Steel Reinforced Epoxy Resin - Syringe - Part A

SECTION 1: Identification

Product identifier

Product name: Steel Reinforced Epoxy Resin - Syringe - Part A
Product code: 50165AUS, 50176AUS

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:

P264 Wash hands thoroughly after handling
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear face protection
P321 Specific treatment (see supplemental first aid instruction 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: 25068-38-6	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran	30-60
CAS number: 28064-14-4	2-(chloromethyl)oxirane; Formaldehyde; Phenol	30-35
CAS number: 2425-79-8	1,4-bis(2,3 epoxypropoxy)butane	10-15
CAS number: 14807-96-6	Talc (non-asbestiform)	1-5
CAS number: 2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	1-5
CAS number: 14808-60-7	Silica, crystalline quartz (non respirable)	<1
CAS number: 1333-86-4	Bounded Carbon Black	<1
CAS number: 68609-97-2	Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	<0.1
CAS number: 106-89-8	1-chloro-2,3-epoxypropane	<0.1

Additional Information:

CAS # 1333-86-4 is classified as a carcinogen only in its respirable form. Since this substance in this product is not respirable, the product itself is not classified as a carcinogen in the form presented.
CAS # 14808-60-7 is classified as a carcinogen in its inhalable form. Since the substance 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.

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

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

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	Talc (non-asbestiform)	14807-96-6	TWA: 2.5 mg/m³ (containing no asbestos fibers)
	Silica, crystalline quartz (non respirable)	14808-60-7	8-Hour TWA: 0.05 mg/m³ (respirable dust)
	Bounded Carbon Black	1333-86-4	8-Hour TWA: 3 mg/m³ (Workplace Exposure Standards for Airborne Contaminants)
	1-chloro-2,3-epoxypropane	106-89-8	TWA: 7.6 mg/m³ (2 ppm)

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	Black paste
Odor	Ethereal
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)	Product does not sustain combustion.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
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	1.199

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Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	>200°C (>392°F)
Decomposition temperature	Not determined or not available.
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 (%)	<3%

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
2-(chloromethyl)oxirane; Formaldehyde; Phenol	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rat: >2000 mg/kg
1,4-bis(2,3 epoxypropoxy)butane	dermal	LD50 Rabbit: 1130 mg/kg
	oral	LD50 Rat: 1134 mg/kg
Talc (non-asbestiform)	oral	LD50 Rat: >5000 mg/kg

Steel Reinforced Epoxy Resin - Syringe - Part A

Name	Route	Result
Bounded Carbon Black	oral	LD50 Rat: >15400 mg/kg
	dermal	LD50 Rabbit: >3000 mg/kg
Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	oral	LC50 Rat: 17,000 mg/kg
1-chloro-2,3-epoxypropane	oral	LD50 Rat: 175 mg/kg
	dermal	LD50 Rabbit: 515 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.
2-(chloromethyl)oxirane; Formaldehyde; Phenol	Causes mild skin irritation.
1,4-bis(2,3 epoxypropoxy)butane	Causes skin irritation.
Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	Causes skin irritation.
1-chloro-2,3-epoxypropane	Causes severe skin burns and eye damage.

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.
1,4-bis(2,3 epoxypropoxy)butane	Causes serious eye irritation.
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Causes serious eye damage.

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.
2-(chloromethyl)oxirane; Formaldehyde; Phenol	May cause an allergic skin reaction.
1,4-bis(2,3 epoxypropoxy)butane	May cause an allergic skin reaction.
Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	May cause an allergic skin reaction.
1-chloro-2,3-epoxypropane	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.
Bounded Carbon Black	Not applicable.	The carcinogenic classification only applies to airborne, unbound particles of respirable size.
1-chloro-2,3-epoxypropane		May cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Talc (non-asbestiform)	Group 3
Bounded Carbon Black	Group 2B
1-chloro-2,3-epoxypropane	Group 2A

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 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
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)
2-(chloromethyl)oxirane; Formaldehyde; Phenol	LC50 Combination of fish species (Rainbow trout, Golden orfe and Zebra fish): 2.54 mg/L (96 h)
	EC50 Daphnia magna: 2.55 mg/L (48 h)
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:

Name	Result
2-(chloromethyl)oxirane; Formaldehyde; Phenol	NOEC Daphnia magna: 0.3 mg/L (21 d)

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.

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Name	Result
2-(chloromethyl)oxirane; Formaldehyde; Phenol	Not readily biodegradable in testing studies after 28 days of contact with activated sewage sludge. This finding does not, however, preclude the substance from being biodegradable under other environmental conditions including the use of adapted, activated sewage sludge.
Talc (non-asbestiform)	Biodegradation is not applicable to inorganic substances.
Bounded Carbon Black	The substance will not be biodegraded.
Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	Readily biodegradable in water (87% degradation after 28 days).
1-chloro-2,3-epoxypropane	Readily biodegradable (68% degradation after 14 days).

Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
2-(chloromethyl)oxirane; Formaldehyde; Phenol	Substance has the potential to bioaccumulate (logKow = 3.26).
1,4-bis(2,3 epoxypropoxy)butane	Log Kow: -0.15
Talc (non-asbestiform)	No potential for bioaccumulation.
Bounded Carbon Black	Bioaccumulation is not expected to occur.
Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	BCF: 160 - 263 dimensionless (Not expected to bioaccumulate)
1-chloro-2,3-epoxypropane	Low potential to bioaccumulate (log Kow: 0.45).

Mobility in soil

Product data: No data available.

Substance data:

Name	Result
2-(chloromethyl)oxirane; Formaldehyde; Phenol	Minimal potential to adsorb to soil.
1,4-bis(2,3 epoxypropoxy)butane	Mobile (Log Koc: 1.1)
Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	Immobile (log Koc: >5.63)

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:

2-(chloromethyl)oxirane; Formaldehyde; Phenol	The substance is not PBT.
Talc (non-asbestiform)	The substance is inorganic, and as such the criteria for PBT are not applicable.
Bounded Carbon Black	The substance is not PBT.

Steel Reinforced Epoxy Resin - Syringe - Part A

Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	Substance is not PBT.
1-chloro-2,3-epoxypropane	Substance is not PBT.

vPvB assessment:

2-(chloromethyl)oxirane; Formaldehyde; Phenol	The substance is not vPvB.
Talc (non-asbestiform)	The substance is inorganic, and as such the criteria for vPvB are not applicable.
Bounded Carbon Black	The substance is not vPvB.
Oxirane, 2-((C12-14-alkyloxy)methyl) derivs.	Substance is not vPvB.
1-chloro-2,3-epoxypropane	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	UN3077
UN proper shipping name	Environmentally hazardous substance, Solid, N.O.S. (Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran and 2-(chloromethyl)oxirane; Formaldehyde; Phenol)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran and 2-(chloromethyl)oxirane; Formaldehyde; Phenol)
Special precautions for user	None
Hazchem/Emergency Action Code	2Z
Additional Information	This product is being shipped as a limited quantity, packaged in quantities below 5 kg, in accordance with the ADG code.

International Maritime Dangerous Goods (IMDG)

UN number	UN3077

Steel Reinforced Epoxy Resin - Syringe - Part A	
UN proper shipping name	Environmentally hazardous substance, Solid, N.O.S. (Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran and 2-(chloromethyl)oxirane; Formaldehyde; Phenol)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran and 2-(chloromethyl)oxirane; Formaldehyde; Phenol)
Special precautions for user	None
EMS number	F-A, S-F
Stowage category	A
Excepted quantities	E1
Limited quantity	5 kg
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	UN3077
UN proper shipping name	Environmentally hazardous substance, Solid, N.O.S. (Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran and 2-(chloromethyl)oxirane; Formaldehyde; Phenol)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxiran and 2-(chloromethyl)oxirane; Formaldehyde; Phenol)
Special precautions for user	None
ERG code	9L
Excepted quantities	E1
Passenger and cargo	400 kg
Cargo aircraft only	400 kg
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

Steel Reinforced Epoxy Resin - Syringe - Part A

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):

Ingredient Name	CAS	Schedules
1-chloro-2,3-epoxypropane	106-89-8	7, 5

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: 03.16.2017
Revision date: 7.27.2020

Revision Notes:

Revision Date	Notes
2020-07-27	Composition change.

Additional information:

Version 2

End of Safety Data Sheet

Steel Reinforced Epoxy Hardener - Slow Cure - Part B

SECTION 1: Identification

Product identifier

Product name: Steel Reinforced Epoxy Hardener - Slow Cure - Part B
Product code: 50165AUS

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
Acute toxicity (oral), category 4
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
H302 Harmful if swallowed
H315 Causes skin irritation

Precautionary statements:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray
P264 Wash hands thoroughly after handling
P270 Do not eat, drink or smoke when using this product

P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear face protection
P321 Specific treatment (see supplemental first aid instruction 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
P333+P313 If skin irritation or rash occurs: Get medical advice/attention
P362 Take off contaminated clothing and wash before reuse
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 Rinse mouth
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: 68410-23-1	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	10-30
CAS number: 68953-36-6	Fatty acids, tall-oil, reaction products with tetraethylenepentamine	10-15
CAS number: 14807-96-6	Talc (non-asbestiform)	5-10
CAS number: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	5-10
CAS number: 135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	<10
CAS number: 100-51-6	Benzyl Alcohol	5-10
CAS number: 112-57-2	3,6,9-triazaundecamethylenediamine tetraethylenepentamine	1-5
CAS number: 13463-67-7	Titanium Dioxide	1-5
CAS number: 112-24-3	Triethylenetetramine	1-5
CAS number: 280-57-9	1,4-Diazabicyclooctane	<1
CAS number: 14808-60-7	Silica, crystalline quartz (non respirable)	<1
CAS number: 7631-86-9	Silicon dioxide (amorphous)	<0.1

Additional Information:

CAS # 14808-60-7 is classified as a carcinogen in its inhalable form. Since the substance 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. Take precautions to ensure your own safety before attempting rescue. Wear appropriate safety eyewear, gloves, protective clothing and respiratory protection to prevent exposure. See Section 8 of this SDS for personal protective equipment recommendations. Do not use the mouth to mouth method if victim has ingested or inhaled the product. Give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper device.

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.

Acute oral exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

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

Delayed symptoms and effects:

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

Symptoms of exposure may be delayed.

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). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

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:

Harmful if swallowed. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. 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	Talc (non-asbestiform)	14807-96-6	TWA: 2.5 mg/m³ (containing no asbestos fibers)
	Titanium Dioxide	13463-67-7	TWA: 10 mg/m³ (National Workplace OELs)
	Silica, crystalline quartz (non respirable)	14808-60-7	8-Hour TWA: 0.05 mg/m³ (respirable dust)
	Silicon dioxide (amorphous)	7631-86-9	TWA: 10 mg/m³ (Silica amorphous, precipitated silica, & silica gel)
	Silicon dioxide (amorphous)	7631-86-9	TWA: 2 mg/m³ (Fumed silica, respirable dust)

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 paste
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)	Product does not sustain combustion.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
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	1.07
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	>200°C (>392°F)
Decomposition temperature	Not determined or not available.
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 (%)	<3%

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:
Harmful if swallowed.

Product data: No data available.

Substance data:

Name	Route	Result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	oral	LD50 Rat: >2000 mg/kg
	dermal	LD50 Rat: >2000 mg/kg
Talc (non-asbestiform)	oral	LD50 Rat: >5000 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol	oral	LD50 Rat: 1200 mg/kg
Copolymer of benzenamine and formaldehyde, hydrogenated	oral	LD50 Rat: 368 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))
Titanium Dioxide	oral	LD50 Mouse: > 5000 mg/kg
	inhalation	LC50 Rat: 5.09 mg/L (4 hr)
Triethylenetetramine	oral	LD50 Rat: 2500 to 4340 mg/kg
	dermal	LD50 Rabbit: 550 to 805 mg/kg
1,4-Diazabicyclooctane	oral	LD50 Rat: 1700 mg/kg
Silicon dioxide (amorphous)	oral	LD50 Rat: > 5000 mg/kg
	dermal	LD50 Rat: > 5000 mg/kg
	inhalation	LC50 Rat: > 58.8 mg/L (4hr)

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.
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	Causes skin irritation.
2,4,6-tris(dimethylaminomethyl)phenol	Causes skin irritation.
Copolymer of benzenamine and formaldehyde, hydrogenated	Causes severe skin burns.
3,6,9-triazaundecamethylenediamine tetraethylenepentamine	Causes severe skin burns.
Triethylenetetramine	Corrosive to the skin.
1,4-Diazabicyclooctane	Causes skin irritation.

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.
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	Causes serious eye irritation.
2,4,6-tris(dimethylaminomethyl)phenol	Causes serious eye irritation.
Copolymer of benzenamine and formaldehyde, hydrogenated	Causes serious eye damage.
1,4-Diazabicyclooctane	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.
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	May cause an allergic skin reaction.
Copolymer of benzenamine and formaldehyde, hydrogenated	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.
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
Titanium Dioxide	Group 2B
Silicon dioxide (amorphous)	Group 3

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.

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, Eye, Ingestion.

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)
1,4-Diazabicyclooctane	LC50 Pseudokirchneriella subcapitata: 110 mg/L (72 hours)
	EC50 Daphnia magna: 100 mg/L (48 hours)
	LC50 Rainbow Trout: 464 mg/L (96 hours)

Chronic (long-term) toxicity

Assessment:

Toxic 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.
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).
Titanium Dioxide	Degradation/biodegradation testing is not relevant for metals and metal compounds that are not (bio)degradable, including titanium dioxide.
1,4-Diazabicyclooctane	Not readily biodegradable.

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
Talc (non-asbestiform)	No potential for bioaccumulation.
Copolymer of benzenamine and formaldehyde, hydrogenated	BCF (aquatic species): 20
1,4-Diazabicyclooctane	Log Kow: -0.490
1,4-Diazabicyclooctane	BCF (aquatic species): 13
Silicon dioxide (amorphous)	BCF: 3.16 L/kg

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
2,4,6-tris(dimethylaminomethyl)phenol	Mobile (Koc: 20.98 L/kg).

Name	Result
Copolymer of benzenamine and formaldehyde, hydrogenated	Log Koc: 3.81
1,4-Diazabicyclooctane	Log Koc: 1.95
Silicon dioxide (amorphous)	Mobile (log Koc: 1.337)

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.
2,4,6-tris(dimethylaminomethyl)phenol	This substance is not PBT.
Copolymer of benzenamine and formaldehyde, hydrogenated	Substance is not PBT.
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.
Silicon dioxide (amorphous)	This substance is not PBT.

vPvB assessment:

Talc (non-asbestiform)	The substance is inorganic, and as such the criteria for vPvB are not applicable.
2,4,6-tris(dimethylaminomethyl)phenol	This substance is not vPvB.
Copolymer of benzenamine and formaldehyde, hydrogenated	Substacne is not vPvB.
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.
Silicon dioxide (amorphous)	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	UN3077
UN proper shipping name	Environmentally hazardous substance, Solid, N.O.S. (Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines)
Special precautions for user	None
Hazchem/Emergency Action Code	2Z
Additional Information	This product is being shipped as a limited quantity, packaged in quantities below 5 kg, in accordance with the ADG code.

International Maritime Dangerous Goods (IMDG)

UN number	UN3077
UN proper shipping name	Environmentally hazardous substance, Solid, N.O.S. (Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines)
Special precautions for user	None
EMS number	F-A, S-F
Stowage category	A
Excepted quantities	E1
Limited quantity	5 kg
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	UN3077
UN proper shipping name	Environmentally hazardous substance, Solid, N.O.S. (Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines)

Steel Reinforced Epoxy Hardener - Slow Cure - Part B

UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	Marine Pollutant (Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines)
Special precautions for user	None
ERG code	9L
Excepted quantities	E1
Passenger and cargo	400 kg
Cargo aircraft only	400 kg
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.

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Revision Notes:

Revision Date	Notes
2020-07-27	Classification change.

Additional information:

Version 2.

End of Safety Data Sheet