

# SAFETY DATA SHEET

## EPIREZ EPOXY MASTIC METAL PRIMER [215] HARDENER

Infosafe No.: HXXAJ  
ISSUED Date : 27/06/2017  
ISSUED by: ITW POLYMERS AND FLUIDS

### 1. IDENTIFICATION

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**GHS Product Identifier**

EPIREZ EPOXY MASTIC METAL PRIMER [215] HARDENER

**Company Name**

ITW POLYMERS AND FLUIDS (ABN 63 004 235 063)

**Address**

100 Hassall Street Wetherill Park  
NSW 2164 Australia

**Telephone/Fax Number**

Tel: +61 2 9757 8800

Fax: +61 2 9757 3855

**Emergency phone number**

1800 385 556 / 0438 465 960

**Emergency Contact Name**

(02) 9652-1713 A/HRS

**Recommended use of the chemical and restrictions on use**

Hardener or Part B of a 2 pack

epoxy coating system

Use according to manufacturer's directions.

Requires that the two parts be mixed by hand or mixer before use, in accordance with manufacturers directions. Mix only as much as is required. Do not return the mixed material to the original containers

The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.

**Additional Information**

Synonyms: Not Available

Proper shipping name: PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)

Other means of identification: Not Available

### 2. HAZARD IDENTIFICATION

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**GHS classification of the substance/mixture**

Carcinogenicity: Category 2

Eye Damage/Irritation: Category 2A

Flammable Liquids: Category 3

Hazardous to the Aquatic Environment - Acute Hazard: Category 2

Hazardous to the Aquatic Environment - Long-Term Hazard: Category 2

Sensitization - Skin: Category 1

Skin Corrosion/Irritation: Category 2

STOT Repeated Exposure: Category 2

Toxic to Reproduction: Category 2

**Signal Word (s)**

WARNING

### Hazard Statement (s)

H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.  
H361 Suspected of damaging fertility or the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

### Precautionary Statement (s)

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read label before use.

### Pictogram (s)

Flame, Exclamation mark, Health hazard, Environment



### Precautionary statement – Prevention

P201 Obtain special instructions before use.

### Precautionary statement – Response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370+P378 In case of fire: Use for extinction.

### Precautionary statement – Storage

P403+P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

### Precautionary statement – Disposal

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Composition, information on ingredients

Substances

See section below for composition of Mixtures

### Ingredients

Name	CAS	Proportion
Mica	12001-26-2	30-45 %w
Silica crystalline - quartz	14808-60-7	10-20 %w
Aliphatic polyamine	Not Available	1-10 %w
Ethylbenzene	100-41-4	1-5 %w
1,2-Cyclohexanediamine	694-83-7	1-5 %w
Silica amorphous	7631-86-9	1-5 %w
Toluene	108-88-3	1-5 %w
Xylene	1330-20-7	1-5 %w
Propylene glycol monomethyl ether acetate, alpha-isomer	108-65-6	1-5 %w

## 4. FIRST-AID MEASURES

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### Inhalation

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.

### Ingestion

If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

If swallowed do NOT induce vomiting.

If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

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 casualty can comfortably drink.

Seek medical advice.

Avoid giving milk or oils.

Avoid giving alcohol.

### Skin

If skin contact occurs:

Immediately remove all contaminated clothing, including footwear.

Flush skin and hair with running water (and soap if available).

Seek medical attention in event of irritation.

### Eye contact

If this product comes in contact with the eyes:

Wash out immediately with fresh running water.

Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

Seek medical attention without delay; if pain persists or recurs seek medical attention.

Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### Indication of immediate medical attention and special treatment needed if necessary

Treat symptomatically.

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

Following acute or short term repeated exposures to toluene:

Toluene is absorbed across the alveolar barrier, the blood/air mixture being 11.2/15.6 (at 37 degrees C.) The concentration of toluene, in expired breath, is of the order of 18 ppm following sustained exposure to 100 ppm. The tissue/blood proportion is 1/3 except in adipose where the proportion is 8/10.

Metabolism by microsomal mono-oxygenation, results in the production of hippuric acid. This may be detected in the urine in amounts between 0.5 and 2.5 g/24 hr which represents, on average 0.8 gm/gm of creatinine. The biological half-life of hippuric acid is in the order of 1-2 hours.

Primary threat to life from ingestion and/or inhalation is respiratory failure.

Patients should be quickly evaluated for signs of respiratory distress (eg cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen.

Patients with inadequate tidal volumes or poor arterial blood gases ( $pO_2 < 50$  mm Hg or  $pCO_2 > 50$  mm Hg) should be intubated.

Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial damage has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.

A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.

Epinephrine (adrenaline) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a

second choice.

Lavage is indicated in patients who require decontamination; ensure use.

#### BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant / Index / Sampling Time / Comments

o-Cresol in urine 0.5 mg/L End of shift B

Hippuric acid in urine 1.6 g/g creatinine End of shift B, NS

Toluene in blood 0.05 mg/L Prior to last shift of workweek

NS: Non-specific determinant; also observed after exposure to other material

B: Background levels occur in specimens collected from subjects NOT exposed

## 5. FIRE-FIGHTING MEASURES

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### Suitable Extinguishing Media

Foam.

Dry chemical powder.

BCF (where regulations permit).

Carbon dioxide.

### Specific Hazards Arising From The Chemical

Fire Incompatibility

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

### Hazchem Code

•3Y

### Decomposition Temperature

Not Available

### Other Information

Advice for firefighters

Fire Fighting

Alert Fire Brigade and tell them location and nature of hazard.

May be violently or explosively reactive.

Wear breathing apparatus plus protective gloves.

Prevent, by any means available, spillage from entering drains or water course.

Fire/Explosion Hazard

Liquid and vapour are flammable.

Moderate fire hazard when exposed to heat or flame.

Vapour forms an explosive mixture with air.

Moderate explosion hazard when exposed to heat or flame.

Combustion products include:

carbon monoxide (CO)

carbon dioxide (CO<sub>2</sub>)

nitrogen oxides (NO<sub>x</sub>)

other pyrolysis products typical of burning organic material.

Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

## 6. ACCIDENTAL RELEASE MEASURES

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### Clean-up Methods - Small Spillages

Remove all ignition sources.

Clean up all spills immediately.

Avoid breathing vapours and contact with skin and eyes.

Control personal contact with the substance, by using protective equipment.

### Clean-up Methods - Large Spillages

Clear area of personnel and move upwind.

Alert Fire Brigade and tell them location and nature of hazard.

May be violently or explosively reactive.

Wear breathing apparatus plus protective gloves.

#### Other Information

Personal Protective Equipment advice is contained in Section 8(Exposure Controls/Personal Protection) of the SDS.

## 7. HANDLING AND STORAGE

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### Precautions for Safe Handling

Safe handling

Containers, even those that have been emptied, may contain explosive vapours.

Do NOT cut, drill, grind, weld or perform similar operations on or near containers.

Contains low boiling substance:

Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.

Check for bulging containers.

Vent periodically

Always release caps or seals slowly to ensure slow dissipation of vapours

Electrostatic discharge may be generated during pumping - this may result in fire.

Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 1$  m/sec until fill pipe submerged to twice its diameter, then  $\leq 7$  m/sec).

Avoid splash filling.

DO NOT use aluminium, galvanised or tin-plated containers

DO NOT USE brass or copper containers / stirrers

Avoid all personal contact, including inhalation.

Wear protective clothing when risk of overexposure occurs.

Use in a well-ventilated area.

Prevent concentration in hollows and sumps.

DO NOT allow clothing wet with material to stay in contact with skin

Other information

Store below 38 deg. C.

Store in original containers in approved flammable liquid storage area.

Store away from incompatible materials in a cool, dry, well-ventilated area.

DO NOT store in pits, depressions, basements or areas where vapours may be trapped.

No smoking, naked lights, heat or ignition sources.

### Conditions for safe storage, including any incompatibilities

Suitable container

Packing as supplied by manufacturer.

Plastic containers may only be used if approved for flammable liquid.

Check that containers are clearly labelled and free from leaks.

For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.

For materials with a viscosity of at least 2680 cSt. (23 deg. C)

For manufactured product having a viscosity of at least 250 cSt.

Storage incompatibility

Avoid reaction with oxidising agents

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Occupational exposure limit values

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source / Ingredient / Material name / TWA / STEL / Peak / Notes

Australia Exposure Standards mica Mica 2.5 mg/m<sup>3</sup> Not Available Not Available Not Available

Australia Exposure Standards silica crystalline - quartz Silica - Crystalline Not Available Not Available Not Available Not Available

Australia Exposure Standards silica crystalline - quartz Quartz (respirable dust) 0.1 mg/m<sup>3</sup> Not Available Not Available Not Available

Australia Exposure Standards silica crystalline - quartz Quartz (respirable dust) 0.1 mg/m<sup>3</sup> Not Available Not Available Not Available

Australia Exposure Standards ethylbenzene Ethyl benzene 434 mg/m3 / 100 ppm 543 mg/m3 / 125 ppm Not Available Not Available

Australia Exposure Standards silica amorphous Fumed silica (respirable dust) 2 mg/m3 Not Available Not Available Not available

Australia Exposure Standards silica amorphous Fumed silica (respirable dust) 2 mg/m3 Not Available Not Available Not Available

Australia Exposure Standards silica amorphous Precipitated silica 10 mg/m3 Not Available Not Available Not Available

Australia Exposure Standards silica amorphous Precipitated silica 10 mg/m3 Not Available Not Available Not Available

Australia Exposure Standards silica amorphous Silica gel 10 mg/m3 Not Available Not Available Not Available

Australia Exposure Standards silica amorphous Silica gel 10 mg/m3 Not Available Not Available Not Available

Australia Exposure Standards silica amorphous Diatomaceous earth (uncalcined) 10 mg/m3 Not Available Not Available Not Available

Australia Exposure Standards silica amorphous Diatomaceous earth (uncalcined) 10 mg/m3 Not Available Not Available Not Available

Australia Exposure Standards silica amorphous Silica, fused Not Available Not Available Not Available Not Available

Australia Exposure Standards toluene Toluene 191 mg/m3 / 50 ppm 574 mg/m3 / 150 ppm Not Available Not Available

Australia Exposure Standards propylene glycol monomethyl ether acetate, alpha-isomer 1-Methoxy-2-propanol acetate 274 mg/m3 / 50 ppm 548 mg/m3 / 100 ppm Not Available Not Available

#### EMERGENCY LIMITS

Ingredient / Material name / TEEL-1 / TEEL-2 / TEEL-3

mica Mica; (mica silicates) 9 mg/m3 99 mg/m3 590 mg/m3

silica crystalline - quartz Silica, crystalline-quartz; (Silicon dioxide) 0.075 mg/m3 33 mg/m3 200 mg/m3

ethylbenzene Ethyl benzene Not Available Not Available Not Available

1,2-cyclohexanediamine Cyclohexanediamine, 1,2- 2.1 mg/m3 23 mg/m3 140 mg/m3

silica amorphous Silica gel, amorphous synthetic 18 mg/m3 200 mg/m3 1,200 mg/m3

silica amorphous Silica, amorphous fumed 18 mg/m3 100 mg/m3 630 mg/m3

silica amorphous Siloxanes and silicones, dimethyl, reaction products with silica; (Hydrophobic silicon dioxide, amorphous) 120 mg/m3 1,300 mg/m3 7,900 mg/m3

silica amorphous Silica, amorphous fume 45 mg/m3 500 mg/m3 3,000 mg/m3

silica amorphous Silica amorphous hydrated 18 mg/m3 220 mg/m3 1,300 mg/m3

toluene Toluene Not Available Not Available Not Available

xylene Xylenes Not Available Not Available Not Available

propylene glycol monomethyl ether acetate, alpha-isomer Propylene glycol monomethyl ether acetate, alpha-isomer; (1-Methoxypropyl-2-acetate) Not Available Not Available

Available Not Available

propylene glycol monomethyl ether acetate, alpha-isomer Propylene glycol monomethyl ether acetate, beta-isomer; (2-Methoxypropyl-1-acetate) Not Available Not Available

Available Not Available

Ingredient / Original IDLH / Revised IDLH

mica N.E. mg/m3 / N.E. ppm 1,500 mg/m3

silica crystalline - quartz N.E. mg/m3 / N.E. ppm 50 mg/m3

aliphatic polyamine Not Available Not Available

ethylbenzene 2,000 ppm 800 [LEL] ppm

1,2-cyclohexanediamine Not Available Not Available

silica amorphous N.E. mg/m3 / N.E. ppm 3,000 mg/m3

toluene 2,000 ppm 500 ppm

xylene 1,000 ppm 900 ppm

propylene glycol monomethyl ether acetate, alpha-isomer Not Available Not Available

#### Other Exposure Information

Skin protection: See Hand protection below

#### Appropriate Engineering Controls

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

The basic types of engineering controls are:

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

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

### **Respiratory Protection**

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

### **Eye Protection**

Safety glasses with side shields.

Chemical goggles.

Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

### **Hand Protection**

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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

Personal hygiene is a key element of effective hand care.

When handling liquid-grade epoxy resins wear chemically protective gloves (e.g nitrile or nitrile-butatoluene rubber), boots and aprons.

DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin).

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

Wear chemical protective gloves, e.g. PVC.

Wear safety footwear or safety gumboots, e.g. Rubber

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.

### **Thermal Hazards**

Not Available

### **Body Protection**

See Other protection below

### **Other Information**

Other protection

Overalls.

PVC Apron.

PVC protective suit may be required if exposure severe.

Eyewash unit.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

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### **Form**

Liquid

### **Appearance**

Opaque viscous flammable liquid with a solvent odour; does not mix with water.

### **Odour**

Not Available

### **Decomposition Temperature**

Not Available

### **Solubility in Water**

Immiscible

### **pH**

pH (as supplied): Not Applicable

pH as a solution (1%): Not Applicable

### **Vapour Pressure**

Not Available

**Vapour Density (Air=1)**

>1

**Evaporation Rate**

<1 Ether=1

**Physical State**

Liquid

**Odour Threshold**

Not Available

**Viscosity**

Not Available

**Volatile Component**

20 (%vol)

**Partition Coefficient: n-octanol/water**

Not Available

**Surface tension**

Not Available

**Flash Point**

24°C (Setaflash)

**Flammability**

Flammable.

**Auto-Ignition Temperature**

Not Available

**Explosion Limit - Upper**

7.1%

**Explosion Limit - Lower**

1.0%

**Explosion Properties**

Not Available

**Molecular Weight**

Not Applicable

**Oxidising Properties**

Not Available

**Initial boiling point and boiling range**

11-148 °C

**Relative density**

(Water = 1) 1.56

**Melting/Freezing Point**

Not Available

**Other Information**

Taste: Not Available

Gas group: Not Available

VOC g/L: Not Available

## 10. STABILITY AND REACTIVITY

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**Reactivity**

See section 7 (Handling and Storage)

**Chemical Stability**

Unstable in the presence of incompatible materials.

Product is considered stable.

Hazardous polymerisation will not occur.



**Conditions to Avoid**

See section 7(Handling and Storage)

**Incompatible materials**

See section 7(Handling and Storage)

**Hazardous Decomposition Products**

See section 5(Fire Fighting Measures)

**Possibility of hazardous reactions**

See section 7(Handling and Storage)

## 11. TOXICOLOGICAL INFORMATION

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**Ingestion**

Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)

The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.

**Inhalation**

There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Inhalation hazard is increased at higher temperatures.

Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.

If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

Effects on lungs are significantly enhanced in the presence of respirable particles.

Inhalation of amine vapours may cause irritation of the mucous membrane 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 aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.

**Skin**

The material may accentuate any pre-existing dermatitis condition

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

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

The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time.

Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.

**Eye**

Vapours of volatile amines irritate the eyes, causing excessive secretion of tears, inflammation of the conjunctiva and slight swelling of the cornea, resulting in "halos" 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.

The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.

There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.

**Skin corrosion/irritation**

Data available to make classification

**Serious eye damage/irritation**

Data available to make classification

**Mutagenicity**

Data Not Available to make classification

**Respiratory sensitisation**

Data available to make classification

**Skin Sensitisation**

Data available to make classification

**Carcinogenicity**

Data available to make classification

**Reproductive Toxicity**

Data available to make classification

**STOT-single exposure**

Data Not Available to make classification

**STOT-repeated exposure**

Data available to make classification

**Aspiration Hazard**

Data Not Available to make classification

**Chronic Effects**

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

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

There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer.

There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby.

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

Long term exposure to vermiculite usually causes few hazards in low concentration and does not cause cancer. Over years, scarring of the lungs may develop; however tuberculosis does not occur.

Overexposure to the breathable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function.

Chronic symptoms may include decreased vital lung capacity and chest infections. Repeated exposures in the workplace to high levels of fine-divided dusts may produce a condition known as pneumoconiosis, which is the lodgement of any inhaled dusts in the lung, irrespective of the effect. This is particularly true when a significant number of particles less than 0.5 microns (1/50000 inch) are present.

**Other Information**

Epirez Epoxy Mastic Metal Primer [215] Hardener

TOXICITY: Not Available

IRRITATION: Not Available

mica

TOXICITY: Not Available

IRRITATION: Not Available

silica crystalline - quartz

TOXICITY: Not Available

IRRITATION: Not Available

ethylbenzene

TOXICITY:

Dermal (rabbit) LD50: >5000 mg/kg[2]

Inhalation (mouse) LC50: 0.01775 mg/L/2H[2]

Oral (rat) LD50: 3500 mg/kg[2]

IRRITATION:

Eye (rabbit): 500 mg - SEVERE

Skin (rabbit): 15 mg/24h mild

1,2-cyclohexanediamine

TOXICITY: Oral (rat) LD50: 1000 mg/kg[2]

IRRITATION: Skin (rabbit): 500 mg/24h mod.

silica amorphous

TOXICITY:

Dermal (rabbit) LD50: >5000 mg/kg[2]

Inhalation (rat) LC50: >0.139 mg/l/14h\*\*[Grace][2]

Oral (rat) LD50: 3160 mg/kg[2]

IRRITATION:

Eye (rabbit): non-irritating \*

Skin (rabbit): non-irritating \*

toluene

TOXICITY:

Dermal (rabbit) LD50: 12124 mg/kg[2]

Inhalation (rat) LC50: 49 mg/L/4H[2]

Oral (rat) LD50: 636 mg/kg[2]

IRRITATION:

Eye (rabbit): 2mg/24h - SEVERE

Eye (rabbit):0.87 mg - mild

Eye (rabbit):100 mg/30sec - mild

Skin (rabbit):20 mg/24h-moderate

Skin (rabbit):500 mg - moderate

xylene

TOXICITY:

Dermal (rabbit) LD50: >1700 mg/kg[2]

Inhalation (rat) LC50: 4988.596509405 mg/L/4h[2]

Oral (rat) LD50: 4300 mg/kg[2]

IRRITATION:

Eye (human): 200 ppm irritant

Eye (rabbit): 5 mg/24h SEVERE

Eye (rabbit): 87 mg mild

Skin (rabbit):500 mg/24h moderate

propylene glycol monomethyl ether acetate, alpha-isomer

TOXICITY:

dermal (rat) LD50: >2000 mg/kg[1]

Inhalation (rat) LC50: 6502.63555000942 mg/L/6h[2]

Oral (rat) LD50: >5000 mg/kg[1]

IRRITATION: Not Available

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

MICA

No significant acute toxicological data identified in literature search.

SILICA CRYSTALLINE - QUARTZ

WARNING: For inhalation exposure ONLY: This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS

The International Agency for Research on Cancer (IARC) has classified occupational exposures to respirable (<5 um) crystalline silica as being carcinogenic to humans . This classification is based on what IARC considered sufficient evidence from epidemiological studies of humans for the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Crystalline silica is also known to cause silicosis, a non-cancerous lung disease.

Intermittent exposure produces; focal fibrosis, (pneumoconiosis), cough, dyspnoea, liver tumours.

ETHYLBENZENE

Ethylbenzene is readily absorbed when inhaled, swallowed or in contact with the skin. It is distributed throughout the body, and passed out through urine. It may irritate the skin, eyes and may cause hearing loss if exposed to high doses. Long Term exposure may cause damage to the kidney, liver and lungs, including a tendency to cancer formation, according to animal testing.

NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.

WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.

Liver changes, uterine tract, effects on fertility, foetotoxicity, specific developmental abnormalities (musculoskeletal system) recorded.

#### 1,2-CYCLOHEXANEDIAMINE

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.

"Amine heads" possess ammoniacal odour. They are toxic via the acute oral and inhalation routes. They are severe irritants or corrosive to the skin and eye following direct application to the skin or eye. Repeated inhalation produces irritation of the nose with accompanying tissue changes.

#### SILICA AMORPHOUS

For silica amorphous:

When experimental animals inhale synthetic amorphous silica (SAS) dust, it dissolves in the lung fluid and is rapidly eliminated. If swallowed, the vast majority of SAS is excreted in the faeces and there is little accumulation in the body. Following absorption across the gut, SAS is eliminated via urine without modification in animals and humans.

SAS is not expected to be broken down (metabolised) in mammals.

Reports indicate high/prolonged exposures to amorphous silicas induced lung fibrosis in experimental animals; in some experiments these effects were reversible. [PATTYS]

#### TOLUENE

For toluene:

Acute toxicity: Humans exposed to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis (sleepiness) and death. When inhaled or swallowed, toluene can cause severe central nervous system depression, and in large doses has a narcotic effect. 60mL has caused death. Death of heart muscle fibres, liver swelling, congestion and bleeding of the lungs and kidney injury were all found on autopsy.

#### XYLENE

Reproductive effector in rats

#### PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER

For propylene glycol ethers (PGEs):

Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA) and tripropylene glycol methyl ether (TPM).

Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on the reproductive organs, the developing embryo and foetus, blood or thymus gland, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces and alkoxyacetic acid.

Animal testing shows that high concentrations (for example, 0.5%) are associated with birth defects but lower exposures have not been shown to cause adverse effects.

The beta isomer of PGMEA comprises only 10% of the commercial material; the remaining 90% is alpha isomer.

Hazard appears low, but emphasizes the need for care in handling this chemical.

A BASF report (in ECETOC ) showed that inhalation exposure to 545 ppm PGMEA (beta isomer) was associated with a teratogenic response in rabbits; but exposure to 145 ppm and 36 ppm had no adverse effects. The beta isomer of PGMEA comprises only 10% of the commercial material, the remaining 90% is alpha isomer. Hazard appears low but emphasizes the need for care in handling this chemical. [I.C.I] \*Shin-Etsu SDS

#### ETHYLBENZENE & XYLENE

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

#### ETHYLBENZENE & 1,2-CYCLOHEXANEDIAMINE & TOLUENE & XYLENE

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

#### SILICA AMORPHOUS & XYLENE

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

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

Acute Toxicity

Data Not Available to make classification

## 12. ECOLOGICAL INFORMATION

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### Ecological information

Toxicity

NOT AVAILABLE

Ingredient / Endpoint / Test Duration (hr) / Effect / Value / Species / BCF

Epirez Epoxy Mastic Metal Primer [215] Hardener Not Available Not Available Not Available Not Available Not Available Not Available

mica Not Available Not Available Not Available Not Available Not Available Not Available

silica crystalline - quartz Not Available Not Available Not Available Not Available Not Available Not Available

ethylbenzene Not Available Not Available Not Available Not Available Not Available Not Available

1,2-cyclohexanediamine Not Available Not Available Not Available Not Available Not Available Not Available

silica amorphous Not Available Not Available Not Available Not Available Not Available Not Available

toluene Not Available Not Available Not Available Not Available Not Available Not Available

xylene Not Available Not Available Not Available Not Available Not Available Not Available

propylene glycol monomethyl ether acetate, alpha-isomer Not Available Not Available Not Available Not Available Not Available Not Available

Drinking Water Standards: hydrocarbon total: 10 ug/l (UK max.).

For Hydrocarbons: log Kow 1. BCF~10.

For Aromatics: log Kow 2-3.

BCF 20-200.

DO NOT discharge into sewer or waterways.

### Persistence and degradability

Ingredient / Persistence: Water/Soil / Persistence: Air

ethylbenzene HIGH (Half-life = 228 days) LOW (Half-life = 3.57 days)

1,2-cyclohexanediamine LOW LOW

silica amorphous LOW LOW

toluene LOW (Half-life = 28 days) LOW (Half-life = 4.33 days)

xylene HIGH (Half-life = 360 days) LOW (Half-life = 1.83 days)

propylene glycol monomethyl ether acetate, alpha-isomer LOW LOW

### Mobility

Mobility in soil

Ingredient / Mobility

ethylbenzene LOW (KOC = 517.8)

1,2-cyclohexanediamine LOW (KOC = 10.06)

silica amorphous LOW (KOC = 23.74)

toluene LOW (KOC = 268)

propylene glycol monomethyl ether acetate, alpha-isomer HIGH (KOC = 1.838)

### Bioaccumulative Potential

Ingredient / Bioaccumulation

ethylbenzene LOW (BCF = 79.43)

1,2-cyclohexanediamine LOW (LogKOW = 0.0866)

silica amorphous LOW (LogKOW = 0.5294)

toluene LOW (BCF = 90)

xylene MEDIUM (BCF = 740)

propylene glycol monomethyl ether acetate, alpha-isomer LOW (LogKOW = 0.56)

### 13. DISPOSAL CONSIDERATIONS

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#### Waste Disposal

Product / Packaging disposal

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.

Dispose of 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).

Decontaminate empty containers.

### 14. TRANSPORT INFORMATION

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#### Transport Information

Labels Required

Marine Pollutant

HAZCHEM: •3Y

Land transport (ADG)

UN number: 1263

Packing group: III

UN proper shipping name: PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)

Environmental hazard: No relevant data

Transport hazard class(es)

Class: 3

Subrisk: Not Applicable

Special precautions for user

Special provisions: 163 223 367

Limited quantity: 5 L

Air transport (ICAO-IATA / DGR)

UN number: 1263

Packing group: III

UN proper shipping name: Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds)

Environmental hazard: No relevant data

Transport hazard class(es)

ICAO/IATA Class: 3

ICAO / IATA Subrisk: Not Applicable

ERG Code: 3L

Special precautions for user

Special provisions: A3 A72 A192

Cargo Only Packing Instructions: 366

Cargo Only Maximum Qty / Pack: 220 L

Passenger and Cargo Packing Instructions: 355

Passenger and Cargo Maximum Qty / Pack: 60 L

Passenger and Cargo Limited Quantity Packing Instructions: Y344

Passenger and Cargo Limited Maximum Qty / Pack: 10 L

Sea transport (IMDG-Code / GGVSee)

UN number: 1263

Packing group: III

UN proper shipping name: PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)

Environmental hazard: Marine Pollutant

Transport hazard class(es)

IMDG Class: 3  
IMDG Subrisk: Not Applicable  
Special precautions for user  
EMS Number: F-E , S-E  
Special provisions: 163 223 367 955  
Limited Quantities: 5 L

Transport in bulk according to Annex II of MARPOL and the IBC code  
Source / Ingredient / Pollution Category  
Epirez Epoxy Mastic Metal Primer [215] Hardener

**U.N. Number**

1263

**UN proper shipping name**

PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)

**Transport hazard class(es)**

3

**Packing Group**

III

**Hazchem Code**

•3Y

**IERG Number**

14

## 15. REGULATORY INFORMATION

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**Regulatory information**

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

MICA(12001-26-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

SILICA CRYSTALLINE - QUARTZ(14808-60-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

ETHYLBENZENE(100-41-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

1,2-CYCLOHEXANEDIAMINE(694-83-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

SILICA AMORPHOUS(7631-86-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

TOLUENE(108-88-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

XYLENE(1330-20-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs  
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER(108-65-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS  
Australia Exposure Standards  
Australia Hazardous Substances Information System - Consolidated Lists  
Australia Inventory of Chemical Substances (AICS)

**National Inventory / Status**

Australia - AICS / Y

Canada - DSL / Y

Canada - NDSL / N (toluene; propylene glycol monomethyl ether acetate, alpha-isomer; 1,2-cyclohexanediamine; xylene; ethylbenzene; silica crystalline - quartz; mica)

China - IECSC / Y

Europe - EINEC / ELINCS / NLP / N (mica)

Japan - ENCS / N (silica amorphous; silica crystalline - quartz; mica)

Korea - KECI / Y

New Zealand - NZIoC / Y

Philippines - PICCS / Y

USA - TSCA / N (mica)

**Legend:**

Y = All ingredients are on the inventory

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

**Poisons Schedule**

S5

**Other Information**

Ingredients with multiple cas numbers

Name/ CAS No

mica 12001-26-2, 129899-84-9, 61076-94-6

silica crystalline - quartz 14808-60-7, 122304-48-7, 122304-49-8, 12425-26-2, 1317-79-9, 70594-95-5, 87347-84-0, 308075-07-2

1,2-cyclohexanediamine 694-83-7, 20439-47-8, 21436-03-3

silica amorphous 7631-86-9, 112945-52-5, 67762-90-7, 68611-44-9, 68909-20-6, 112926-00-8, 61790-53-2, 60676-86-0, 91053-39-3, 69012-64-2, 844491-94-7

propylene glycol monomethyl ether acetate, alpha-isomer 108-65-6, 84540-57-8, 142300-82-1

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## 16. OTHER INFORMATION

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### END OF SDS

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