

MATERIAL SAFETY DATA SHEET**1. IDENTIFICATION OF PRODUCT AND COMPANY**

Product: Ronabond EP 31 – Part A
Company: Ronacrete (Far East) Ltd., 16/F, No. 3 Lockhart Rd,
Wanchai, Hong Kong SAR
Tel/Fax: +852 2865 5872 / +852 2865 5568

2. COMPOSITION

Ingredient	CAS number	Proportion
Bisphenol A-epichlorohydrin resin	25068-38-6	VHIGH
Butanedioldiglycidyl ether	2425-79-8	MED

Proportion (% weight/weight): VHIGH >60, HIGH 30 – 60, MED 10 – 29, LOW 1 – 9, VLOW <1

3. FIRST AID MEASURES

Notes to physician: Skin sensitisation may develop. If a causal relationship can be confirmed, further exposure should not be allowed.

Ingestion: Rinse mouth with water. Give water to drink. DO NOT induce vomiting. Seek immediate medical assistance.

Inhalation: Remove victim from exposure. Keep warm. Keep at rest until fully recovered. If breathing becomes laboured and patient is cyanotic (blue), ensure airways are clear and have qualified person give oxygen. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical attention.

Skin contact: Wash contaminated skin with plenty of soap and water. Remove contaminated clothing and wash before re-use. If swelling, redness, blistering or irritation occurs seek medical advice.

Eye contact: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Urgently seek medical assistance.

4. FIRE FIGHTING MEASURES

Specific hazards: Will emit toxic fumes on burning including those of carbon and nitrogen oxides.

Suitable extinguishing media: Foam, carbon dioxide, chemical powder and water fog may be used. Sand or earth may also be used. DO NOT use water in a concentrated jet.

Required special equipment for fire fighters: Self-contained breathing apparatus.

5. ACCIDENTAL RELEASE MEASURES**For minor spillage:**

1. Wear skin and eye protection.
2. Treat spillage with solid media (eg sand, sawdust or chemical binder).
3. Remove and dispose of residues according to local authority regulations.

For major spillage:

1. Clear area of all unprotected personnel
 2. Wear full protective equipment including splash suit, air supplied mask, gloves, boots and eye protection.
 3. Prevent run off into drains and waterways. Cover with wet soil, wet sand or solid decontaminant.
 4. Let material react for 10 minutes.
 5. Shovel into open top drums for further decontamination if necessary.
 6. Wash down area with excess water.
 7. Ventilate the area well before allowing unprotected personnel to re-enter the area.
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6. HANDLING AND STORAGE

Storage: Store indoors in a dry, well-ventilated area. Recommended storage temperature 10 – 35°C.

Materials to avoid: Amines, acids, alkalis, organic compounds containing active hydrogen groups, foodstuffs and sources of ignition.

7. EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure limits:

No values assigned for this specific material by the National Occupational Health and Safety Commission (Worksafe Australia).

Personal protection: Avoid inhalation of fumes, use with local exhaust ventilation or wear a respirator in confined areas. Avoid contact with skin. Wear eye protection.

8. PHYSICAL AND CHEMICAL PROPERTIES

% Solids by weight:	100
pH:	Not applicable
Solubility in water:	Slight
Boiling point (°C):	>300
Flash point (°C):	>150
Density:	1.4 – 1.45 g/cm ³
Autoignition Temp (°C):	>200
Vapour pressure (20 °C):	Not Available
Vapour density:	Not Available
Melting point (°C):	5
Decomposition point (°C):	>300
Sublimation point (°C):	>300
Evaporation rate:	Not applicable

9. STABILITY AND REACTIVITY

Materials to avoid: Water, alcohols, amines, acids, alkalis, organic compounds containing active hydrogen groups, oxidizing agents, foodstuffs and sources of ignition.

10. TOXICOLOGICAL INFORMATION

Eye contact: Vapour and liquid can cause severe eye irritation, may cause chemical conjunctivitis.

Skin contact: Contact will result in moderate irritation. May cause sensitisation in some individuals. Repeated or prolonged contact may result in allergic contact dermatitis.

Inhalation: Vapour is an irritant to mucous membranes and respiratory tract. Inhalation of vapour can result in irritation to eyes, nose, throat and lungs, combined with dryness of the throat, tightness of the chest and difficulty breathing. A respiratory sensitiser. The onset of respiratory symptoms may be delayed for several hours after exposure.

Ingestion: May cause nausea, vomiting and irritation to the gastrointestinal tract.

Long-term effects: No data.

Acute toxicity / Chronic toxicity: No LD50 data available for this product.

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11. ECOLOGICAL INFORMATION

No specific data however components are not readily biodegradable and have a potential for bioaccumulation.

12. DISPOSAL CONSIDERATIONS

Refer to Local authority. Empty the drums and recycle by through approved reconditioner.

13. REGULATORY INFORMATION

R-phrases

R21/22 Harmful in contact with skin, eyes and if swallowed.
R36/38 Irritating to eyes, respiratory system and skin.
R42/43 May cause sensitisation by skin contact or inhalation.

S-phrases

S26 In case of contact with skin, wash immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of soap and water.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S38 In case of insufficient ventilation, wear suitable respiratory equipment.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

14. OTHER INFORMATION

This MSDS summarises at the date of issue our best knowledge of health and safety hazard information for this product, and in particular how to safely handle and use the product in the workplace. Each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

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Company: Ronacrete (Far East) Ltd., 16/F, No. 3 Lockhart Rd,
Wanchai, Hong Kong SAR
Tel/Fax: +852 2865 5872 / +852 2865 5568

2. COMPOSITION

Ingredient	CAS number	Proportion
Amines	Mixture	VHIGH

Proportion (% weight/weight): VHIGH >60, HIGH 30 – 60, MED 10 – 29, LOW 1 – 9, VLOW <1

3. FIRST AID MEASURES

Notes to physician: Skin sensitisation may develop. If a causal relationship can be confirmed, further exposure should not be allowed.

Ingestion: Rinse mouth with water. Give water to drink. DO NOT induce vomiting. Seek immediate medical assistance.

Inhalation: Remove victim from exposure. Keep warm. Keep at rest until fully recovered. If breathing becomes laboured and patient is cyanotic (blue), ensure airways are clear and have qualified person give oxygen. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical attention.

Skin contact: Wash contaminated skin with plenty of soap and water. Remove contaminated clothing and wash before re-use. If swelling, redness, blistering or irritation occurs seek medical advice.

Eye contact: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Urgently seek medical assistance.

4. FIRE FIGHTING MEASURES

Specific hazards: Will emit toxic fumes on burning including those of carbon and nitrogen oxides.

Suitable extinguishing media: Foam, carbon dioxide, dry chemical powder and water fog may be used. Sand or earth may also be used. DO NOT use water in a concentrated jet.

Required special equipment for fire fighters: Self-contained breathing apparatus.

5. ACCIDENTAL RELEASE MEASURES**For minor spillage:**

4. Wear skin and eye protection.
5. Treat spillage with solid media (eg sand, sawdust or chemical binder).
6. Remove and dispose of residues according to local authority regulations.

For major spillage:

8. Clear area of all unprotected personnel
 9. Wear full protective equipment including splash suit, air supplied mask, gloves, boots and eye protection.
 10. Prevent run off into drains and waterways. Cover with wet soil, wet sand or solid decontaminant.
 11. Let material react for 10 minutes.
 12. Shovel into open top drums for further decontamination if necessary.
 13. Neutralise residue with a dilute acetic acid solution.
- Ventilate the area well before allowing unprotected personnel to re-enter the area.
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6. HANDLING AND STORAGE

Storage: Store indoors in a dry, well-ventilated area. Recommended storage temperature 10 – 35°C.

Materials to avoid: Amines, acids, alkalis, organic compounds containing active hydrogen groups, foodstuffs and sources of ignition.

National occupational exposure limits:

No values assigned for this specific material by the National Occupational Health and Safety Commission (Worksafe Australia).

Personal protection: Avoid inhalation of fumes, use with local exhaust ventilation or wear a respirator in confined areas. Avoid contact with skin. Wear eye protection.

7. EXPOSURE CONTROLS/PERSONAL PROTECTION

Materials to avoid: Water, alcohols, amines, acids, alkalis, organic compounds containing active hydrogen groups, oxidizing agents, foodstuffs and sources of ignition.

8. PHYSICAL AND CHEMICAL PROPERTIES

% Solids by weight:	100
pH:	Not Available
Solubility in water:	Slight
Boiling point (°C):	>200
Flash point (°C):	>150
Density :	1.45 – 1.50g/cm ³
Autoignition Temp (°C):	Not Available
Vapour pressure (20 °C):	Not Available
Vapour density:	Not Available
Melting point (°C):	Not Available
Decomposition point (°C):	Not Available
Sublimation point (°C):	Not Available
Evaporation rate:	Not applicable

9. STABILITY AND REACTIVITY

Materials to avoid: Water, alcohols, amines, acids, alkalis, organic compounds containing active hydrogen groups, oxidizing agents, foodstuffs and sources of ignition.

10. TOXICOLOGICAL INFORMATION

Eye contact: Corrosive to eyes liquid can cause severe eye irritation, may cause chemical conjunctivitis.

Skin contact: Corrosive to skin. May cause sensitisation in some individuals. Repeated or prolonged contact may result in allergic contact dermatitis.

Inhalation: Vapour is an irritant to mucous membranes and respiratory tract. Inhalation of vapour can result in irritation to eyes, nose, throat and lungs, combined with dryness of the throat, tightness of the chest and difficulty breathing. A respiratory sensitiser. The onset of respiratory symptoms may be delayed for several hours after exposure.

Ingestion: May cause nausea, vomiting and irritation to the gastrointestinal tract.

Long-term effects: No data.

Acute toxicity / Chronic toxicity: No LD50 data available for this product.

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11. ECOLOGICAL INFORMATION

No specific data however similar products are not readily biodegradable and have a potential for bioaccumulation.

12. DISPOSAL CONSIDERATIONS

Refer to Local authority. Empty the drums and recycle by through approved reconditioner.

13. REGULATORY INFORMATION

R-phrases

R21/22	Harmful in contact with skin, eyes and if swallowed.
R36/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by skin contact or inhalation.

S-phrases

S26	In case of contact with skin, wash immediately with plenty of water and seek medical advice.
S28	After contact with skin, wash immediately with plenty of soap and water.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

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