

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

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

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**2. COMPOSITION**

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**3. HAZARDS IDENTIFICATION**

No hazards resulting from material as supplied.

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**4. FIRST AID MEASURES**

Skin Contact: Wash off immediately with soap and plenty of water  
Eye Contact: Rinse thoroughly with plenty of water, also under the eyelids.  
Ingestion: Do not induce vomiting. Drink plenty of water. Obtain medical attention.  
General advice: If you feel unwell, seek medical advice (show the label where possible).

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**5. FIRE FIGHTING MEASURES**

Suitable extinguishing media: Alcohol resistant foam carbon dioxide (CO2) dry powder  
Suitable extinguishing which must not be used spread fire for safety reasons: Do not use a solid water stream as it may scatter and  
Special protective equipment for fire-fighters: In the event of fire and/or explosion do not breathe fumes.

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**6. ACCIDENTAL RELEASE MEASURES**

Personal Precautions: No conditions to be specially mentioned.  
Methods for cleaning up: Package all material in plastic, cardboard or metal containers for disposal in compliance with the Environmental Protection (Duty of Care) Regulations 1991. Small amounts: wipe up with absorbent material (e.g. cloth, fleece). Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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**7. HANDLING AND STORAGE**

Handling: No special handling advice required.  
Packaging material: Plastic container of HDPE.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory protection: No personal respiratory protective equipment normally required.  
Hand protection: Rubber or plastic gloves.  
Eye protection: If splashes are likely to occur, wear: safety glasses with side shields.  
Skin and body protection: Handle in accordance with good industrial hygiene and safety practice.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Colour: Pigmented

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## 10. STABILITY AND REACTIVITY

## 11. TOXICOLOGICAL INFORMATION

Acute toxicity:	The product contains no substances classified as hazardous to health in concentrations which should be taken into account.
Primary irritation:	May cause skin irritation in susceptible persons.
Repeated or prolonged exposure:	Prolonged skin contact may cause skin irritation and/or dermatitis.

## 12. ECOLOGICAL INFORMATION

The products has no known eco-toxicological effects.

## 13. DISPOSAL CONSIDERATIONS

General Information:	Can be incinerated when in compliance with the Environment Protection Act 1990. (Process Guidance Note IPR5/1)
Contaminated Packaging:	Empty containers should be transported/delivered using a registered waste carrier for local recycling or waste disposal.

## 14. TRANSPORT INFORMATION

ADR/RID	Not classified as hazardous under transport regulations.
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## 15. REGULATORY INFORMATION

## 16. OTHER INFORMATION

The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.  
The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process.

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

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

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**3. COMPOSITION**

Hazardous Components Methylenediphenyl diisocyanate 90-100%  
CAS:26447-40-5  
EINECS: 247-714-0  
Xn;R20-36/37/38-42/43

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**4. HAZARDS IDENTIFICATION**

No hazards resulting from material as supplied.

Most important hazards Harmful by inhalation. Irritating to eyes, respiratory system and skin.  
May cause sensitisation by inhalation and skin contact.

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**4. FIRST AID MEASURES**

Skin Contact: In the case of skin irritation or allergic reactions see a physician. May cause sensitisation by skin contact. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Eye Contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Inhalation: Consult a physician after significant exposure. Move to fresh air. May cause sensitisation by halation. Oxygen or artificial respiration if needed.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Never give anything by mouth to an unconscious person.

General Advice: In case of shortness of breath, give oxygen. Take off all contaminated clothing immediately. If symptoms persist, call a physician.

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**5. FIRE FIGHTING MEASURES**

Suitable extinguishing media: Use dry chemical, CO<sub>2</sub>, water spray or "Alcohol" foam.

Specific hazards: In the event of fire carbon monoxide, nitrogen oxides, isocyanate vapour and traces of hydrogen cyanide may be formed.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

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**6. ACCIDENTAL RELEASE MEASURES**

Personal Precautions: Ensure adequate ventilation.

Environmental Precautions: Do not allow material to contaminate ground water system.  
Prevent product from entering drains.

Methods for cleaning up: Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approximately one hour transfer to waste container and do not seal (evolution of CO<sub>2</sub>!).

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### 7. HANDLING AND STORAGE

Handling:	Avoid contact with skin and eyes. Ensure adequate ventilation or exhaust ventilation in the working area. Exhaust ventilation necessary if product is sprayed. In all areas where MDI aerosols and/or vapour concentrations are produced, exhaust ventilation must be provided in such a way that the MEL is not exceeded. The air should be drawn away from the personnel handling the product.
Storage:	Keep container tightly closed in a dry and well-ventilated place. Further information on storage conditions, which must be observed to preserve quality, can be found in our product information sheet. VCI Storage Class:10

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures: Occupational exposure Controls:	Ensure adequate ventilation, especially in confined areas. Keep away from food, drink and animal feeding stuffs.
Respiratory protection:	Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask is recommended. For short periods of work a combination of charcoal filter and particulate filter is suitable.
Hand protection:	Butyl rubber – IIR ( $\geq 0.5\text{mm}$ ) Fluorinated rubber – FKM ( $\geq 0.4\text{mm}$ ) Nitrile rubber – NBR ( $\geq 0.35\text{mm}$ ) Polychloroprene – CR ( $\geq 0.5\text{mm}$ ) Polyvinyl chloride – PVC ( $\leq 0.5\text{mm}$ ) Wash hands before breaks and immediately after handling the product.
Eye protection:	Tightly fitting safety goggles
Skin and body protection:	Keep working clothes separately. Take off contaminated clothing and shoes immediately.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Description:	liquid
Colour:	brown
Odour:	characteristic
PH:	Not applicable
Boiling point/range:	350 °C
Flash point:	190 °C
Vapour pressure:	<0.00001 mbar @ 20 °C
Relative density:	c.a. 1.22g/ml @ 20 °C
Water solubility:	immiscible, reacts as described in section 10
Viscosity:	c.a. 21 mpas @25 °C

### 10. STABILITY AND REACTIVITY

Stability:	Polymerises at about 200 °C with evolution of CO <sub>2</sub> .
Conditions to avoid:	In closed containers, risk of bursting owing to increase of pressure.
Materials to avoid:	Exothermic reaction with amines and alcohols.
Hazardous decomposition Products:	No hazardous decomposition products when stored and handled correctly.

### 11. TOXICOLOGICAL INFORMATION

Acute toxicity:	ORL RAT LD50 > 15000mg/kg INH RAT LC50 c.a. 490 mg as aerosol/m <sup>3</sup> , 4h over exposure, especially when spraying coatings containing Isocyanate without the necessary precautions, entails the risk of concentration dependant irritating effects on eyes, nose, throat and respiratory tract.
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Sensitisation:	Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low Isocyanate concentrations, including concentrations below the UK Maximum Exposure Limit (MEL). May cause sensitisation by inhalation and skin contact.
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12. ECOLOGICAL INFORMATION	
Ecotoxicity effects	Acute fish toxicity LC0=>1000mg/l 96H Test species: Zebra barbell (Brachydanio rerio) Acute bacteria toxicity: EC50=> 1000 mg/ 13H tested On activated sludge micro organisms. Acute daphnia toxicity: EC50=>1000 mg/124H Test species: Daphnia magna.
Persistence and Degradability: Further information:	Not readily biodegradable ( 0% after 28 days ).  The product reacts with water at the interface forming CO2 and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water-soluble solvents.
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13. DISPOSAL CONSIDERATIONS	
General Information:	Dispose of as special waste in compliance with the control of pollution (Special Waste). Regulations 1980. Can be incinerated, when in compliance with the Environment Protection Act 1990. (Process Guidance Note IPR5/1)
Specific methods:	For disposal within the EC, the appropriate code according to the European Waste catalogue (EWC) should be used.
Contaminated Packaging:	Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. Containers must be recycled in compliance with national legislation and environmental regulations.
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14. TRANSPORT INFORMATION	
ADR/RID	Not classified as hazardous under transport regulations.
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15. REGULATORY INFORMATION	
Labelling:	Contains isocyanates. See information supplied by the manufacturer.
Symbol(s):	
R-phrase:	R20 – Harmful by inhalation. R36/37/38 – Irritating to eyes, respiratory system and skin. R42/43 – May cause sensitisation by inhalation and skin contact.
S-phrase:	S22 – Do not breathe dust. S23 – Don not breathe gas/fumes/vapour/spray. S24 – Avoid contact with the skin. S37 – Wear suitable gloves. S45 – In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). S63 – In case of accident by inhalation: remove casualty to fresh air and keep at rest.
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## 16. OTHER INFORMATION

Text of R phrases  
Mentioned in section 2:

Further information:

R20 – Harmful by inhalation.

R36/37/38 – Irritating to eyes, respiratory system and skin.

R42/43 – May cause sensitisation by inhalation and skin contact.

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