Steel Reinforced Epoxy Resin - Twin Tube - Part A

SECTION 1: Identification

Product identifier

Product name: Steel Reinforced Epoxy Resin - Twin Tube - Part A
Product code: 8265AUS, 8272AUS, 8281AUS, 8276AUS

Recommended use of the product and restriction on use

Relevant identified uses: Adhesive
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:	**Supplier:**
United States	**Australia**
J-B Weld Company, LLC	HPP Lunds
400 CMH Road	1/195 Jackson Rd
Sulphur Springs, TX 75482	Sunnybank Hills, Qld 4109
903-885-7696	1300-306-781

Emergency telephone number:

Australia
InfoTrac
1300-366-961 (24 hours)

SECTION 2: Hazard(s) identification

GHS classification:

Skin irritation, category 2
Eye irritation, category 2A
Skin sensitization, category 1

Label elements

Hazard pictograms:

Signal word: Warning

Hazard statements:

H315 Causes skin irritation
H319 Causes serious eye irritation
H317 May cause an allergic skin reaction

Precautionary statements:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray
P264 Wash skin thoroughly after handling
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear face protection
P321 Specific treatment (see supplemental first aid instructions on this label)

P302+P352 IF ON SKIN: Wash with plenty of soap and water
P362 Take off contaminated clothing and wash before reuse
P333+P313 If skin irritation or rash occurs: Get medical advice/attention
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention
P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified:

None

SECTION 3: Composition and information on ingredients

Identification	Name	Weight %
CAS number: 1317-65-3	Limestone	30-60
CAS number: 25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	10-30
CAS number: 14807-96-6	Talc (non-asbestiform)	<10
CAS number: 9003-36-5	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	<5
CAS number: 2425-79-8	1,4-bis(2,3 epoxypropoxy)butane	<5
CAS number: 65997-17-3	Glass, oxide, chemicals	<5

Additional Information:

CAS # 65997-17-3 is classified as a carcinogen in its inhalable form. Since the fiberglass powder in this product is not inhalable, the product itself is not classified as a carcinogen in the form presented.

SECTION 4: First aid measures

Description of first aid measures

General notes:

Show this Safety Data Sheet to the doctor in attendance.

After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

After skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After eye contact:

Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if

present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

After swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Skin contact may result in redness, pain, burning and inflammation.

Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing.

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time).

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Fire fighting measures

Extinguishing media

Suitable extinguishing media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable extinguishing media:

Do not use water jet.

Specific hazards during fire-fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage precautions

Precautions for safe handling:

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

SECTION 8: Exposure controls and personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Australia	Limestone	1317-65-3	8-Hour TWA: 10 mg/m^3
	Talc (non-asbestiform)	14807-96-6	TWA: 2.5 mg/m^3 (containing no asbestos fibers)
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Superfine glass fiber])
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Synthetic mineral fibers])
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Glasswool including superfine glass fiber])
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Rockwool])
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Ceramic fibers])

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal protection equipment

Eye and face protection:

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Off White - Paste
Odor	Ethereal (slight)
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Closed cup: >93.3°C (>199.9°F) [Setaflash.] [Product does not sustain combustion.]
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	1.927
Solubilities	Insoluble in the following materials: cold water and hot water.

Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	>220 °C (>428 °F)
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

VOC Content	<1%
Flammability	Non-flammable in the presence of the following materials or conditions: heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.

SECTION 10: Stability and reactivity

Reactivity:
Not reactive under recommended handling and storage conditions.

Chemical stability:
Stable under recommended handling and storage conditions.

Possibility of hazardous reactions:
Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to avoid:
Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible materials:
None known.

Hazardous decomposition products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Hazard information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	oral	LD50 Rat: > 2000 mg/kg
Talc (non-asbestiform)	oral	LD50 Rat: >5000 mg/kg
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	oral	LD50 Rat: >2000 mg/kg

Name	Route	Result
1,4-bis(2,3 epoxypropoxy)butane	dermal	LD50 Rabbit: 1130 mg/kg
	oral	LD50 Rat: 1134 mg/kg

Skin corrosion/irritation

Assessment:

Causes skin irritation.

Product data:

No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Causes skin irritation.
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Causes skin irritation.
1,4-bis(2,3 epoxypropoxy)butane	Causes skin irritation.

Serious eye damage/irritation

Assessment:

Causes serious eye irritation.

Product data:

No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	Causes serious eye irritation.
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Causes serious eye irritation.
1,4-bis(2,3 epoxypropoxy)butane	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction.

Product data:

No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	May cause an allergic skin reaction.

Name	Result
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	May cause an allergic skin reaction.
1,4-bis(2,3 epoxypropoxy)butane	May cause an allergic skin reaction.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Species	Result
Talc (non-asbestiform)		Talc containing asbestos is carcinogenic to humans.
Glass, oxide, chemicals	Not applicable	May cause cancer via inhalation.

International Agency for Research on Cancer (IARC):

Name	Classification
Talc (non-asbestiform)	Group 3
Glass, oxide, chemicals	Group 2B

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:
Skin and eye contact.

Symptoms related to the physical, chemical and toxicological characteristics:
Refer to Section 4 of this SDS.

Other information:
No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	EC50 Scenedesmus capricornutum: 9 mg/L (48 hr)
	EC50 Daphnia magna: 1 mg/L (48 hr)
1,4-bis(2,3 epoxypropoxy)butane	LC50 Danio rerio: 19.8 mg/L (96 hours)
	EC50 Daphnia magna: 75 mg/L (24 hours)
	ErC50 Pseudokirchnerella subcapitata: 160 mg/L (72 hours)

Chronic (long-term) toxicity

Assessment:
Toxic to aquatic life with long lasting effects.

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	No biodegradation observed. However, significant hydrolysis occurred eliminating 82 % over 28 days.
Talc (non-asbestiform)	Biodegradation is not applicable to inorganic substances.

Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Talc (non-asbestiform)	No potential for bioaccumulation.
1,4-bis(2,3 epoxypropoxy)butane	Log Kow: -0.15

Mobility in soil

Product data: No data available.

Substance data:

Steel Reinforced Epoxy Resin - Twin Tube - Part A

Name	Result
1,4-bis(2,3 epoxypropoxy)butane	Mobile (Log Koc: 1.1)

Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Talc (non-asbestiform)	The substance is inorganic, and as such the criteria for PBT are not applicable.

vPvB assessment:

Talc (non-asbestiform)	The substance is inorganic, and as such the criteria for vPvB are not applicable.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport information

Australian Dangerous Goods (ADG)

UN number	UN3082
UN proper shipping name	Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Contains Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran)
Special precautions for user	None
Hazchem/Emergency Action Code	3Z
Additional Information	This product is being shipped as a limited quantity, packaged in quantities below 5 L, in accordance with the ADG Code.

International Maritime Dangerous Goods (IMDG)

UN number	UN3082

UN proper shipping name	Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Contains Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran)
Special precautions for user	None
EMS number	F-A, S-F
Stowage category	A
Excepted quantities	E1
Limited quantity	5 L
Additional Information	This product is being shipped as a limited quantity, packaged in quantities below 5 L, in accordance with the IMDG Code.

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN3082
UN proper shipping name	Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Contains Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran)
Special precautions for user	None
ERG code	9 L
Excepted quantities	E1
Passenger and cargo	450 L
Cargo aircraft only	450 L
Limited quantity	30 Kg G
Additional Information	This product is being shipped as a limited quantity, packaged in quantities below 30 Kg G, in accordance with the IATA Dangerous Goods Regulations.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

Australia regulations

Australian Inventory of Chemical Substances (AICS): All ingredients are listed or exempt.

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This SDS was authored in accordance with the Australian Work Health and Safety Regulations and supplemented by the Australian Code of Practice on the Preparation of Safety Data Sheets for Hazardous Chemicals. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

Initial preparation date: 01.25.2017
Revision date: 7.27/2020

Revision Notes:

Revision Date	Notes
2020-07-27	Composition change; aquatic hazards not communicated in Section 2.

Additional information:

Version 2

End of Safety Data Sheet

Steel Reinforced Epoxy Hardener - Slow Cure - Twin Tube- Part B

SECTION 1: Identification

Product identifier

Product name: Steel Reinforced Epoxy Hardener - Slow Cure - Twin Tube- Part B

Product code: 8265AUS, 8272AUS, 8281AUS

Recommended use of the product and restriction on use

Relevant identified uses: Adhesive

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:	**Supplier:**
United States	**Australia**
J-B Weld Company, LLC	HPP Lunds
400 CMH Road	1/195 Jackson Rd
Sulphur Springs, TX 75482	Sunnybank Hills, Qld 4109
903-885-7696	1300-306-781

Emergency telephone number:

Australia

InfoTrac

1300-366-961 (24 hours)

SECTION 2: Hazard(s) identification

GHS classification:

Serious eye damage, category 1

Skin sensitization, category 1

Skin irritation, category 2

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H318 Causes serious eye damage

H317 May cause an allergic skin reaction

H315 Causes skin irritation

Precautionary statements:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray

P264 Wash skin thoroughly after handling

P272 Contaminated work clothing should not be allowed out of the workplace

P280 Wear face protection

P321 Specific treatment (see supplemental first aid instructions on this label)
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 Immediately call a POISON CENTER or doctor/physician
P302+P352 IF ON SKIN: Wash with plenty of soap and water
P362 Take off contaminated clothing and wash before reuse
P333+P313 If skin irritation or rash occurs: Get medical advice/attention
P501 Dispose of contents/container in accordance with local regulations

Hazards not otherwise classified:

None

SECTION 3: Composition and information on ingredients

Identification	Name	Weight %
CAS number: 7727-43-7	Barium Sulfate, Natural	10-30
CAS number: 68410-23-1	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	10-30
CAS number: 135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	<10
CAS number: 68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine	<10
CAS number: 14807-96-6	Talc (non-asbestiform)	<10
CAS number: 65997-17-3	Glass, oxide, chemicals	<5
CAS number: 13463-67-7	Titanium Dioxide	<2
CAS number: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	<2
CAS number: 100-51-6	Benzyl Alcohol	<1
CAS number: 112-57-2	3,6,9-triazaundecamethylenediamine tetraethylenepentamine	<1
CAS number: 112-24-3	Triethylenetetramine	<1
CAS number: 71074-89-0	Bis[(dimethylamino)methyl]phenol	<1

Additional Information:

CAS # 65997-17-3 is classified as a carcinogen in its inhalable form. Since the fiberglass powder in this product is not inhalable, the product itself is not classified as a carcinogen in the form presented. Although this product contains Titanium Dioxide, the Titanium Dioxide is bound and the particles are not of respirable size.

SECTION 4: First aid measures

Description of first aid measures

General notes:

Show this Safety Data Sheet to the doctor in attendance.

After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

After skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After eye contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist.

After swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis.

Skin contact may result in redness, pain, burning and inflammation.

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time).

Immediate medical attention and special treatment

Specific treatment:

In case of eye contact, seek prompt medical attention while rinsing is continued.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Fire fighting measures

Extinguishing media

Suitable extinguishing media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable extinguishing media:

Do not use water jet.

Specific hazards during fire-fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage precautions

Precautions for safe handling:

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Do not get in eyes. Avoid contact with skin and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

SECTION 8: Exposure controls and personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Australia	Barium Sulfate, Natural	7727-43-7	8-Hour TWA: 10 mg/m^3

Steel Reinforced Epoxy Hardener - Slow Cure - Twin Tube- Part B

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Talc (non-asbestiform)	14807-96-6	TWA: 2.5 mg/m³ (containing no asbestos fibers)
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Superfine glass fiber])
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Synthetic mineral fibers])
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Glasswool including superfine glass fiber])
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Rockwool])
	Glass, oxide, chemicals	65997-17-3	TWA: 0.5 fibers/ml (of air [Ceramic fibers])
	Titanium Dioxide	13463-67-7	TWA: 10 mg/m³ (National Workplace OELs)

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal protection equipment

Eye and face protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	White liquid
Odor	Amine-like
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Closed cup: >93.3 °C (>199.9 °F) [Setaflash.] [Product does not sustain combustion.]
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	1.955
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	>220°C (>392°F)
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

Flammability	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
VOC Content	<1%

SECTION 10: Stability and reactivity

Reactivity:
Not reactive under recommended handling and storage conditions.

Chemical stability:
Stable under recommended handling and storage conditions.

Possibility of hazardous reactions:
Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to avoid:
Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible materials:

None known.

Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Hazard information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
Barium Sulfate, Natural	dermal	LD50 Rat: >2000 mg/kg
	oral	LD50 Rat: >5000 mg/kg
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	oral	LD50 Rat: >2000 mg/kg
	dermal	LD50 Rat: >2000 mg/kg
Copolymer of benzenamine and formaldehyde, hydrogenated	oral	LD50 Rat: 368 mg/kg
Talc (non-asbestiform)	oral	LD50 Rat: >5000 mg/kg
Titanium Dioxide	oral	LD50 Mouse: > 5000 mg/kg
	inhalation	LC50 Rat: 5.09 mg/L (4 hr)
2,4,6-tris(dimethylaminomethyl)phenol	oral	LD50 Rat: 1200 mg/kg
Benzyl Alcohol	oral	LD50 Rabbit: 1040 mg/kg
	inhalation	LC50 Rat: 4.178 mg/L (4hr)
3,6,9-triazaundecamethylenediamine tetraethylenepentamine	dermal	LD50 Rabbit: 660 mg/kg
	oral	LD50 Rat: 2100 to 3990 mg/kg
	inhalation	LC50 Rat: >0.107 mg/L (4 h (Vapor))
Triethylenetetramine	oral	LD50 Rat: 2500 to 4340 mg/kg
	dermal	LD50 Rabbit: 550 to 805 mg/kg

Skin corrosion/irritation

Assessment:

Causes skin irritation.

Product data:

Skin testing was performed per the OECD 435 methods using the Corrositex testing process, indicating the product is non-corrosive to skin.

Substance data:

Name	Result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Causes skin irritation.

Name	Result
Copolymer of benzenamine and formaldehyde, hydrogenated	Causes severe skin burns.
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	Causes skin irritation.
2,4,6-tris(dimethylaminomethyl)phenol	Causes skin irritation.
3,6,9-triazaundecamethylenediamine tetraethylenepentamine	Causes severe skin burns.
Triethylenetetramine	Corrosive to the skin.
Bis[(dimethylamino)methyl]phenol	Causes severe skin burns.

Serious eye damage/irritation

Assessment:

Causes serious eye damage.

Product data:

No data available.

Substance data:

Name	Result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Causes serious eye damage.
Copolymer of benzenamine and formaldehyde, hydrogenated	Causes serious eye damage.
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	Causes serious eye irritation.
2,4,6-tris(dimethylaminomethyl)phenol	Causes serious eye irritation.
Bis[(dimethylamino)methyl]phenol	Causes serious eye damage.

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction.

Product data:

No data available.

Substance data:

Name	Result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	May cause an allergic skin reaction.

Name	Result
Copolymer of benzenamine and formaldehyde, hydrogenated	May cause an allergic skin reaction.
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	May cause an allergic skin reaction.
3,6,9-triazaundecamethylenediamine tetraethylenepentamine	May cause an allergic skin reaction.
Triethylenetetramine	May cause an allergic skin reaction.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Species	Result
Talc (non-asbestiform)		Talc containing asbestos is carcinogenic to humans.
Glass, oxide, chemicals	Not applicable	May cause cancer via inhalation.
Titanium Dioxide	Not applicable.	Airborne, unbound particles of respirable size are known to cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Talc (non-asbestiform)	Group 3
Glass, oxide, chemicals	Group 2B
Titanium Dioxide	Group 2B

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	May cause respiratory irritation.
Bis[(dimethylamino)methyl]phenol	May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Copolymer of benzenamine and formaldehyde, hydrogenated	May cause damage to kidneys through prolonged or repeated oral exposure.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

Skin contact, Eye contact.

Symptoms related to the physical, chemical and toxicological characteristics:

Refer to Section 4 of this SDS.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	EC50 Daphnia magna: 5.8 mg/L (48 Hours)
	LC50 Zebra Fish: 7.07 mg/L (96 Hours)
Copolymer of benzenamine and formaldehyde, hydrogenated	LC50 Poecilia reticulata: 63 mg/L (96 hours)
	EC50 Daphnia magna: 15.4 mg/L (48 hours)
	EC50 Desmodesmus subspicatus: 44 mg/L (72 hours)

Chronic (long-term) toxicity

Assessment:

Harmful to aquatic life with long lasting effects

Product data: No data available.

Substance data:

Name	Result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	ErC50 Pseudokirchneriella subcapitata: 4.11 mg/L (72 Hours)
Copolymer of benzenamine and formaldehyde, hydrogenated	EC10 Desmodesmus subspicatus: 1.2 mg/L (72 hours)

Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Talc (non-asbestiform)	Biodegradation is not applicable to inorganic substances.
Titanium Dioxide	Degradation/biodegradation testing is not relevant for metals and metal compounds that are not (bio)degradable, including titanium dioxide.
2,4,6-tris(dimethylaminomethyl)phenol	Not readily biodegradable in water (4% degradation after 28 days).
Benzyl Alcohol	Readily biodegradable in water (92-96% degradation after 14 days).

Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	BCF (aquatic species): 492 L/kg ww
Copolymer of benzenamine and formaldehyde, hydrogenated	BCF (aquatic species): 20
Talc (non-asbestiform)	No potential for bioaccumulation.

Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Log Koc: 4.9 - 11.6
Copolymer of benzenamine and formaldehyde, hydrogenated	Log Koc: 3.81
2,4,6-tris(dimethylaminomethyl)phenol	Mobile (Koc: 20.98 L/kg).

Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Copolymer of benzenamine and formaldehyde, hydrogenated	Substance is not PBT.
Talc (non-asbestiform)	The substance is inorganic, and as such the criteria for PBT are not applicable.
Titanium Dioxide	According to Annex XIII of regulation (EC) 1907/2006 a PBT assessment shall not be conducted for inorganic substances. Titanium dioxide is an inorganic substance, thus a PBT assessment is not required.
2,4,6-tris(dimethylaminomethyl)phenol	This substance is not PBT.

vPvB assessment:

Copolymer of benzenamine and formaldehyde, hydrogenated	Substacne is not vPvB.
Talc (non-asbestiform)	The substance is inorganic, and as such the criteria for vPvB are not applicable.
Titanium Dioxide	According to Annex XIII of regulation (EC) 1907/2006 a vPvB assessment shall not be conducted for inorganic substances. Titanium dioxide is an inorganic substance, thus a vPvB assessment is not required.
2,4,6-tris(dimethylaminomethyl)phenol	This substance is not vPvB.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport information

Australian Dangerous Goods (ADG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

Australia regulations

Australian Inventory of Chemical Substances (AICS):

7727-43-7	Barium Sulfate, Natural	Listed
68410-23-1	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Listed
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	Listed
68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine	Listed
14807-96-6	Talc (non-asbestiform)	Listed
65997-17-3	Glass, oxide, chemicals	Listed
13463-67-7	Titanium Dioxide	Listed
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	Listed
100-51-6	Benzyl Alcohol	Listed
112-57-2	3,6,9-triazaundecamethylenediamine tetraethylenepentamine	Listed
112-24-3	Triethylenetetramine	Listed
71074-89-0	Bis[(dimethylamino)methyl]phenol	Not Listed

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This SDS was authored in accordance with the Australian Work Health and Safety Regulations and supplemented by the Australian Code of Practice on the Preparation of Safety Data Sheets for Hazardous Chemicals. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

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Revision Notes:

Revision Date	Notes
2020-07-27	Classification change; composition change.

Additional information:

Version 2

End of Safety Data Sheet