

## \*\*\* SAFETY DATA SHEET \*\*\*

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME..... PERMA-LOK LH 050

PermaBond, Division of National Starch & Chemical  
 Woodside Road  
 Eastleigh  
 Hants.  
 S050 4EX  
 United Kingdom  
 EMERGENCY TELEPHONE:  
 (44) 01703 629628 (Business hours)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY..... Methacrylate Ester

| COMPONENT                           | CAS NUMBER | CONCENTRATION RANGES | EEC SYMBOL/<br>RISK PHRASES |
|-------------------------------------|------------|----------------------|-----------------------------|
| Tetraethylene glycol dimethacrylate | 109-17-1   | 35-50%               | Xi<br>R36/37/38, R43        |

## 3. HAZARDS IDENTIFICATION

Irritant. Sensitiser.

EYE..... Irritating, but does not injure eye tissue.  
 SKIN CONTACT..... Frequent or prolonged contact may irritate the skin and cause sensitization.  
 INHALATION..... Vapours may be irritating to respiratory system and nasal passages.  
 INGESTION..... Low order of toxicity. No hazard in normal industrial use.

## 4. FIRST-AID MEASURES

EYE..... Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.  
 SKIN CONTACT..... Flush with large amounts of water; use soap if available. If irritation

## \*\*\* SAFETY DATA SHEET \*\*\*

---

#### 4. FIRST-AID MEASURES ( Continued )

---

|                 |   |
|-----------------|---|
| INHALATION..... | persists, get medical attention. Remove to fresh air. Get medical attention if irritation persists.   |
| INGESTION.....  | DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. |

---

#### 5. FIREFIGHTING MEASURES

---

|                                     |  |
|-------------------------------------|--|
| AUTOFLAMMABILITY.....               | Not Applicable   |
| FLASH POINT.....                    | 110 C  |
| EXTINGUISHING MEDIA.....            | CO <sub>2</sub> ; Dry chemical; Foam; Water fog  |
| SPECIAL FIREFIGHTING PROCEDURES.... | Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes |
| FIRE & EXPLOSION HAZARDS.....       | Combustion may release noxious or toxic vapours. See below.  |
| HAZARDOUS COMBUSTION PRODUCTS.....  | Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.                           |
| UPPER EXPLOSION LIMIT (%).....      | Not Applicable   |
| LOWER EXPLOSION LIMIT (%).....      | Not Applicable   |

---

#### 6. ACCIDENTAL RELEASE MEASURES

---

|                                |  |
|--------------------------------|--|
| SPILL AND LEAK PROCEDURES..... | Take up with sand or other absorbent material and place in container for later disposal. |
|--------------------------------|--|

For safety and environmental precautions, please review entire Safety Data Sheet for necessary information.

---

#### 7. HANDLING AND STORAGE

---

|                          |                           |
|--------------------------|---------------------------|
| STORAGE TEMPERATURE..... | Ambient.                  |
| SPECIAL SENSITIVITY..... | Keep away from heat.      |
| HANDLING/STORAGE.....    | Store in cool, dry place. |

## \*\*\* SAFETY DATA SHEET \*\*\*

---

7. HANDLING AND STORAGE ( Continued )

---

VENTILATION REQUIREMENTS..... General; Normal room ventilation should be adequate. If vapours or dust are a nuisance near the work area, local mechanical ventilation should be provided.

SENSITIVE TO STATIC ELECTRICITY?... No

SENSITIVITY TO MECHANICAL IMPACT... No

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

---

VENTILATION REQUIREMENTS..... General; Normal room ventilation should be adequate. If vapours or dust are a nuisance near the work area, local mechanical ventilation should be provided.

EYE PROTECTION REQUIREMENTS..... Wear chemical goggles.

GLOVE REQUIREMENTS..... Wear rubber, neoprene, or vinyl gloves.

CLOTHING REQUIREMENTS..... Overalls or lab coat should be worn.

RESPIRATORY REQUIREMENTS..... None required under normal handling conditions.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

PURE SUBSTANCE OR PREPARATION..... Preparation

PHYSICAL FORM..... Liquid

APPEARANCE/ODOUR..... White; Slight odour

ODOUR THRESHOLD..... Not available.

pH AS IS..... Not Applicable

BOILING POINT..... Not Applicable

MELTING/FREEZING POINT..... Not Applicable

SOLUBILITY IN WATER..... Insoluble

PARTITION COEFFICIENT  
(n-octanol/water)..... Not Applicable

RELATIVE DENSITY..... 1.070

EVAPORATION RATE..... Not Applicable

VAPOUR PRESSURE (mmHg)..... 0.01 (25 C)

VAPOUR DENSITY (air=1)..... 1.01

VISCOSITY..... 200000 cps

VOLATILES..... None.

VOLATILE ORGANIC COMPOUNDS..... 10 g/l

AUTOFLAMMABILITY..... Not Applicable

## \*\*\* SAFETY DATA SHEET \*\*\*

---

9. PHYSICAL AND CHEMICAL PROPERTIES ( Continued )

---

FLASH POINT..... 110 C  
OXIDIZING PROPERTIES..... Not Applicable

---

## 10. STABILITY AND REACTIVITY

---

STABILITY..... Stable  
MATERIALS TO AVOID..... Oxidizers  
HAZARDOUS DECOMPOSITION PRODUCTS... Thermal decomposition could produce carbon monoxide, carbon dioxide, and unidentified organic compounds.  
HAZARDOUS POLYMERIZATION  
CONDITIONS..... An oxygen-free atmosphere may cause hazardous polymerization.

---

## 11. TOXICOLOGICAL INFORMATION

---

CHRONIC (LONG TERM) EFFECTS OF EXPOSURE

---

ROUTE OF ENTRY..... Inhalation; Skin contact; Eye contact  
EFFECTS OF CHRONIC EXPOSURE..... Although this product has not been tested for chronic effects it is judged as having a low order of toxicity based on component information. Use of good industrial hygiene practices is recommended.  
TARGET ORGANS..... Skin  
SPECIAL HEALTH EFFECTS..... Sensitiser.

---

## 12. ECOLOGICAL INFORMATION

---

POTENTIAL EFFECT ON ENVIRONMENT.... Unknown.  
MOBILITY..... Unknown.  
PERSISTENCE AND DEGRADABILITY..... Unknown  
POTENTIAL TO BIOACCUMULATE..... Unknown  
ECOTOXICITY..... Unknown.  
AQUATIC TOXICITY..... None established.

## \*\*\* SAFETY DATA SHEET \*\*\*

---

13. DISPOSAL CONSIDERATIONS

---

WASTE DISPOSAL METHODS..... Waste disposal should be in accordance with existing Community, National and local regulations.

EMPTY CONTAINER WARNINGS..... Empty containers may contain product residue; follow SDS and label warnings even after they have been emptied.

---

## 14. TRANSPORT INFORMATION (See also section 9)

---

ADR/RID..... Not Applicable

CEFIC TREMCARD NUMBER..... Not Applicable

HAZCHEM CODE..... Not Applicable

KEMMLER CODE..... Not Applicable

IMDG CLASSIFICATION..... Not Applicable

IATA CLASSIFICATION..... Not Applicable

MARINE POLLUTANT..... No

U.N. NUMBER (S.I.N.)..... Not Applicable

U.N. CLASS, PACKING GROUP..... Not Applicable

---

## 15. REGULATORY INFORMATION

---

EEC HAZARD CLASSIFICATION..... Irritant.

RISK PHRASES..... R36/37/38 - Irritating to eyes, respiratory system and skin. R43 - May cause sensitization by skin contact.

SAFETY PHRASES..... S24 - Avoid contact with skin. S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37 - Wear suitable gloves.

Directives 88/379/EEC and 91/155/EEC have been considered when compiling this SDS; the information is provided for health and safety assessment by an industrial user. Reference should be made to any relevant local or national health, safety, and environmental legislation. This information does not constitute indication of suitability for specific uses.

\*\*\* SAFETY DATA SHEET \*\*\*

---

16. OTHER INFORMATION

---

MSDS DATE..... 5 September, 1996

FOR REGULATORY INFORMATION, CONTACT:

Simon Ward  
Product Assurance Supervisor  
Adhesives - Europe  
National Starch & Chemical Ltd.  
Galvin Road  
Slough, Berkshire SL1 4DF  
United Kingdom  
Telephone: (+44) 01753 533494  
FAX: (+44) 01753 577704