MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PERMOSEAL (PTY) LTD		Tel.	+27 (0)21 555-7400
Beverley Close		Fax	+27 (0)21 552-1848
Montague Gardens, 7441		Toll-free No.	0800 222 400
Cape Town		Website	www.bostik.co.za

TRADE NAME	**BOSTIK SUPER EPOXY (RESIN)**	Chemical abstract no.	Mixture
Chemical family	Epoxy resin	NIOSH no.	Unknown
Chemical name	Mixture	Hazchem code	Unknown
Synonyms	None	UN no.	3082

2. COMPOSITION / INFORMATION OF INGREDIENTS

Ingredient	CAS No.	Approx. (%)	Hazard Classification & Risk Phrases
Epoxy resin	25068-38-6	60	Unknown
Talc	14807-96-6	<40	Unknown
Titanium Dioxide	13463-67-7	<1	Unknown

3. HAZARDS IDENTIFICATION

Main hazards	Xi – Irritant
Health effects: Eyes	R36/38 Irritant to eyes and skin
Health effects: Skin	R43 May cause sensitisation by skin contact. Contains epoxy constituents, may produce an allergic reaction
Health effects: Ingestion	S46 – Hazardous if swallowed
Health effects: Inhalation	P261 – Breathing vapours pose a health risk. Contains crystalline silica which may cause cancer but is not in breathable form in the sold product. No exposure should occur unless the cured adhesive is dry sanded or otherwise cut without proper local exhaust and/or the use of a NIOSH approved respirator

4. FIRST- AID MEASURES

Product in eyes	Remove any contact lenses from the eyes before rinsing thoroughly with plenty of water (lift eye lids). Rinse for at least 15 minutes. Seek medical attention if any discomfort continues
Product on skin	Wash skin with soap and water – do not use solvents! Seek medical attention if irritation persists
Product ingested	Seek medical attention immediately. Never make an unconscious person vomit or drink fluids. Get the affected person to drink a lot of water in small gulps. Do not induce vomiting.
Product inhaled	Move to fresh air and seek medical attention. If required, provide artificial respiration

5. FIRE-FIGHTING MEASURES

Extinguishing media	Water, dry chemical powder, foam, carbon dioxide or sand
Special hazards	In case of fire, hazardous combustion-gases are formed – CO. Toxic vapours may be released. Cool containers exposed to flames with water until well after the fire is out. Vapour accumulation could flash and/or explode if ignited and vapour pressure build-up could result in container rupture. Under certain conditions of combustion traces of other toxic substances cannot be excluded.
Protective clothing	In case of fire, wear respiratory protection such as NIOSH approved breathing equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear NISOH approved self contained breathing apparatus. Spill surface may be slippery
Environmental precautions	Avoid contamination of ground and water surfaces
Small spills	If recovery is not feasible, absorb with dry sand, soil or non-reactive absorbent material or coagulate by sprinkling sodium chloride over the spill. If product has dried, scrape off the ground. Place in a container suitable for disposal
Large spills	Stop leak if without risk. Ventilate area. Prevent entry into drains or sewers. Clean as per small spills

7. HANDLING AND STORAGE

Suitable material	Steel container lined with polyethylene or polypropylene, polyethylene, PVC containers
Storage precautions	Keep product in a sealed container at temperatures between 5 and 30℃. Avoid heat, sparks, open flames and static charge.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational exposure limits

Name	TWA - 8 hrs	STEL - 15 min
Talc	2mg/m^3	2mg/m^3
Titanium Dioxide	10mg/m^3	15mg/m^3

Engineering controls	Provide good ventilation when handling large quantities. No special measures are required if stored and handled as above. Ventilation must be explosive proof
Respiratory Protection	Not required under normal conditions of use in a well-ventilated space
Hand Protection	PVC or PE gloves should be used if there is a risk of direct contact onto skin
Eye Protection	Tightly sealed goggles
Skin Protection	Observe the usual precautions when handling chemicals. Remove soiled or soaked clothing immediately
Other Protection	Wash hands at the end of each work shift and before eating

9. PHYSICAL PROPERTIES

- Appearance — White viscous liquid
- Odour — Mild odour
- Boiling point — >260℃
- Flash point — 250℃
- Density (g/cm^3 @ 20℃) — 1.57
- Solubility water — Insoluble

10. STABILITY AND REACTIVITY

Conditions to avoid	No decomposition if used according to specifications. Avoid temperature extremes: below 5℃ and above 30℃
Incompatible materials	Organic solvents, strong acids, strong alkalis, salts. Reactive with amines
Hazardous decomposition products	Carbon monoxide, Carbon dioxide, smoke, aldehydes, organic acids

11. TOXICOLOGICAL INFORMATION

This product has not undergone any toxicological testing. Acute and chronic health effects are not expected as long as good industrial hygiene and safety precautions are followed

12. ECOLOGICAL INFORMATION

This product has not been tested for environmental effects.

13. DISPOSIBLE CONSIDERATIONS

Disposal methods	Whatever cannot be saved for recovery or recycling should be handled according to current local waste disposal legislation. Do not allow to enter drains or sewers. Do not allow to enter any body of water
Disposal of packaging	Contaminated packaging should be emptied as far as possible and after appropriate cleaning may be taken for reuse or disposed of in approved facility in accordance with current local legislation

14. TRANSPORT REGULATIONS

UN no		Not regulated
Substance identity no.		Not regulated
Road / rail transport	ADR / RID	Not regulated
Marine Transport	IMDG	Not regulated
Inland waterways	ADNR	Not regulated
Air transport	IATA	Not regulated

15. REGULATORY INFORMATION

EEC hazard classification	Unknown
Risk phrases	Xi, N, R36/37, R43, R51/53
Safety phrases	S(24/25), 26, 37, 46, 57, 61
National legislation	n/a

16. OTHER INFORMATION

For intended use and applications see the Technical Date Sheet for the product. The information provided in this Material Safety Data Sheet is based on the present state of our knowledge. This data is intended to enable safety assessments to be made and should not be construed as guaranteeing specific properties. Recipients of our product must take responsibility for observing existing laws and regulations

Risk Phrases	R36	Irritating to eyes.
	R38	Irritating to skin.
	R43	May cause sensitization by skin contact
	R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
	R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrases	S24	Avoid contact with skin.
	S25	Avoid contact with eyes
	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S51	Use only in well-ventilated areas.
	S57	Use appropriate containment to avoid environmental contamination.
	S60	This material and its container must be disposed of as hazardous waste.
	S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

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Montague Gardens, 7441		Toll-free No.	0800 222 400
Cape Town		Website	www.bostik.co.za
TRADE NAME	**BOSTIK SUPER EPOXY (HARDENER)**	Chemical abstract no.	Mixture
Chemical family	Epoxy hardener	NIOSH no.	Unknown
Chemical name	Mixture	Hazchem code	Unknown
Synonyms	None	UN no.	3334

2. COMPOSITION / INFORMATION OF INGREDIENTS

Polymercaptan

3. HAZARDS IDENTIFICATION NONE

4. FIRST- AID MEASURES

Product in eyes	Remove any contact lenses from the eyes before rinsing thoroughly with plenty of water (lift eye lids). Rinse for at least 15 minutes. Seek medical attention if any discomfort continues
Product on skin	Wash skin with soap and water – do not use solvents! Seek medical attention if irritation persists
Product ingested	Seek medical attention immediately. Never make an unconscious person vomit or drink fluids. Get the affected person to drink a lot of water in small gulps. Do not induce vomiting.
Product inhaled	Move to fresh air and seek medical attention. If required, provide artificial respiration

5. FIRE-FIGHTING MEASURES

Extinguishing media	Water, dry chemical powder, foam, carbon dioxide or sand
Special hazards	In case of fire, hazardous combustion-gases are formed – CO. Under certain conditions of combustion traces of other toxic substances cannot be excluded.
Protective clothing	In case of fire, wear respiratory protection such as NIOSH approved breathing equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear NISOH approved self contained breathing apparatus. Spill surface may be slippery
Environmental precautions	Avoid contamination of ground and water surfaces
Small spills	If recovery is not feasible, absorb with dry sand, soil or non-reactive absorbent material or coagulate by sprinkling sodium chloride over the spill. If product has dried, scrape off the ground. Place in a container suitable for disposal
Large spills	Stop leak if without risk. Ventilate area. Prevent entry into drains or sewers. Clean as per small spills

7. HANDLING AND STORAGE

Suitable material	Steel container lined with polyethylene or polypropylene, polyethylene, PVC containers
Storage precautions	Keep product in a sealed container at temperatures between 5 and 30℃. Avoid heat, sparks, open flames and static charge.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational exposure limits	None
Engineering controls	Provide good ventilation when handling large quantities. No special measures are required if stored and handled as above. Ventilation must be explosive proof
Respiratory Protection	Not required under normal conditions of use in a well-ventilated space
Hand Protection	Nitrile gloves (0.3mm) should be used if there is a risk of direct contact onto skin
Eye Protection	Tightly sealed goggles
Skin Protection	Observe the usual precautions when handling chemicals. Remove soiled or soaked clothing immediately
Other Protection	Wash hands at the end of each work shift and before eating

9. PHYSICAL PROPERTIES

- Appearance — Transparent yellowish liquid
- Odour — Intense sulphur odour
- pH — 3-5
- Flash point — 275℃
- Density (g/cm^3 @ 20℃) — 1.15

10. STABILITY AND REACTIVITY

Conditions to avoid	No decomposition if used according to specifications. Avoid temperature extremes: below 5℃ and above 30℃
Incompatible materials	Vigorous reaction with strong oxidizing agents, epoxy resins and amines
Hazardous decomposition products	Carbon oxides and sulphur oxides

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 >2000mg/kg body weight (Experiment)
Skin irritation	Slightly irritating, does not require labelling. Method: Draize Test
Eye irritation	Slightly irritating, does not require labelling. Method: Draize Test

12. ECOLOGICAL INFORMATION

Aquatic plant/algae Toxicity	EC50 >100mg product/l. Method: OECD 201/DIN 38412 part 9
Ultimate biodegradation	This product is poorly biodegradable. Method: OECD 301B

13. DISPOSIBLE CONSIDERATIONS

Disposal methods	Whatever cannot be saved for recovery or recycling should be handled according to current local waste disposal legislation. Do not allow to enter drains or sewers. Do not allow to enter any body of water
Disposal of packaging	Contaminated packaging should be emptied as far as possible and after appropriate cleaning may be taken for reuse or disposed of in approved facility in accordance with current local legislation

14. TRANSPORT REGULATIONS

Road / rail transport	ADR / RID	Not regulated	
Marine Transport	IMDG	Not regulated	
Inland waterways	ADNR	Not regulated	
Air transport	IATA	Class:	9
		Packaging instructions (cargo)	906
		UN Number	3334 – Polymercaptan, NOS

15. REGULATORY INFORMATION

EEC hazard classification	None
Risk phrases	None
Safety phrases	None
National legislation	n/a

16. OTHER INFORMATION

For intended use and applications see the Technical Date Sheet for the product. The information provided in this Material Safety Data Sheet is based on the present state of our knowledge. This data is intended to enable safety assessments to be made and should not be construed as guaranteeing specific properties. Recipients of our product must take responsibility for observing existing laws and regulations