1. **Product Name:** Rust Remover  
**Product Code:** Formula 1132  
**General Description:** Acid based rust and scale remover

2. **COMPOSITION / INFORMATION OF INGREDIENT**

<table>
<thead>
<tr>
<th>Material</th>
<th>%</th>
<th>Risk Phrase</th>
<th>QEL (ST)</th>
<th>QEL (LT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid</td>
<td>&lt;15-30</td>
<td>R37 Corrosive and Irritating to respiratory system</td>
<td>5 ppm</td>
<td>-</td>
</tr>
<tr>
<td>Methyl phosphoric acid ester</td>
<td>&lt;10-20</td>
<td>R34 Causes burns</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other ingredient</td>
<td>&lt;1-5</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Risk phrases in this section apply only to raw material, not necessarily finished product. See 15 regulatory information.

3. **HAZARDS IDENTIFICATION**

Corrosive to skin and eyes. – irritating to respiratory system.

4. **FIRST AID MEASURES**

<table>
<thead>
<tr>
<th>HAZARD</th>
<th>FIRST AID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin: irritation and stinging to skin</td>
<td>Remove all contaminated clothing. Wash under running water for 10 minutes. Apply emollient cream.</td>
</tr>
<tr>
<td>Eyes: pain and reddening which can lead to corneal burns.</td>
<td>Speed is essential. Immediately gently irrigate with clean water for at least 10 to 15 minutes. seek medical attention immediately</td>
</tr>
<tr>
<td>Ingestion: soreness in throat, severe stomach upset.</td>
<td>Rinse mouth out with water. Give a pint of milk or water to drink. Seek medical attention immediately</td>
</tr>
<tr>
<td>Inhalation: Irritation of mucous membranes.</td>
<td>Remove affected person to fresh air, keep warm and still. Seek medical attention if symptoms persists.</td>
</tr>
</tbody>
</table>

5. **FIRE FIGHTING MEASURES**

- **Extinguishing Media:** Non-flammable
- **Special Protective Equipment:** Wear breathing apparatus
- **Exposure Hazards:** Fume of hydrogen chloride and phosphorus oxides evolved on exposure to very high temperatures.

6. **ACCIDENTAL RELEASE MEASURES**

Do not allow entry into drain, sewers and water courses. Mop up with absorbent material such as sand or earth. Scrap or Shovel up and transfer to suitable container. Clean up affected area with plenty of water. Prevent slip hazard. See ‘Disposal Consideration’.

7. **HANDLING AND STORAGE**

Store in a cool, dry area in original container. Keep away from bleach and strong alkalis. Keep out of reach of children.

8. **EXPOSURE CONTROL / PERSONAL PROTECTION**

<table>
<thead>
<tr>
<th><strong>WEL=</strong> Workplace Exposure Limits</th>
<th>PROTECTIVE EQUIPMENT:-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engineering Measures:</strong></td>
<td>Provide sufficient ventilation during operations which cause vapour formation</td>
</tr>
<tr>
<td><strong>Hands Protection:</strong></td>
<td>Use suitable protective gloves if risk of skin contact.</td>
</tr>
<tr>
<td><strong>Eyes Protection:</strong></td>
<td>Wear approved safety goggle.</td>
</tr>
<tr>
<td><strong>Other Protection:</strong></td>
<td>Wear appropriate clothing, respiratory to prevent any possibility of inhalation.</td>
</tr>
<tr>
<td><strong>Hygiene Measures:</strong></td>
<td>Make eyes wash &amp; showering accessible, wash at the end of each work shift and before eating, smoking using the toilet.</td>
</tr>
</tbody>
</table>
9. PHYSICAL PROPERTIES

Appearance - Clear liquid
Odour - Pungent
PH (5% solution) - > 1
Flash point - Not applicable
Flammability - Non-flammable
Autoignitability - Not applicable
Relative density - 1.1 at 20°C
Vapour density - 1.150
Solubility - Complete soluble in water.

10. STABILITY AND REACTIVITY

Keep away from strong oxidising agent and bleach. React with materials: Avoid use of mild steel. Cast iron, tin, brass, aluminium and other alloys and galvanised metals, contact with these metals can produce hydrogen gas.

11. TOXICOLOGICAL INFORMATION

For the hydrochloric acid, inhale (hmn) LCLo : 3000ppm / 5 min - orl (rbt) LD50 : 900 mg/kg
For the methyl phosphoric acid ester, orl (rat) LD50 : 2000 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic toxicity rating for methyl-phosphoric acid TLm 96:1000 – 100 ppm

13. DISPOSAL CONSIDERATION

Recycle used containers if facilities are available, if not incineration is recommended. Failing this, use landfill. Be sure to comply with local authority regulation.

14. TRANSPORT INFORMATION

UN Number - 1789
ICAO-Air - Class 8. Packaging group III
IMO Sea - Class 8. Packaging group III
ADR Road - Class 8 item 66° (a)
Proper Shipping Name - Corrosive liquid, N.O.S. (Hydrochloric acid solution)

15. REGULATORY INFORMATION

Supply classification: Corrosive
Risk phrases: R34 Cause burns
R37 irritating to respiratory system
Safety phrases: S23 Do not breathe vapour/spray
S24/25 Avoid contact with skin and eye
S26 in case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S28 After contact with skin, wash immediately with plenty of water
S37/39 Wear suitable gloves and eye/face protection

16. OTHER INFORMATION

Data from the following sources have been used to compile this document.
HSE – EH40/93; Occupational exposure limits; Suppliers Health and Safety Data.
HSC – Safety Data Sheets for substances and preparation dangerous for supply.
Date of issue 28.08.2008
Revision : 4

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