

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product: Ronabond Primer - Liquid
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

| | |
|--|---------|
| Carboxylated styrene butadiene polymer | 47% |
| Water | Balance |

3. HAZARDS IDENTIFICATION

On available data the Product has no hazard classification according to EC directive 88/379/EEC (CHIP Regulations in the UK)

4. FIRST AID MEASURES

Eye Contact: May cause slight irritation and soreness
Wash out with plenty of clean water
Seek medical attention if symptoms persist

Skin Contact: Remove soiled clothing
Wash off with soap and water

Swallowing: May cause nausea
Give plenty of water to drink
Seek medical attention

5. FIRE FIGHTING MEASURES

Product is water based and low fire hazard. The dried polymer is combustible. All Extinguishing media are suitable. Fire fighters should wear breathing apparatus to avoid smoke inhalation.

6. ACCIDENTAL RELEASE MEASURES

Large spillages should be contained and pumped into a vessel.
Small spillages should be absorbed on sand etc for disposal (Refer to Section 13).
Prevent product entering drains or watercourses (Refer to Section 12).

7. HANDLING AND STORAGE

Handling: No special precautions needed. Ensure adequate ventilation.
Storage: Store between +5 and +25°C protected from frost and direct sunlight.
Bulk tanks should be cleaned and sterilised at least annually to prevent accumulation of bacteria.
Observe safe tank entry procedures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Good general ventilation is normally adequate. Where product is dried or sprayed local extraction is recommended.

Respiratory protection: If sprayed product use suitable respirator.
Hand protection: For frequent contact wear impermeable gloves.
Eye protection: Goggles, face visor or safety glasses recommended.
Skin protection: If severe splashing occurs wear waterproof overalls.

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9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------|-----------------------------|
| Appearance: | milky white liquid |
| Odour: | faint aromatic |
| pH: | 9.0 - 10.0 |
| Boiling point: | approx. 100°C (water) |
| Flash point: | not applicable |
| Flammability: | not applicable |
| Autoignition: | not applicable |
| Explosive/oxidising: | not applicable |
| Vapour pressure: | as water |
| Relative density: | approx 1.0 |
| Solubility in water: | miscible in all proportions |
| Partition coeff. | |
| n-octanol/water: | not applicable |
| VOC: | < 250 grams per litre |

10. STABILITY AND REACTIVITY

Product is stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Available data indicate low toxicity.
Long term experience of this product type indicates no danger to health when handling under industrial conditions.

12. ECOLOGICAL INFORMATION

The product is miscible with water and could be transported considerable distances if allowed to enter waterways. Even low concentrations in water give a pronounced white appearance.
The product will degrade only very slowly in the environment.
There is no evidence of any tendency for bioaccumulation.
In low concentrations (<100mg/litre) Ronabond Primer – Liquid exhibits low toxicity to fish, but in higher concentrations may be harmful to fish and aquatic life.
Low concentrations of Ronabond Primer – Liquid in water for sewage treatment do not affect the biomass; the polymer particles are absorbed onto the sludge and eliminated from the waste stream.
The BOD of dilute Ronabond Primer – Liquid is relatively low (BOD₅ approx. 100ppm at 0.1% concentration).

13. DISPOSAL CONSIDERATIONS

Waste Ronabond primer – Liquid must not be discharged directly into drains or waterways without treatment. The polymer content may be separated by coagulation and disposed of to landfill or by incineration. Waste water containing Ronabond primer – Liquid may be treated by coagulation setting, flotation or ultrafiltration. Disposal should always comply with local, national or EC regulations.

14. TRANSPORT INFORMATION

The product is not classified as dangerous for Transport.

15. REGULATORY INFORMATION

The product has no hazard classification according to EC Directive 88/379/EEC.

Type of Regulated Paint under the Air Pollution Control (Volatile Organic Compounds) Regulation of Hong Kong: Other adhesives

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16. OTHER INFORMATION

This Material Safety Data Sheet conforms to EC Directive 91/155/EEC

The information given here is to the best of our knowledge true and accurate and is provided solely for making safety assessments. It is not a sales specification or an indication of suitability for a particular use.

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product: Ronabond Primer - Powder
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/INFORMATION ON INGREDIENTS

The principle constituents are:-

Hydraulic powder combined with rheological additives.

CAS No: 65997-16-2

ECC No: 266-045-5

3. HAZARDS IDENTIFICATION

Classification: IRRITANT.

Human effects: Dry powder, has no effects on dry skin. When mixed with water, an alkaline solution is produced. A dust problem may occur in confined areas.

Environmental effects: No effects, Ronabond Primer – Powder is insoluble in water.

4. FIRST AID MEASURES

Skin Contact: Wash affected areas with plenty of clean water.

Eye Contact: Wash eyes immediately with plenty of clean water and if necessary, seek medical advice.

Inhalation: If irritation occurs move to fresh air. If nose or airways become inflamed, seek medical advice.

Ingestion: Do not induce vomiting. Wash out mouth with water and give patient plenty of water to drink.

5. FIRE FIGHTING MEASURES

Ronabond Primer – Powder is not flammable and does not support burning or dangerous synergistic reactions with other materials, provided that these substances themselves are stable.

6. ACCIDENTAL RELEASE MEASURES

On Spillage: Spilt material maybe collected for re-use, provided that no contamination has occurred.

Personal Precautions: See section 8.

Environmental Precautions: Do not empty material into drains, sewers/water courses as substance hardens when in contact with water.

7. HANDLING AND STORAGE

Storage: Store in dry conditions, preferably above ground on pallets protected by shrink wrapping. This will prevent moisture ingress and prolong shelf life.

Handling: Wear personal protective equipment and clothing to avoid contact with the skin and eyes.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupation Exposure Standards (OES), 8 hours.
Time Weighted Average (TWA).
Total Inhalable Dust: 10mg/m³.
Total Respirable Dust: 5mg/m³.

Personnel protection: Dust proof goggles should be worn whenever there is a risk of powder or wet mix entering the eyes.

Skin protection: Protective clothing should be worn, including waterproof gloves, trousers and wellington boots. Any wet material, contaminating clothing should be removed immediately and the skin washed thoroughly as well as the protective clothing/footwear.

Respiratory Protection: Suitable respiratory protection should be worn to ensure that personnel exposure is less than the OES, ie dust mask.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------|-----------------------------|
| Physical State: | Dark grey powder |
| Odour: | Odourless |
| Bulk Density: | 850 - 1200kg/m ³ |
| Flammability: | Not flammable |
| Explosive Properties: | Not explosive |
| VOC: | < 250 grams per litre |

10. STABILITY AND REACTIVITY

Conditions Contributing to:-

| | |
|-----------------------------------|------|
| Chemical Instability: | None |
| Hazardous Decomposition Products: | None |
| Special Precautions: | None |

11. TOXICOLOGICAL INFORMATION

This material has no known toxic or carcinogenic effects.

12. ECOLOGICAL INFORMATION

Stable in soil. No photodegradation with sunlight. When mixed with water, the increase in pH may be lethal to aquatic life.

13. DISPOSAL CONSIDERATIONS

Dispose of empty bags or material at an authorised disposal site.

14. TRANSPORT INFORMATION

Not classified as hazardous for transport purposes.

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15. REGULATORY INFORMATION

Chemical (Hazard Information and Packaging Regulations 1993).

Classification: Irritant.

Risk Phases: None.

Safety Phases: Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of clean water, if necessary, seek medical advice.
After contact with skin, wash immediately with plenty of clean water.
Keep out of reach of children.

Type of Regulated Paint under the Air Pollution Control (Volatile Organic Compounds) Regulation of Hong Kong: Other adhesives

16. OTHER INFORMATION

Health and Safety at Work Act 1974.

HSE Occupational Exposure Criteria Document Summaries 1993 Edition (ISBN 0118821202).

Control of Substances Hazardous to Health (Regulations) 1988.

HSE Guidance Note EH26 (Occupational Skin Diseases - Health and Safety Precautions - HMSO 1981).

HSE Guidance Note EH40 (Occupational Exposure Limits).

Ronabond Primer – Powder contains chemical additives in such small concentrations they are not considered hazardous to health.
