | Bioaccumulation    |
|----------------|--------------------|
| benzyl alcohol | LOW (LogKOW = 1.1) |

**Mobility in soil**

| Ingredient     | Mobility              |
|----------------|-----------------------|
| benzyl alcohol | LOW (Log KOC = 15.66) |

**Other adverse effects**

No evidence of ozone depleting properties were found in the current literature.

**SECTION 13 Disposal considerations****Waste treatment methods**

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product / Packaging disposal</b> | <ul style="list-style-type: none"> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | <p>Otherwise:</p> <ul style="list-style-type: none"> <li>If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> </ul> <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>Reduction</li> <li>Reuse</li> <li>Recycling</li> <li>Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. 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. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none"> <li><b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>It may be necessary to collect all wash water for treatment before disposal.</li> <li>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>Where in doubt contact the responsible authority.</li> <li>Recycle wherever possible or consult manufacturer for recycling options.</li> <li>Consult State Land Waste Authority for disposal.</li> <li>Bury or incinerate residue at an approved site.</li> <li>Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul> |

**SECTION 14 Transport information****Labels Required**

|                         |    |
|-------------------------|----|
| <b>Marine Pollutant</b> | NO |
|-------------------------|----|

**Land transport (DOT): 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**

**14.7. Maritime transport in bulk according to IMO instruments****14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

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

| Product name                                                                                                                 | Group          |
|------------------------------------------------------------------------------------------------------------------------------|----------------|
| Poly (a- hydrogen -w- (2-aminomethyl ethoxy) - propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3- propylene glycol to form ether | Not Applicable |
| benzyl alcohol                                                                                                               | Not Applicable |
| Ethyl 4- [[[(methylphenylamino)methylene]amino]benzoate                                                                      | Not Applicable |

**14.7.3. Transport in bulk in accordance with the IGC Code**

| Product name                                                                                                                | Ship Type      |
|-----------------------------------------------------------------------------------------------------------------------------|----------------|
| Poly (a- hydrogen -w- (2-aminomethyl ethoxy) - propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3-propylene glycol to form ether | Not Applicable |
| benzyl alcohol                                                                                                              | Not Applicable |
| Ethyl 4-<br>[[[(methylphenylamino)methylene]amino]benzoate                                                                  | Not Applicable |

**SECTION 15 Regulatory information****Safety, health and environmental regulations / legislation specific for the substance or mixture**

**Poly (a- hydrogen -w- (2-aminomethyl ethoxy) -propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3-propylene glycol to form ether is found on the following regulatory lists**

US DOE Temporary Emergency Exposure Limits (TEELs)  
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

**benzyl alcohol is found on the following regulatory lists**

US - Massachusetts - Right To Know Listed Chemicals  
US - Pennsylvania - Hazardous Substance List  
US AIHA Workplace Environmental Exposure Levels (WEELs)  
US DOE Temporary Emergency Exposure Limits (TEELs)  
US EPA Pesticide Chemical Search - Antimicrobial  
US EPA Pesticide Chemical Search - Conventional Chemical  
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory  
US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

**Ethyl 4-[[[(methylphenylamino)methylene]amino]benzoate is found on the following regulatory lists**

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

**Additional Regulatory Information**

Not Applicable

**Federal Regulations****Superfund Amendments and Reauthorization Act of 1986 (SARA)****Section 311/312 hazard categories**

|                                                 |     |
|-------------------------------------------------|-----|
| Flammable (Gases, Aerosols, Liquids, or Solids) | No  |
| Gas under pressure                              | No  |
| Explosive                                       | No  |
| Self-heating                                    | No  |
| Pyrophoric (Liquid or Solid)                    | No  |
| Pyrophoric Gas                                  | No  |
| Corrosive to metal                              | No  |
| Oxidizer (Liquid, Solid or Gas)                 | No  |
| Organic Peroxide                                | No  |
| Self-reactive                                   | No  |
| In contact with water emits flammable gas       | No  |
| Combustible Dust                                | No  |
| Carcinogenicity                                 | No  |
| Acute toxicity (any route of exposure)          | Yes |
| Reproductive toxicity                           | No  |
| Skin Corrosion or Irritation                    | Yes |
| Respiratory or Skin Sensitization               | Yes |

Continued...

|                                                              |     |
|--------------------------------------------------------------|-----|
| Serious eye damage or eye irritation                         | Yes |
| Specific target organ toxicity (single or repeated exposure) | Yes |
| Aspiration Hazard                                            | No  |
| Germ cell mutagenicity                                       | Yes |
| Simple Asphyxiant                                            | No  |
| Hazards Not Otherwise Classified                             | No  |

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

Additional Federal Regulatory Information

Not Applicable

State Regulations

US. California Proposition 65

 **WARNING:** . For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Not Applicable

National Inventory Status

| National Inventory                                | Status                                                                                                                                                                                                    |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia - AIIC / Australia Non-Industrial Use   | Yes                                                                                                                                                                                                       |
| Canada - DSL                                      | No (Ethyl 4-[[[(methylphenylamino)methylene]amino]benzoate)                                                                                                                                               |
| Canada - NDSL                                     | No (trimethylolpropane triamine ether, propoxylated; benzyl alcohol)                                                                                                                                      |
| China - IECSC                                     | Yes                                                                                                                                                                                                       |
| Europe - EINEC / ELINCS / NLP                     | Yes                                                                                                                                                                                                       |
| Japan - ENCS                                      | No (Ethyl 4-[[[(methylphenylamino)methylene]amino]benzoate)                                                                                                                                               |
| Korea - KECI                                      | Yes                                                                                                                                                                                                       |
| New Zealand - NZIoC                               | Yes                                                                                                                                                                                                       |
| Philippines - PICCS                               | Yes                                                                                                                                                                                                       |
| USA - TSCA                                        | All chemical substances in this product have been designated as TSCA Inventory 'Active'                                                                                                                   |
| Taiwan - TCSI                                     | Yes                                                                                                                                                                                                       |
| Mexico - INSQ                                     | No (Poly (a- hydrogen -w- (2-aminomethyl ethoxy) -propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3-propylene glycol to form ether; Ethyl 4-[[[(methylphenylamino)methylene]amino]benzoate)                   |
| Vietnam - NCI                                     | Yes                                                                                                                                                                                                       |
| Russia - FBEPH                                    | No (Poly (a- hydrogen -w- (2-aminomethyl ethoxy) -propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3-propylene glycol to form ether; Ethyl 4-[[[(methylphenylamino)methylene]amino]benzoate)                   |
| UAE - Control List (Banned/Restricted Substances) | No (Poly (a- hydrogen -w- (2-aminomethyl ethoxy) -propylene oxide, 2-ethyl-2-hydroxymethyl-1, 3-propylene glycol to form ether; benzyl alcohol; Ethyl 4-[[[(methylphenylamino)methylene]amino]benzoate)   |
| <b>Legend:</b>                                    | <i>Yes = All CAS declared ingredients are on the inventory<br/>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.</i> |

SECTION 16 Other information

|               |            |
|---------------|------------|
| Revision Date | 26/12/2025 |
| Initial Date  | 14/11/2025 |

Other information

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

### Definitions and abbreviations

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit.
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code
  
- 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