



ARDEX EG15 Hardener Part B Improved Formula

Ardex (Ardex Australia)

Chemwatch: 85-5516

Version No: 3.1.1.1

Safety Data Sheet according to WHS and ADG requirements

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

Product Identifier

Product name	ARDEX EG15 Hardener Part B Improved Formula
Synonyms	Not Available
Proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (contains isophorone diamine, trimethylhexamethylene diamine and formaldehyde/benzenamine, hydrogenated)
Other means of identification	Not Available
Relevant identified uses of the substance or mixture and uses advised against	Relevant identified uses: Epoxy hardener for epoxy grout

Details of the supplier of the safety data sheet

Registered company name	Ardex (Ardex Australia)
Address	20 Powers Road Seven Hills NSW 2147 Australia
Telephone	1800 224 070
Fax	1300 780 102
Website	Not Available
Email	Not Available

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	1800 224 070 (Mon-Fri, 9am-5pm)
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

CHEMWATCH HAZARD RATINGS

Flammability	1
Toxicity	2
Body Contact	3
Reactivity	1
Chronic	3

Poisons Schedule

S5

Classification [1]

Legend:

1 Classified by Chemwatch 2 Classification drawn from HSES 3 Classification drawn from EC Directive 1272/2008 - Annex VI
 Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Reproductive Toxicity Category 1B, Specific target organ toxicity - single exposure Category 3 (narcoic effects), Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2

Label elements

Hazard pictogram(s)



SIGNAL WORD

DANGER

Hazard statement(s)

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H332 Harmful if inhaled.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H360 May damage fertility or the unborn child.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

- P201 Obtain special instructions before use.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 IF exposed or concerned: Get medical advice/attention.

Precautionary statement(s) Storage

- P405 Store locked up.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

- P501 Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures	CAS No	%[weight]	Name
	100-51-6	10-50	benzyl alcohol
	135108-88-2	10-50	formaldehyde/ benzeneamine, hydrogenated
	2855-13-2	10-50	isophorone diamine
	Not Available	10-50	cycloaliphatic amine
	68953-36-6	<20	oil of tetraethylenepentamine polyamides
	25620-58-0	1-5	trimethylhexamethylene diamine
	112-57-2	1-5	tetraethylenepentamine

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact

- ▶ If this product comes in contact with the eyes:
 - ▶ Immediately hold eyelids apart and flush the eye continuously with running water.
 - ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
 - ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
 - ▶ Transport to hospital or doctor without delay.
 - ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
- For amines:
 - ▶ If liquid amines come in contact with the eyes, irrigate immediately and continuously with low pressure flowing water, preferably from an eye wash fountain, for 15 to 30 minutes.

For more effective flushing of the eyes, use the fingers to spread apart and hold open the eyelids. The eyes should then be "rolled" or moved in all directions.

Seek immediate medical attention, preferably from an ophthalmologist.

If skin or hair contact occurs

Immediately flush body and clothes with large amounts of water, using safety shower if available.

Quickly remove all contaminated clothing, including footwear.

Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.

Transport to hospital, or doctor.

For amines:

In case of major exposure to liquid amine, promptly remove any contaminated clothing, including rings, watches, and shoe, preferably under a safety shower.

Wash skin for 15 to 30 minutes with plenty of water and soap. Call a physician immediately.

Remove and dry-clean or launder clothing soaked or soiled with this material before reuse. Dry cleaning of contaminated clothing may be more effective than normal laundering.

Inform individuals responsible for cleaning of potential hazards associated with handling contaminated clothing.

Discard contaminated leather articles such as shoes, belts, and watchbands.

Note to Physician: Treat any skin burns as thermal burns. After decontamination, consider the use of cold packs and topical antibiotics.

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

Lay patient down. Keep warm and rested.

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

Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

Transport to hospital, or doctor.

Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.

Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).

As the reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.

Below any such manifestation, the administration of a spray containing a dexamethasone derivative or dexamethasone derivative may be considered.

This must definitely be left to a doctor or person authorized by him/her.

(ICSC13719)

For amines:

All employees working in areas where contact with amine catalysts is possible should be thoroughly trained in the administration of appropriate first aid procedures.

Experience has demonstrated that prompt administration of such aid can minimize the effects of accidental exposure.

Promptly move the affected person away from the contaminated area to an area of fresh air.

Keep the affected person calm and warm, but not hot.

If breathing is difficult, oxygen may be administered by a qualified person.

If breathing stops, give artificial respiration. Call a physician at once.

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

Urgent hospital treatment is likely to be needed.

If swallowed do NOT induce vomiting.

Observe the patient carefully.

Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

Give water to rinse out mouth, then provide liquid slowly and as much as casually can comfortably drink.

For amines:

Transport to hospital or doctor without delay.

If liquid amine are ingested, have the affected person drink several glasses of water or milk.

Do not induce vomiting.

Immediately transport to a medical facility and inform medical personnel about the nature of the exposure. The decision of whether to induce vomiting should be made by an attending physician.

Indication of any immediate medical attention and special treatment needed

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, cricothyrotomy 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.

Cathartics and emesis are absolutely contra-indicated.

Activated charcoal does not absorb alkali.

Gastric lavage should not be used.

Supportive care involves the following:

Without 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 "gaspung syndrome" describes the progressive neurological deterioration of poisoned neonates.

Management is essentially supportive.

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

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immunosuppressive mechanism.
Some persons with hyperreactive airways (e.g., asthmatic persons) may experience wheezing attacks (bronchospasms) when exposed to airway irritants.
Health effects of amines, such as skin irritation and transient corneal edema ("blue haze," "halo effect," "glaucopsis"), 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 characterized 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.
Polyurethane Amine Catalysts: Guidelines for Safe Handling and Disposal Bulletin June 2000
Alliance for Polyurethanes Industry

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

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

Special hazards arising from the substrate or mixture

Fire incompatibility

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

Advice for firefighters

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use fire fighting procedures suitable for surrounding area.
- For amines:
 - For firefighting, cleaning up large spills, and other emergency operations, workers must wear a self-contained breathing apparatus with full face-piece, operated in a pressure-demand mode.
 - Airline and air purifying respirators should not be worn for firefighting or other emergency or upset conditions.
 - Respirators should be used in conjunction with a respiratory protection program, which would include suitable fit testing and medical evaluation of the user.
- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include:
 - carbon dioxide (CO2)
 - aldehydes
 - nitrogen oxides (NOx)
- other pyrolysis products typical of burning organic material.
- Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.
- May emit corrosive fumes.
- WARNING: Long standing in contact with air and light may result in the formation of potentially explosive peroxides.

Fire Fighting

Fire/Explosion Hazard

HAZCHEM

2X

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

- Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
- Check regularly for spills and leaks.
- Small spills should be covered with inorganic absorbents and disposed of properly. Organic absorbents have been known to ignite when contaminated with

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amines in closed containers. Certain cellulosic materials used for spill cleanup such as wood chips or sawdust have shown reactivity with ethyleneamines and should be avoided. Ethyleneamine leaks will frequently be identified by the odor (ammoniacal) or by the formation of a white, solid, waxy substance (amine carbonates).
Slippery when spill.
Clean up all spills immediately.
Avoid breathing vapours and contact with skin and eyes.
Control personal contact with the substance, by using protective equipment.
Contain and absorb spill with sand, earth, inert material or vermiculite.
For amines:
If possible (i.e., without risk of contact or exposure), stop the leak.
Contain the spilled material by diking, then neutralize.
Next, absorb the neutralized product with clay, sawdust, vermiculite, or other inert absorbent and shovel into containers.
Store the containers outdoors.
Slippery when spill.
Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.
Wear full body protective clothing with breathing apparatus.
Prevent, by any means available, spillage from entering drains or water course.
For amines:
First remove all ignition sources from the spill area.
Have firefighting equipment nearby, and have firefighting personnel fully trained in the proper use of the equipment and in the procedures used in fighting a chemical fire.
Spills and leaks of polyurethane amine catalysts should be contained by diking, if necessary, and cleaned up only by properly trained and equipped personnel. All others should promptly leave the contaminated area and stay upwind.
Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

- Safe handling**
- Avoid all personal contact, including inhalation.
 - Wear protective clothing when risk of exposure occurs.
 - Use in a well-ventilated area.
 - Avoid contact with moisture.
 - Store in original containers.
 - Keep containers securely sealed.
 - Store in a cool, dry, well-ventilated area.
 - Store away from incompatible materials and foodstuff containers.
 - DO NOT store near acids, or oxidising agents.
 - No smoking, naked lights, heat or ignition sources.

Other information

Conditions for safe storage, including any incompatibilities

- DO NOT use aluminium or galvanised containers.
- Lined metal can, lined metal pail can.
- Plastic pail.
- Polymer drum.
- Packing as recommended by manufacturer.
- For low viscosity materials
- Drums and jerrycans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure.
- Removable head packaging.
- Cans with friction closures and low pressure tubes and cartridges may be used.
- Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.
- Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.
- Avoid contact with copper, aluminium and their alloys.
- Avoid reaction with oxidising agents

Storage incompatibility

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
benzyl alcohol	Benzyl alcohol	30 ppm	52 ppm	740 ppm
tetraethylenepentamine	Tetraethylenepentamine	15 mg/m3	130 mg/m3	790 mg/m3
Original IDLH	Original IDLH	Not Available	Not Available	Not Available
benzyl alcohol	benzyl alcohol	Not Available	Not Available	Not Available
formaldehyde/benzenamine, hydrogenated	Not Available	Not Available	Not Available	Not Available
isophorone diamine	Not Available	Not Available	Not Available	Not Available
Revised IDLH	Revised IDLH	Not Available	Not Available	Not Available

Exposure controls

Appropriate engineering controls

Eye and face protection

Skin protection

Hand/feet protection

Body protection

Other protection

Thermal hazards

- Not Available cycloaliphatic amine
- Not Available tall oil tetraethylene diamine
- Not Available polyamides
- Not Available trimethylhexamethylene diamine
- Not Available tetraethylene diamine

CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear

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

The basic types of engineering controls are

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

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

Personal protection



- Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes.
- 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.

SPECIAL PRECAUTION

- Because amines are alkaline materials that can cause rapid and severe tissue damage, wearing of contact lenses while working with amines is strongly discouraged. Wearing such lenses can prolong contact of the eye tissue with the amine, thereby causing more severe damage.
- Appropriate eye protection should be worn whenever amines are handled or whenever there is any possibility of direct contact with liquid products, vapors, or aerosol mists.

CAUTION:

- Ordinary safety glasses or face-shields will not prevent eye irritation from high concentrations of vapour.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care.

- Leather wear not recommended: Contaminated leather footwear, watch bands, should be destroyed, i.e. burnt, as they cannot be adequately decontaminated
- When handling liquid-grade epoxy resins wear chemically protective gloves (e.g. nitrile or nitrile-butadiene rubber), boots and aprons.
- DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin).
- DO NOT use barrier creams containing emulsified fats and oils as these may absorb the resin. Silicone based barrier creams should be removed prior to use

For amines:

- 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
- Where there is a possibility of exposure to liquid amines skin protection should include: rubber gloves, (neoprene, nitrile, or butyl).
- DO NOT USE latex.

See Other protection below

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.

Not Available

Recommended material(s)

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

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

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Material	CPI	Required minimum protection factor	Maximum gas/vapour concentration present in air	Half-face Respirator	Full-face Respirator
BUTYL	C	up to 10	1000	-	-
NATURAL RUBBER	C	up to 10	1000	AK-AUS / Class 1 P2	-
NEOPRENE	C	up to 50	1000	-	AK-AUS / Class 1 P2
VITON	C	up to 50	1000	-	AK-AUS / Class 1 P2

A: Best Selection
CPI - Chemwatch Performance Index

Respiratory protection

Type A1-P Filter of sufficient capacity (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z89 or national equivalent)

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

Material	CPI	Required minimum protection factor	Maximum gas/vapour concentration present in air	Half-face Respirator	Full-face Respirator
BUTYL	C	up to 10	1000	-	-
NATURAL RUBBER	C	up to 10	1000	AK-AUS / Class 1 P2	-
NEOPRENE	C	up to 50	1000	-	AK-AUS / Class 1 P2
VITON	C	up to 50	1000	-	AK-AUS / Class 1 P2

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B - Satisfactory; may degrade after 4 hours continuous immersion
C - Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation.
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

* - Continuous Flow ** - Continuous-flow or positive pressure demand
A(All classes) = Organic vapours. B AUS or B1 = Acid gases. B2 = Acid gas or hydrogen cyanide(HCN). B3 = Acid gas or hydrogen cyanide(HCN). E = Sulphur dioxide(SO2). G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)
Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
Where engineering controls are not feasible and work practices do not reduce airborne amine concentrations below recommended exposure limits, appropriate respiratory protection should be used. In such cases, air-purifying respirators equipped with cartridges designed to protect against amines are recommended.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Brownish alkaline liquid.
Physical state	Liquid
Odour	Not Available
Odour threshold (pH as supplied)	Not Available
Melting point / freezing point (°C)	Not Available
Initial boiling point and boiling range (°C)	Not Available
Flash point (°C)	Not Available
Evaporation rate	Not Available
Flammability	Not Available
Upper Explosive Limit (%)	Not Available
Lower Explosive Limit (%)	Not Available
Vapour pressure (kPa)	Not Available
Solubility in water (g/L)	Not Available
Vapour density (Air = 1)	Not Available
Relative density (Water = 1)	Not Available
Partition coefficient n-octanol / water	Not Available
Auto-ignition temperature (°C)	Not Available
Decomposition temperature	Not Available
Viscosity (cSt)	Not Available
Molecular weight (g/mol)	Not Applicable
Taste	Not Available
Explosive properties	Not Available
Oxidising properties	Not Available
Surface Tension (dyne/cm or mN/m)	Not Available
Volatile Component (%vol)	Not Available
Gas group	Not Available
pH as a solution (1%)	Not Available
VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.
Inhalation of epoxy resin amine hardeners (including polyamines and amine adducts) may produce bronchospasm and coughing episodes lasting several days after cessation of the exposure. Even faint traces of these vapours may trigger an intense reaction in individuals showing "amine asthma".
Inhalation of amine vapours may cause irritation of the nose and throat, and lung irritation with respiratory distress and cough.
Swelling and inflammation of the respiratory tract is seen in serious cases, with headache, nausea, faintness and anxiety.
Inhalation of benzyl alcohol may affect breathing (causing depression and paralysis of breathing and lower blood pressure.
Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.
There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Ingestion

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea. The vomitus may contain blood and amines without benzene rings when swallowed are absorbed throughout the gut. Corrosive action may cause damage throughout the gastrointestinal tract.

Central nervous system (CNS) depression may include general discomfort, symptoms of dizziness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.

Skin contact with the material may be harmful; systemic effects may result following absorption.

The material can produce chemical burns following direct contact with the skin.

Airline epoxy-curing agents (hardeners) may produce primary skin irritation and sensitisation dermatitis in predisposed individuals. Cutaneous reactions include erythema, intolerable itching and severe facial swelling.

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

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

Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Skin Contact

The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

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

Vapours of volatile amines irritate the eyes, causing excessive secretion of tears, inflammation of the conjunctiva and slight swelling of the cornea, resulting in "haze" around lights. This effect is temporary, lasting only for a few hours. However this condition can reduce the efficiency of undertaking skilled tasks, such as driving a car. Direct eye contact with liquid volatile amines may produce eye damage, permanent for the lighter species.

Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammation and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue.

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

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

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

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Reactions to benzoic acid have been reported. It may worsen asthma, skin rash or skin disease (angio-oedema). Effect may be worse if exposed persons are also taking aspirin tablets.

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

Prolonged or repeated exposure to benzyl alcohol may cause allergic contact dermatitis (skin inflammation). Prolonged or repeated swallowing may affect behaviour and the central nervous system with symptoms similar to acute swelling. It may also affect the liver, kidneys, cardiovascular system, the lungs and cause weight loss. Studies in animals have shown evidence of causing birth defects, but the significance of this information in humans is unknown.

Inhalation of epoxy resin amine hardeners (including polyamines and amine adducts) may produce bronchospasm and coughing episodes lasting several days after cessation of the exposure. Even faint traces of these vapours may trigger an intense reaction in individuals showing "amine asthma".

Chronic

Dermal (rabbit) LD50: 2000 mg/kg [2]
 Inhalation (rat) LC50 > 4.178 mg/l/4h [2]
 Oral (rat) LD50: 1230 mg/kg [2]

TOXICITY
 Not Available
 IRRITATION
 Not Available

benzyl alcohol

formaldehyde/ benzamide, hydrogenated,

isophorone diamine

tall oil tetraethylenepentamine polyamides

trimethylhexamethylene diamine

tetraethylenepentamine

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Dermal (rabbit) LD50: 2000 mg/kg [2]
 Inhalation (rat) LC50 > 4.178 mg/l/4h [2]
 Oral (rat) LD50: 1230 mg/kg [2]

TOXICITY
 Not Available
 IRRITATION
 Not Available

benzyl alcohol

formaldehyde/ benzamide, hydrogenated,

isophorone diamine

tall oil tetraethylenepentamine polyamides

trimethylhexamethylene diamine

tetraethylenepentamine

Legend:

1 Value obtained from Europe ECHA Registered Substances - Acute Toxicity 2 * Value obtained from manufacturer's SDS Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of Chemical Substances

Unlike benzylic alcohols, the beta-hydroxy group of the members of benzyl alkyl alcohols contributes to break down reactions but do not undergo phase II metabolic activation. Though structurally similar to cancer causing ethyl benzene, phenethyl alcohol is only of negligible concern due to limited similarity in their pattern of activity.

For benzoxales:

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<p>Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol are considered to be unharmed and of low acute toxicity. They may cause slight irritation by oral, dermal or inhalation exposure except sodium benzoate which doesn't irritate the skin. Studies showed increased mortality, reduced weight gain, liver and kidney effects at higher doses, also, lesions of the brain, thymus and skeletal muscles may occur with benzyl alcohol.</p>	<p>Adverse reactions to fragrances in perfumes and fragrances cosmetic products include allergic contact dermatitis, irritant contact dermatitis, sensitivity to light, immediate contact reactions, and pigmented contact dermatitis. Airborne and conjugal contact dermatitis occurs. Contact allergy is a lifelong condition, so symptoms may occur on re-exposure. Allergic contact dermatitis can be severe and widespread, with significant impairment of quality of life and potential consequences for fitness for work.</p>	<p>Fragrance allergens act as haptens, low molecular weight chemicals that cause an immune response only when attached to a carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but require previous activation. A pre-hapten is a chemical that itself causes little or no sensitization, but is transformed into a hapten in the skin (bioactivation), usually via enzyme catalysis. It is not always possible to know whether a particular allergen that is not directly reactive acts as a pre-hapten or a hapten.</p>	<p>This is a member or analogue of a group of benzyl derivatives generally regarded as safe (GRAS), based partly on their self-limiting properties as flavouring substances in food. In humans and other animals, they are rapidly absorbed, broken down and excreted, with a wide safety margin. They also lack significant potential to cause genetic toxicity and mutations. The intake of benzyl derivatives as natural components of traditional foods is actually higher than the intake as intentionally added flavouring substances.</p>	<p>The any allyl alcohol (AAA) fragrance ingredients have diverse chemical structures, with similar metabolic and toxicity profiles. The AAA fragrances demonstrate low acute and subchronic toxicity by skin contact and swallowing. At concentrations likely to be encountered by consumers, AAA fragrances ingredients are non-irritating to the skin. The potential for eye irritation is minimal.</p>	<p>Amine adducts have much reduced volatility and are less irritating to the skin and eyes than amine hardeners. However commercial amine adducts may contain a percentage of unreacted amine and all unnecessary contact should be avoided.</p>	<p>Amine adducts are prepared by reacting excess primary amines with epoxy resin. No significant acute toxicological data identified in literature search.</p>	<p>isophorone diamine is a strong skin irritant, corrosive with repeated application. Frequent occupational exposure may lead to the development of allergic skin inflammation. There could be damage to the small organ, throat and lungs following inhalational exposure. Reduced kidney weight can result. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p>	<p>Overexposure to most of these materials may cause adverse health effects. Many amine-based compounds can cause release of histamines, which, in turn, can trigger allergic and other physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient.</p>	<p>There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing.</p>	<p>The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.</p>	<p>The triethylamine is a severe irritant to skin and eyes and may induce skin sensitization. Acute exposure to saturated vapour via inhalation was tolerated without impairment but exposure to aerosol may lead to reversible irritations of the mucous membranes in the airways. Studies done on experimental animals showed that it does not cause cancer or fetal developmental defects.</p>	<p>The following information refers to contact allergens as a group and may not be specific to this product.</p>	<p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's edema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.</p>	<p>BENZYL ALCOHOL & ISOPHORONE DIAMINE & TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>FORMALDEHYDE/BENZENAMINE, HYDROGENATED</p>	<p>ISOPHORONE DIAMINE</p>	<p>TRIMETHYLHEXAMETHYLENE DIAMINE</p>	<p>TETRAETHYLENEPENTAMINE</p>	<p>BENZYL ALCOHOL & ISOPHORONE DIAMINE & TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>FORMALDEHYDE/BENZENAMINE, HYDROGENATED</p>	<p>ISOPHORONE DIAMINE & TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>
<p>Ashtma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airway dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperactivity on methacholine testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.</p>	<p>The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.</p>	<p>Ethylbenzenamines are very reactive and can cause chemical burns, skin rashes and asthma-like symptoms. It is readily absorbed through the skin and may cause eye blindness and irreparable damage. As such, they require careful handling. In general, the low-molecular weight polyamines have been positive in Ames assay (for genetic damage); however, this is probably due to their ability to chelate copper.</p>	<p>The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p>	<p>For alkyl polyamines:</p>	<p>The alkyl polyamines cluster consists of two terminal primary and at least one secondary amine groups and are derivatives of low molecular weight ethylenediamine, propylenediamine or hexamethylenediamine. Toxicity depends on route of exposure. Cluster members have been shown to cause skin irritation or sensitisation, eye irritation and genetic defects, but have not been shown to cause cancer.</p>	<p>TETRAETHYLENEPENTAMINE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>	<p>DIAMINE & TRIMETHYLHEXAMETHYLENE POLYAMIDES & TETRAETHYLENEPENTAMINE</p>	<p>TALL OIL/TETRAETHYLENEPENTAMINE</p>

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TALL OIL
Tetraethylenepentamine (TEPA) has a low acute toxicity when taken orally and a higher toxicity via the dermal route most likely due to the corrosive nature of TEPA to the skin against neutralization by stomach acid. TEPA may be corrosive to the skin and eyes. Long term dermal application may cause thickening of the epidermis and other skin changes. There were no evidence of reproductive toxicity but there may be foetal toxicity at high doses most likely due to copper deficiency and zinc toxicity.

- Acute Toxicity
- Skin Irritation/Corrosion
- Serious Eye Damage/Irritation
- Respiratory or Skin sensitisation
- Mutagenicity
- Aspiration Hazard
- Reproductive
- STOT - Single Exposure
- STOT - Repeated Exposure

Legend:
 - Data available but does not fit the criteria for classification
 - Data available to make classification
 - Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	TEST DURATION (HR)	SPCIES	VALUE	SOURCE
ARDEX EG15 Hardener Part B Improved Formula	Not Available	Not Available	Not Available	Not Available	Not Available
	Available	Available	Available	Available	Available
benzyl alcohol	LC50	96	Fish	10mg/L	4
	ENDPOINT	TEST DURATION (HR)	SPCIES	VALUE	SOURCE
formaldehyde/benzenamine, hydrogenated,	Not Available	Not Available	Not Available	Not Available	Not Available
	Available	Available	Available	Available	Available
isophorone diamine	LC50	96	Fish	70mg/L	1
	EC50	48	Crustacea	17.4mg/L	4
isophorone diamine	EC50	48	Crustacea	37mg/L	1
	EC10	72	Algae or other aquatic plants	3.1mg/L	1
Algae or other aquatic plants	NOEC	72	Algae or other aquatic plants	1.5mg/L	1
	ENDPOINT	TEST DURATION (HR)	SPCIES	VALUE	SOURCE
tall oil tetraethylenepentamine polyamides	LC50	96	Fish	0.19mg/L	2
	EC50	48	Crustacea	0.18mg/L	2
trimethylhexamethylene diamine	ENDPOINT	TEST DURATION (HR)	SPCIES	VALUE	SOURCE
	EC50	72	Algae or other aquatic plants	29.5mg/L	1
Algae or other aquatic plants	EC10	72	Algae or other aquatic plants	16.3mg/L	1
	ENDPOINT	TEST DURATION (HR)	SPCIES	VALUE	SOURCE
tetraethylenepentamine	EC50	48	Crustacea	24.1mg/L	1
	EC50	72	Algae or other aquatic plants	2.1mg/L	1
Algae or other aquatic plants	NOEC	72	Algae or other aquatic plants	0.5mg/L	1
	ENDPOINT	TEST DURATION (HR)	SPCIES	VALUE	SOURCE

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Prevent, by any means available, spillage from entering drains or water courses. DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
benzyl alcohol	LOW	LOW
isophorone diamine	HIGH	HIGH
trimethylhexamethylene diamine	HIGH	HIGH
tetraethylenepentamine	LOW	LOW

Legend:
 Extracted from 1 IUCLID Toxicity Data 2 Europe ECHA Registered Substances Ecotoxicological Information Aquatic Toxicity 3 EPIWIN Suite V3 12 (QSAR) - Aquatic Toxicity Data (Estimate) 4 US EPA Ecotox database - Aquatic Toxicity Data 5 ECETOC Aquatic Hazard Assessment Data 6 RTE (Japan) Bioconcentration Data 7 METTI (Japan) Bioconcentration Data 8 Vendor Data

SECTION 13 DISPOSAL CONSIDERATIONS

Mobility in soil	Mobility
benzyl alcohol LOW (LogKOW = 1.1)	Mobility LOW (KOC = 15.66)
isophorone diamine LOW (BCF = 3.4)	LOW (KOC = 340.4)
trimethylhexamethylene diamine LOW (LogKOW = 1.6347)	LOW (KOC = 1101)
tetraethylenepentamine LOW (LogKOW = -3.1604)	LOW (KOC = 1098)

Waste treatment methods

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.
- Otherwise:
 - Containers can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
 - Where possible retain label warnings and SDS and observe all notices pertaining to the product.
 - Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
 - A Hierarchy of Controls seems to be common - the user should investigate:
 - Reduction
 - Reuse
 - Recycling
 - Disposal (if all else fails)
- This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
 - DO NOT allow wash water from cleaning or process equipment to enter drains.
 - It may be necessary to collect all wash water for treatment before disposal.
 - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
 - Where in doubt contact the responsible authority.
 - Recycle wherever possible.
 - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
 - Treat and neutralise at an approved treatment plant.
 - Treatment should involve: Neutralisation with suitable dilute acid followed by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant



HAZCHEM

2X

Land transport (ADG)

UN number

2735

UN proper shipping name

AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (contains isophorone diamine, trimethylhexamethylene diamine and formaldehyde/benzenamine, hydrogenated)

Transport hazard class(es)

Class 8

Subrisk Not Applicable

Packing group

III

Environmentally hazardous

Special precautions for user

Special provisions 223 274
Limited quantity 5L

UN number

2735

Air transport (ICAQ-IATA / DGR)

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UN proper shipping name	Amines, liquid, comosive, n.o.s., (contains isophorone diamine, trimethylhexamethylene diamine and formaldehyde/ benzeneamine, hydrogenated); Polyamines, liquid, comosive, n.o.s., (contains isophorone diamine, trimethylhexamethylene diamine and formaldehyde/ benzeneamine, hydrogenated)
Transport hazard class(es)	ICAO/IATA Class 8 ICAO / IATA Subrisk Not Applicable ERG Code 8L
Packing group	III Environmentally hazardous
Special precautions for user	Special provisions A3 A803 Cargo Only Packing Instructions 855 Cargo Only Maximum Qty / Pack 60 L Passenger and Cargo Packing Instructions 852 Passenger and Cargo Maximum Qty / Pack 5 L Passenger and Cargo Limited Quantity Packing Instructions Y841 Passenger and Cargo Limited Maximum Qty / Pack 1 L
Sea transport (IMDG-Code / GGVSee)	UN number 2735 AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S., (contains isophorone diamine, trimethylhexamethylene diamine and formaldehyde/ benzeneamine, hydrogenated) IMDG Class 8 IMDG Subrisk Not Applicable Packing group III Marine Pollutant EMS Number F-A, S-B Special provisions 223 274 Limited Quantities 5 L

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

BENZYL ALCOHOL(190-51-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)

FORMALDEHYDE/ BENZENAMINE, HYDROGENATED(135108-88-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

ISOPHORONE DIAMINE(2855-13-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

TALL OIL/ TETRAETHYLENEDIAMINE POLYAMIDES(68953-36-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

TRIMETHYLHEXAMETHYLENE DIAMINE(25620-58-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)

TETRAETHYLENEDIAMINE(112-57-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

National Inventory

Status

Australia - AICS	Y
Canada - DSL	Y
Canada - NDCL	N (benzyl alcohol; tetraethylenepentamine; isophorone diamine; trimethylhexamethylene diamine, formaldehyde/ benzeneamine, hydrogenated)
China - IECSC	Y

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Y = All ingredients are on the inventory	
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)	
Y	USA - TSCA
Y	Philippines - PICCS
Y	New Zealand - NZIOC
Y	Korea - KECI
N (oil/tetraethylenepentamine polyamides; formaldehyde/benzenamine, hydrogenated)	Japan - ENCS
N (formaldehyde/benzenamine, hydrogenated)	Europe - EINEC / ELINCS / NLP

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Name	CAS No
oil/tetraethylenepentamine polyamides	68513-05-3; 68953-36-6; 68555-22-6; 1226892-45-0
trimethylhexamethylene diamine	25620-58-0; 25513-64-8; 3236-53-1; 105759-40-8; 112360-55-1; 125146-87-4; 130014-36-7; 161075-53-2; 172084-55-8; 178861-94-4; 72259-26-5; 76882-77-9; 87748-70-7; 93365-28-7; 3236-54-2

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

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

Definitions and abbreviations

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC-STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit
- IDLH: Immediately Dangerous to Life or Health Concentrations
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEL: Biological Exposure Index

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