Material Safety Data Sheet

1. Identification of Substance/Preparation and Company

Product Name: VESF MasonMate ETA Vinylester

Company: Harrison & Clough Ltd, P.O. Box 9, Harclo Road, Off Aireworth Road, Keighley, West Yorks, BD21 4EG

Chemical Name and Synonyms: 2 Component Chemical Anchor Grout Containing Unsaturated Resin and Dibenzoyl Peroxide.

For Information: 0844 571 22 22 / 571 22 23 (8.15am - 6.00pm)

In an Emergency: As Above

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Substance</th>
<th>CAS Number</th>
<th>Concentration Range</th>
<th>Warning Symbol</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Dimethacrylate</td>
<td>90-90-5</td>
<td>10 - 20%</td>
<td>Xi, Xn</td>
<td>R36/37/38, S1/S3</td>
</tr>
<tr>
<td>Methacrylate Acid, Monoester with Propane-1, 2-Diol</td>
<td>27813-02-1</td>
<td>10 - 20%</td>
<td>Xi</td>
<td>R36/43</td>
</tr>
<tr>
<td>Dibenzoyl Peroxide</td>
<td>94-36-0</td>
<td>10 - 30%</td>
<td>E, Xi</td>
<td>R2, R36, R43, R3</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Resin: May cause sensitisation by skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Irritating to respiratory system.

Catalyst: May cause sensitisation by skin contact.

4. First Aid Measures

Summon immediate medical assistance on contact with skin, eyes, inhalation or ingestion.

Eye: Irrigate with clean water for at least 15 minutes. Seek medical attention.

Skin: Remove from skin with plenty of soap and water. Remove contaminated clothing. If irritation persists, seek medical advice.

Ingestion: Drink plenty of water. Seek medical attention. Do Not Induce Vomiting.
5. Fire Fighting Measures

Extinguishing Media: Dry powders, CO₂ and Foam. Not to be used: Halones

Exposure Hazards: Sealed containers, heated, can pressurise leading to explosion. Emits acrid black smoke and irritating fumes when heated to decomposition.

Fire Fighting Equipment: Wear self contained breathing apparatus.

6. Accidental Release Measures

Do not discharge into sewers. Scrape up and place into a suitable container for disposal. Wash area with water.

Refer to section 5, 8 and 13 for Protective Measures and Disposal.

7. Handling and Storage

Resin: Keep away from heat and sources of ignition.

Catalyst: Keep away from heat and sources of ignition. No sparking tools should be used. Never bring into direct contact with accelerator.

Store in a cool dry place. Keep away from reducing agents e.g. amines, acids, alkalis, heavy metals compounds.

Must only be kept in original packaging.

Inhalation: Move patient to fresh air and allow to rest. If patient is slow to recover or unconscious, obtain medical assistance immediately.

First Aiders should protect themselves from exposure (Ref to Section 8).
8. Exposure Controls/Personal Protection

Occupational exposure limit – none assigned

Respiratory: Ensure good ventilation to minimise exposure to vapours. Breathing protection is required in inadequately ventilated places.

Ingestion: Unlikely during normal use.

Skin Protection: Wear gloves and protective clothing at all times.

Eye Protection: Not normally required during normal use. If splashing can occur, goggles should be worn.

9. Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Resin</th>
<th>Catalyst</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Appearance</td>
</tr>
<tr>
<td>Odour</td>
<td>Odour</td>
</tr>
<tr>
<td>Density</td>
<td>Density</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Flash Point</td>
</tr>
<tr>
<td>Explosive</td>
<td>Oxidising properties</td>
</tr>
<tr>
<td>Autoflammability</td>
<td>&gt; 380°C</td>
</tr>
<tr>
<td>Solubility</td>
<td>Solubility</td>
</tr>
</tbody>
</table>

Resin Catalyst
- Appearance: Thick amber Paste
- Odour: Sweet aromatic
- Density: 1.60g/cm³
- Flash Point: 80°C
- Explosive properties: N/D
- Autoflammability: N/D
- Solubility: Partly soluble in water

Catalyst
- Appearance: Thick Grey Paste
- Odour: Faint
- Density: 1.45g/cm³
- Flash Point: Above the SADT (50°C)
- Explosive properties: Oxidising
- Autoflammability: > 380°C
- Solubility: Soluble in water

10. Stability and Reactivity

Stability: Stable under normal conditions. Resin component can polymerise (solidify) exothermically if heated, exposed to air, sunlight or by addition of free radical initiators. A dangerous self accelerating decomposition reaction and under certain circumstances explosion or fire can be caused by direct contact of the catalyst with incompatible substances or by thermal decomposition.

Materials to Avoid - Catalyst: Violent reactions may be expected with acid, alkali, heavy metals and reducing agents. Avoid contact with rust. Do not mix with peroxide accelerators.
Vinylester Resins

Resin: Reacts vigorously with strong oxidising agents and peroxides.

Hazardous Decomposition: Emits acrid smoke and irritating fumes of carbon oxides when heated to decomposition.

Hazardous Polymerisations: Polymerisations in a closed container can give rise to pressure, which may rupture the vessel.

11. Toxicological Information

Oral - Resin: Material is classified as an irritant and is considered likely to have a low order of toxicity in normal handling.

Catalyst: Material is classified as a sensitiser and may cause sensitisation by skin contact. An LD50 (rat) is 7710mg/m3

Eye: Severe eye irritant.

Skin: Irritation and redness may occur. The possibility of allergic sensitisation should be considered.

Ingestion/Inhalation: There may be loss of consciousness.

12. Ecological Information

Do not discharge into drains or the environment. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Not identified as a PBT substance.

13. Disposal Considerations

In an uncured state, place in a suitable container and dispose as chemical waste in accordance with local regulations. Small quantities of resin and catalyst may be reacted together, allowed to cure and dispose as solid waste.

14. Transport Information

Not classified as hazardous for transport.
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Vinylester Resins

15. Regulatory Information

Labelling:

Irritant

Risk Phrases
(R37) Irritating to respiratory system.
(R43) May cause sensitisation by skin contact.
(R52/53) Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases
(S2) Keep out of reach of children.
(S24/25) Avoid contact with skin and eyes.
(S26) In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
(S37) Wear suitable gloves.
(S46) If swallowed, seek medical advice immediately and show this container or label.

16. Other Information

Risk phrases used in section 2 and not previously mentioned:
R2 – Risk of explosion by shock, friction, fire or other sources of ignition.
R36 – Irritating to the eyes.
R37 – Irritating to respiratory system.
R43 – May cause sensitisation by skin contact.
R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Date of Preparation:
February 2011

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