1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name: UP2331, UP2332, UP2333, UP2334, UP2335 2K SYSTEM 20 SLOW HARDENER
Product code: S2033
Use / description of product: SLOW HARDENER
Company name: U-Pol Products
US ADDRESS: Sanders and Associates Inc., 1263 Route 31 South, Lebanon, NJ 08833, USA
Fax: 1-800-787-5150
Emergency tel: 1-800-424-9300 (CHEMTREC)

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous ingredients:
N-BUTYL ACETATE 1-10%
EINECS: 204-658-1 CAS: 123-86-4
[-] R10; [Xi] R66; [-] R67

•  LOW BOILING POINT NAPHTHA - UNSPECIFIED - SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM. 30-50%
EINECS: 265-199-0 CAS: 64742-95-6
[F+] R12; [Xi] R38; [N] R51/53; [Xn] R65

• 2-METHOXY-1-METHYLETHYL ACETATE 10-30%
EINECS: 203-603-9 CAS: 108-65-6
[-] R10; [Xi] R36

• ALIPHATIC POLYISOCYANATE 30-50%
CAS: 28182-81-2
[Sens.] R43

3. HAZARDS IDENTIFICATION

Main hazards: Flammable. Harmful by inhalation. May cause sensitisation by inhalation and skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Other hazards: May cause sensitisation by skin contact.

[cont...]
4. FIRST AID MEASURES (SYMPTOMS)

Skin contact: There may be irritation and redness at the site of contact.
Eye contact: There may be irritation and redness.
Ingestion: There may be soreness and redness of the mouth and throat.
Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

4. FIRST AID MEASURES (ACTION)

Skin contact: Wash immediately with plenty of soap and water. Remove all contaminated clothes and footwear immediately unless stuck to skin.
Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.
Ingestion: Do not induce vomiting. Wash out mouth with water. Consult a doctor.
Inhalation: Remove casualty from exposure ensuring one’s own safety whilst doing so. Consult a doctor.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Carbon dioxide. Dry chemical powder. Alcohol or polymer foam. Do not use water.
Protection of fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to section 8 of SDS for personal protection details.
Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.
Clean-up procedures: Absorb into dry earth or sand. Wash the spillage site with large amounts of water.

7. HANDLING AND STORAGE

Handling requirements: Ensure there is sufficient ventilation of the area. Smoking is forbidden.
Storage conditions: Store in cool, well ventilated area. Keep away from sources of ignition. Keep container tightly closed.
Suitable packaging: Must only be kept in original packaging.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous ingredients: N-BUTYL ACETATE
   TWA (8 hr exposure limit): 724 mg/m³ STEL (15 min exposure limit): 966 mg/m³ (OES)
   • 2-METHOXY-1-METHYLETHYL ACETATE
      TWA (8 hr exposure limit): 274 mg/m³ STEL (15 min exposure limit): 822 mg/m³ (OES)
Engineering measures: Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.
Respiratory protection: Compressed airline breathing apparatus (EN139).
Hand protection: Nitrile gloves.
Eye protection: Face-shield.
Skin protection: Protective clothing with elasticated cuffs and closed neck.

[cont...]
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Aromatic</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Also soluble in</td>
<td>Most organic solvents.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Non-viscous</td>
</tr>
<tr>
<td>Viscosity value</td>
<td>100 cps</td>
</tr>
<tr>
<td>Flammability limits %: lower</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>upper</td>
</tr>
<tr>
<td></td>
<td>7.6</td>
</tr>
<tr>
<td>Flash point °C</td>
<td>27</td>
</tr>
<tr>
<td>Autoflammability °C</td>
<td>370</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.0</td>
</tr>
<tr>
<td>VOC g/l</td>
<td>595</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Heat. Sources of ignition. Flames.</td>
</tr>
<tr>
<td>Haz. decomp. products</td>
<td>In combustion emits toxic fumes of carbon dioxide / carbon monoxide.</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous ingredients</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-BUTYL ACETATE</td>
<td>ORL MUS LD50 6 gm/kg</td>
</tr>
<tr>
<td></td>
<td>ORL RAT LD50 10768 mg/kg</td>
</tr>
<tr>
<td>LOW BOILING POINT NAPHTHA</td>
<td>UNSPECIFIED - SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.</td>
</tr>
<tr>
<td></td>
<td>ORL RAT LD50 8400 mg/kg</td>
</tr>
<tr>
<td>2-METHOXY-1-METHYLETHYL ACETATE</td>
<td>IPR MUS LD50 750 mg/kg</td>
</tr>
<tr>
<td></td>
<td>ORL RAT LD50 8532 mg/kg</td>
</tr>
<tr>
<td>Chronic toxicity</td>
<td>May cause sensitisation by skin contact.</td>
</tr>
<tr>
<td>Routes of exposure</td>
<td>Refer to section 4 of SDS for routes of exposure and corresponding symptoms.</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Not biodegradable.</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>No data available.</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>Very toxic to aquatic organisms.</td>
</tr>
</tbody>
</table>

[cont...]
13. DISPOSAL CONSIDERATIONS

Disposal operations: D10 Incineration on land.
R1 Solvent reclamation/regeneration.

Disposal of packaging: Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

NB: The user’s attention is drawn to the possible existence of regional or national regulations regarding disposal.

14. TRANSPORT INFORMATION

ADR / RID

UN no: 1263
ADR Class: 3
Packing group: III
Classification code: F1
Shipping name: PAINT RELATED MATERIAL
Labelling: 3
Hazard ID no: 30

IMDG / IMO

UN no: 1263
Class: 3
Packing group: III
EmS: F-E,S-E
Marine pollutant: .
Labelling: 3

IATA / ICAO

UN no: 1263
Class: 3
Packing group: III
Packing instructions: 309(P&CA); 310(CAO)
Labelling: 3

15. REGULATORY INFORMATION

Hazard symbols: Dangerous for the environment.
Harmful.

Risk phrases: R10: Flammable.
R20: Harmful by inhalation.
R42/43: May cause sensitisation by inhalation and skin contact.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases: S23 Do not breathe vapour/spray
S24: Avoid contact with skin.

[cont...]
S42: During fumigation / spraying wear suitable respiratory equipment.
S63: In case of accident by inhalation, remove casualty to fresh air and keep at rest.

Precautionary phrases: Contains isocyanates. See information supplied by the manufacturer.

VbF: All

Water hazard class: 1

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Risk phrases used in s.2: R10: Flammable.
R66: Repeated exposure may cause skin dryness or cracking.
R67: Vapours may cause drowsiness and dizziness.
R12: Extremely flammable.
R38: Irritating to skin.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65: Harmful: may cause lung damage if swallowed.
R36: Irritating to eyes.
R43: May cause sensitisation by skin contact.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Addition of reducers, hardeners and other additives over and above U-POL's recommendations for use, may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, this company shall not be held liable for any damage resulting from handling or from contact with the above product.