SAFETY DATA SHEET
HIGH STRENGTH RETAINER

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

PRODUCT NAME: HIGH STRENGTH RETAINER
PRODUCT NO.: 303
APPLICATION: Anaerobic thread locking resin
SUPPLIER: ORAPI APPLIED LIMITED, SPRING ROAD, SMETHWICK, WEST MIDLANDS, B66 1PT, ENGLAND
Tel: 0121-525-4000
Fax: 0121-525-4919
Lee Baughan
lee.baughan@orapiapplied.com
EMERGENCY TELEPHONE: 0121 525 4000 (09:00 - 17:00 hrs)

2 HAZARDS IDENTIFICATION

Irritating to eyes, respiratory system and skin. May cause sensitisation by skin contact.
CLASSIFICATION: Xi;R36/37/38. R43.

3 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>EC No.</th>
<th>CAS-No.</th>
<th>Content</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALIPHATIC URETHANE ACRYLATE</td>
<td></td>
<td></td>
<td>30-60%</td>
<td>Xi;R36</td>
</tr>
<tr>
<td>2,2-BIS(ACRYLOYLOXYMETHYL)BUTYL ACRYLATE</td>
<td>239-701-3</td>
<td>15625-89-5</td>
<td>5-10%</td>
<td>R43 Xi;R36/38</td>
</tr>
<tr>
<td>2-HYDROXYPROPYL METHACRYLATE</td>
<td>213-090-3</td>
<td>923-26-2</td>
<td>5-10%</td>
<td>R43 Xi;R36</td>
</tr>
<tr>
<td>ACRYLIC ACID</td>
<td>201-177-9</td>
<td>79-10-7</td>
<td>1-5%</td>
<td>R10 C;R35 Xn;R20/21/22 N;R50</td>
</tr>
<tr>
<td>CUMENE HYDROPEROXIDE</td>
<td>201-254-7</td>
<td>80-15-9</td>
<td>1-5%</td>
<td>O;R7 T;R23 C;R34 Xn;R21/22,R48/20/22 N;R51/53</td>
</tr>
<tr>
<td>MEQUINOL</td>
<td>205-769-8</td>
<td>150-76-5</td>
<td>0.1 - 1%</td>
<td>Xn;R22 R43 Xi;R36</td>
</tr>
<tr>
<td>2-PHENYLACETOHYDRAZIDE</td>
<td>204-055-3</td>
<td>114-83-0</td>
<td>0.1 - 1%</td>
<td>Xn;R20/21/22. Carc. Cat. 3;R40. Xi;R36/37/38. R43.</td>
</tr>
<tr>
<td>CUMENE</td>
<td>202-704-5</td>
<td>98-82-8</td>
<td>0.1 - 1%</td>
<td>R10 Xn;R65 Xe;R37 N;R51/53</td>
</tr>
<tr>
<td>N,N-DIMETHYL-PARA-TOLUIDINE</td>
<td>202-805-4</td>
<td>99-97-8</td>
<td>0.1 - 1%</td>
<td>T;R23/24/25 R33 R52/53</td>
</tr>
</tbody>
</table>

The Full Text for all R-Phrases are Displayed in Section 16

4 FIRST-AID MEASURES

INHALATION
Remove victim immediately from source of exposure. Move into fresh air and keep at rest. Get medical attention if any discomfort continues.

INGESTION
Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions.

SKIN CONTACT
Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if irritation persists after washing.

EYE CONTACT
Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if any discomfort continues.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
This product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Do not use water as an extinguisher.
HIGH STRENGTH RETAINER

SPECIAL FIRE FIGHTING PROCEDURES
Avoid breathing fire vapours. Ventilate closed spaces before entering them.

UNUSUAL FIRE & EXPLOSION HAZARDS
No unusual fire or explosion hazards noted.

SPECIFIC HAZARDS
By fire, toxic gases may be formed (COx, NOx).

PROTECTIVE MEASURES IN FIRE
Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Avoid inhalation of vapours and contact with skin and eyes.

ENVIRONMENTAL PRECAUTIONS
Do not discharge onto the ground or into water courses.

SPILL CLEAN UP METHODS
Ventilate well. Absorb spillage with non-combustible, absorbent material. Transfer to a container for disposal.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS
Avoid contact with skin and eyes.

STORAGE PRECAUTIONS
Keep in original container. Keep containers tightly closed. Unsuitable containers: common metals (iron, aluminium, copper). Do not store near heat sources or expose to high temperatures.

STORAGE CLASS
Chemical storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Name</th>
<th>Std</th>
<th>TWA - 8 hrs</th>
<th>STEL - 15 min</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACRYLIC ACID</td>
<td>OES</td>
<td>10 ppm</td>
<td>30 mg/m³</td>
<td>20 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30 mg/m³</td>
<td>60 mg/m³</td>
<td></td>
</tr>
<tr>
<td>CUMENE</td>
<td>WEL</td>
<td>25 ppm(Sk)</td>
<td>125 mg/m³(Sk)</td>
<td>50 ppm(Sk)</td>
</tr>
<tr>
<td>MEQUINOL</td>
<td>OES</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WEL = Workplace Exposure Limit.

PROTECTIVE EQUIPMENT

ENGINEERING MEASURES
Provide adequate ventilation. Observe Workplace Exposure Limits and minimise the risk of inhalation of vapours.

RESPIRATORY EQUIPMENT
If ventilation is insufficient, suitable respiratory protection must be provided.

HAND PROTECTION
Chemical resistant gloves required for prolonged or repeated contact. Use protective gloves made of: Neoprene.

EYE PROTECTION
Wear approved safety goggles.

HYGIENE MEASURES
Wash at the end of each work shift and before eating, smoking and using the toilet.

9 PHYSICAL AND CHEMICAL PROPERTIES
HIGH STRENGTH RETAINER

APPEARANCE Clear liquid
COLOUR Green
ODOUR Sweetish
SOLUBILITY Insoluble in water Soluble in Hydrocarbons.

RELATIVE DENSITY 1.08
pH-VALUE, CONC. SOLUTION 3 - 5
VAPOUR PRESSURE <0.1 mmHg 20°C
VISCOSITY 2500 cps

10 STABILITY AND REACTIVITY

STABILITY
Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID
Avoid contact with strong oxidisers. May attack light-alloy metals and liberate hydrogen gas. In contact with metals generates hydrogen gas, which together with air can form explosive mixtures.

HAZARDOUS POLYMERISATION
May polymerise.

POLYMERISATION DESCRIPTION
Avoid heat.

MATERIALS TO AVOID
Strong oxidising substances. Chemically active metals.

HAZARDOUS DECOMPOSITION PRODUCTS
During fire, toxic gases (CO, CO2) are formed. By heating, vapours/gases hazardous to health may be formed.

11 TOXICOLOGICAL INFORMATION

INHALATION
Irritating to respiratory system. May cause irritation to the respiratory system.

INGESTION
May cause discomfort if swallowed. May cause stomach pain or vomiting. Liquid irritates mucous membranes and may cause abdominal pain if swallowed.

SKIN CONTACT
Irritating to skin. Prolonged or repeated exposure may cause severe irritation. May cause sensitisation by skin contact. Risk of sensitisation or allergic reactions among sensitive individuals.

EYE CONTACT
Irritating to eyes. Irritation of eyes and mucous membranes. Extreme irritation of eyes and mucous membranes, including burning and tearing.

12 ECOLOGICAL INFORMATION

ECOTOXICITY
The product is not expected to be hazardous to the environment.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS
Dispose of waste and residues in accordance with local authority requirements. Contact specialist disposal companies.

14 TRANSPORT INFORMATION

GENERAL
The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

RAIL TRANSPORT NOTES
Not Classified.

SEA TRANSPORT NOTES
Not Classified.

15 REGULATORY INFORMATION

LABELLING
HIGH STRENGTH RETAINER

CONTAINS

2,2-BIS(ACRYLOYLOXYMETHYL)BUTYL ACRYLATE
2-HYDROXYPROPYL METHACRYLATE

RISK PHRASES

R36/37/38 Irritating to eyes, respiratory system and skin.
R43 May cause sensitisation by skin contact.

SAFETY PHRASES

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.
S51 Use only in well-ventilated areas.

UK REGULATORY REFERENCES

Chemicals (Hazard Information & Packaging) Regulations.

EU DIRECTIVES


STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations. Control of Substances Hazardous to Health.

APPROVED CODE OF PRACTICE

Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply.

GUIDANCE NOTES

Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

NATIONAL REGULATIONS


16 OTHER INFORMATION

GENERAL INFORMATION

For further information or advice contact our technical service line during regular office hours on 0121-524-1000.

This safety data sheet has been compiled for the product as supplied, properties and hazards will vary if the product is diluted with water or mixed with any other material.

REVISION COMMENTS

The information contained herein is based on known available data believed to be reliable but does not constitute the users own assessment of the workplace risk as required by other Health and Safety Legislation.

REVISION DATE 19-03-2010

REV. NO./REPL. SDS GENERATED 01/07

SDS NO. 2

SAFETY DATA SHEET STATUS

Approved.

DATE 19-03-2010

SIGNATURE Health and Safety Manager
RISK PHRASES IN FULL

R10  Flammable.
R20/21/22  Harmful by inhalation, in contact with skin and if swallowed.
R21/22  Harmful in contact with skin and if swallowed.
R22  Harmful if swallowed.
R23  Toxic by inhalation.
R23/24/25  Toxic by inhalation, in contact with skin and if swallowed.
R33  Danger of cumulative effects.
R34  Causes burns.
R35  Causes severe burns.
R36  Irritating to eyes.
R36/37/38  Irritating to eyes, respiratory system and skin.
R36/38  Irritating to eyes and skin.
R37  Irritating to respiratory system.
R40  Limited evidence of a carcinogenic effect.
R43  May cause sensitisation by skin contact.
R48/20/22  Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R50  Very toxic to aquatic organisms.
R51/53  Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53  Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65  Harmful: may cause lung damage if swallowed.
R7  May cause fire.

DISCLAIMER

This 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. Such information is, to the best of the company’s knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user’s responsibility to satisfy himself as to the suitability of such information for his own particular use.