



## 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	<a href="http://www.alcolin.com">www.alcolin.com</a>	
<b>TRADE NAME</b>	<b>ALCOLIN RAPID EPOXY (RESIN)</b>	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

CAS Number	25068-38-6
NLP Number	500-033-5
Index Number	603-074-00-8
Reaction Product	Bisphenol-A (Epichlorhydrin) epoxy resin (Number average molecular weight $\leq$ 700)

### 3. HAZARDS IDENTIFICATION

Main hazards	Xi – Irritant            N – Hazard to the environment
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

### 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. Under certain conditions of combustion traces of other toxic substances cannot be excluded. Flammable vapours may form explosive mixture with air.
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

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## 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°C. Avoid heat, sparks, open flames and static charge.

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## 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	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

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## 9. PHYSICAL PROPERTIES

- Appearance Clear liquid
  - Odour Weak odour
  - Flash point >100°C
  - Density (g/cm<sup>3</sup> @ 20°C) Undetermined
  - Solubility water Not miscible
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## 10. STABILITY AND REACTIVITY

Conditions to avoid	No decomposition if used according to specifications. Avoid temperature extremes: below 5°C and above 30°C
Incompatible materials	Organic solvents, strong acids, strong alkalis, salts. Reactive with amines
Hazardous decomposition products	Danger of forming toxic pyrolysis products

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## 11. TOXICOLOGICAL INFORMATION

This product has not undergone any toxicological testing. It is however a known irritant to skin and mucous membranes that may cause sensitization through skin contact. Acute and chronic health effects are not expected as long as good industrial hygiene and safety precautions are followed

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## 12. ECOLOGICAL INFORMATION

This product has not been tested for environmental effects. It is however toxic to fish and other aquatic organisms and poses a danger to drinking water if even small quantities leak into the ground. No quantitative data is available but product does have a regulation of Class 2 (German Regulation) – hazardous for water

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### 13. DISPOSABLE 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

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### 14. TRANSPORT REGULATIONS

#### Land transport ADR/RID

ADR/RID Class	9 (M6) Miscellaneous dangers substances and articles
Danger Code (Kemler)	90
UN-Number	3082
Packaging Group	III
Hazard Label	9
Special Marking	Symbol (fish and tree)
Description of goods	3082 – Environmentally hazardous substances, liquid, NOS, reaction product (Bisphenol-A-(Epichlorhydrin) epoxy resin
Limited Quantities (LQ)	LQ7
Transport Category	3
Tunnel Restriction Code	E

#### Maritime Transport IMDG

IMDG Class	9
UN Number	3082
Label	9
Packaging Group	III
EMS Number	F-A, S-F
Marine pollutant	No
Proper Shipping Name	Environmentally hazardous substances, liquid, NOS, reaction product (Bisphenol-A-(Epichlorhydrin) epoxy resin

#### Air Transport ICAO-TI and IATA-DGR

ICAO/IATA Class	9
UN/ID Number	3082
Label	9
Special Marking	Symbol (fish and tree)
Packaging Group	III
Proper Shipping Name	Environmentally hazardous substances, liquid, NOS, reaction product (Bisphenol-A-(Epichlorhydrin) epoxy resin

UN 'Model Regulation' UN3082 Environmentally hazardous substance, Liquid, NOS, 9, III

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### 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

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## 16. OTHER INFORMATION

For intended use and applications see the Technical Data 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	R10	Flammable.	
	R11	Highly flammable.	
	R12	Extremely flammable.	
	R20/21	Harmful by inhalation and in contact with skin.	
	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.	
	R62	Possible risk of impaired fertility.	
	R65	Harmful: may cause lung damage if swallowed.	
	R66	Repeated exposure may cause skin dryness or cracking.	
	R67	Vapours may cause drowsiness and dizziness.	
	Hazard Phrases	H315	Causes skin irritation
		H319	Cause serious eye irritation
		H317	May cause an allergic skin reaction
H411		Toxic to aquatic life with long lasting effects	
Safety Phrases	S9	Keep container in a well-ventilated place.	
	S16	Keep away from sources of ignition - No smoking.	
	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.	
	S2	Keep out of the reach of children	
P/R/D Phrases	P261	Avoid breathing dust/fume/gas/mist/vapour/spray	
	P280	Wear protective gloves/protective clothing/eye protection/face protection	
	P305/351/338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing	
	P321	Specific treatment (refer to label)	
	P362	Take off contaminated clothing and wash before reuse	
	P501	Dispose of contents/container in accordance with local/regional/national/international regulations	



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**TRADE NAME** ALCOLIN RAPID EPOXY (HARDENER)

Chemical family Epoxy hardener  
Chemical name Mixture  
Synonyms None

Chemical abstract no. Mixture  
NIOSH no. Unknown  
Hazchem code Unknown  
UN no. 3082

### 2. COMPOSITION / INFORMATION OF INGREDIENTS

Ingredient	CAS No.	Approx (%)	Hazard Classification & Risk Phrases	EEC No
Triethyleneglycoldimercaptan	14970-87-7	<10	Xn, R20/22 WARNING! 3.1.O/4, 3.1.I/4	239-044-2
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	10563-29-8	<10	C, Xn, R21/22-34-43 DANGER! Corrosion 3.2/1B WARNING! 3.1.o/4, 3.1.D/4, 3.4.S/1	234-148-4
N,N,4-trimethylpiperazine-1-ethylamine	104-19-8	<5	Xn, R22 WARNING! 3.1.O/4	203-183-7
n-Butyl Acetate	123-86-4	<5	R10-66-67 WARNING! Flame 2.6/3, 3.8/3	204-658-1

### 3. HAZARDS IDENTIFICATION

Main hazards Xi – Irritant  
Health effects: Eyes H314 – Causes severe eye damage, R36/38 – Irritant to eyes and skin  
Health effects: Skin H314 – Causes severe skin burns, 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

### 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. Under certain conditions of combustion traces of other toxic substances cannot be excluded. Flammable vapours may form explosive mixture with air.
Protective clothing	In case of fire, wear respiratory protection such as NIOSH approved breathing equipment

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear NIOSH approved self contained breathing apparatus. Spill surface may be slippery
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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

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## 7. HANDLING AND STORAGE

Suitable material	Steel container lined with polyethylene or polypropylene, polyethylene, PVC containers
Storage precautions	P405 – Store locked up. Keep product in a sealed container at temperatures between 5 and 30°C. Avoid heat, sparks, open flames and static charge.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational exposure limits

Name	TWA - 8 hrs	STEL - 15 min
n-Butyl Acetate	150ppm	200ppm
	724mg/m <sup>3</sup>	966mg/m <sup>3</sup>

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

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## 9. PHYSICAL PROPERTIES

- Appearance Clear liquid
- Odour Characteristic odour
- Flash point >100°C
- Density (g/cm<sup>3</sup> @ 20°C) 1.15
- Solubility water Not miscible

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## 10. STABILITY AND REACTIVITY

Conditions to avoid	No decomposition if used according to specifications. Avoid temperature extremes: below 5°C and above 30°C
Incompatible materials	Organic solvents, strong acids, strong alkalis, salts.
Hazardous decomposition products	Danger of forming toxic pyrolysis products

## 11. TOXICOLOGICAL INFORMATION

This product has not undergone any toxicological testing. It is however a known irritant to skin and mucous membranes that may cause sensitization through skin contact. Acute and chronic health effects are not expected as long as good industrial hygiene and safety precautions are followed

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## 14. TRANSPORT REGULATIONS

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

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## 15. REGULATORY INFORMATION

EEC hazard classification	Water hazard Class 2
Risk phrases	Xi, R36/37/38, R43, H314, H317
Safety phrases	S(24/25), 26, 37, 46,
National legislation	n/a

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	R38	Irritating to skin.
	R43	May cause sensitization by skin contact
Hazard Phrases	H314	Causes severe skin burns and eye damage
	H315	Causes skin irritation
	H317	May cause an allergic skin reaction
	H319	Cause serious eye irritation
Safety Phrases	S24	Avoid contact with skin.
	S25	Avoid contact with eyes
	S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
P/R/D Phrases	P260/1	Avoid breathing dust/fume/gas/mist/vapour/spray
	P310	Immediately call a POISON CENTRE or doctor/physician
	P405	Store locked up

