1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Transpoxy Barrier
- **Article number:** 2.18 (B)
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Coating material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** KOSSAN PAINT (M) SDN. BHD.
  1,Jalan Koperat 1/KU9, Taman Perindustrian Meru, 42200 Kapar, Selangor Darul Ehsan, Malaysia.
- **Further information obtainable from:**
  Product safety department.
  lskeong@kop.com.my
- **Emergency telephone number:**
  Manufacturer/supplier
  603-33922799

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - GHS02 flame
    Flam. Liq. 3 H226 Flammable liquid and vapour.
  - GHS05 corrosion
    Eye Dam. 1 H318 Causes serious eye damage.
  - GHS07
    Skin Irrit. 2 H315 Causes skin irritation.
    Skin Sens. 1 H317 May cause an allergic skin reaction.
    STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Hazard description:** Xn Harmful
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
  - R 10 Flammable.
  - R 22 Harmful if swallowed.
  - R 37/38 Irritating to respiratory system and skin.
  - R 41 Risk of serious damage to eyes.
  - R 43 May cause sensitisation by skin contact.
  - R 67 Vapours may cause drowsiness and dizziness.

(Contd. on page 2)
Trade name: Transpoxy Barrier

- Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- Label elements

- Labelling according to EU guidelines:
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- Code letter and hazard designation of product: Xn Harmful

- Hazard-determining components of labelling: 3,6-diazaoctanethylenediamin

- Risk phrases:
10 Flammable.
22 Harmful if swallowed.
37/38 Irritating to respiratory system and skin.
41 Risk of serious damage to eyes.
43 May cause sensitisation by skin contact.
67 Vapours may cause drowsiness and dizziness.

- Safety phrases: 2 Keep out of the reach of children.

- Other hazards

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Ingredient</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-36-3</td>
<td>200-751-6</td>
<td>butan-1-ol</td>
<td>10-25%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Xn R22; Xi R37/38-41</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>R10-67</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flam. Liq. 3, H226; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336</td>
<td></td>
</tr>
<tr>
<td>112-24-3</td>
<td>203-950-6</td>
<td>3,6-diazaoctanethylenediamin</td>
<td>2.5-10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C R34; Xn R21; Xi R43</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>R52/53</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin Corr. 1B, H314; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412</td>
<td></td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- Description of first aid measures
- General information:
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation:
  Supply fresh air and to be sure call for a doctor.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
5 Firefighting measures

- Extinguishing media:
  - Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters:
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures:
  - Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  - Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
  - Do not flush with water or aqueous cleansing agents.
- Reference to other sections:
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

7 Handling and storage

- Handling:
  - Precautions for safe handling:
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
  - Information about fire - and explosion protection:
    - Keep ignition sources away - Do not smoke.
    - Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities:
  - Storage:
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: Keep container tightly sealed.
    - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.

(Contd. on page 4)
Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>71-36-3</td>
<td>butan-1-ol (10-25%)</td>
<td>WEL: Short-term value: 154 mg/m³, 50 ppm</td>
</tr>
</tbody>
</table>

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

Respiratory protection:
- In case of brief exposure or low pollution use respiratory filter device.
- In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:
- Form: Liquid
- Colour: Amber coloured
- Odour: Ammoniacal
- Odour threshold: Not determined.
### Trade name: Transpoxy Barrier

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
<td>Undetermined</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>&gt; 100 °C</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>46 °C</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous):</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong></td>
<td>340 °C</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Self-igniting:</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong></td>
<td>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>1.5 Vol %</td>
</tr>
<tr>
<td>Upper:</td>
<td>9.4 Vol %</td>
</tr>
<tr>
<td><strong>Vapour pressure at 20 °C:</strong></td>
<td>6.7 hPa</td>
</tr>
<tr>
<td><strong>Density at 20 °C:</strong></td>
<td>1.01 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with water:</strong></td>
<td>Not miscible or difficult to mix.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Kinematic:</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solvent content:</strong></td>
<td></td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>22.0 %</td>
</tr>
<tr>
<td>VOC (EC)</td>
<td>22.00 %</td>
</tr>
<tr>
<td><strong>Solids content:</strong></td>
<td>75.0 %</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:

- LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>71-36-3 butan-1-ol</th>
<th>Oral LD50</th>
<th>790 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dermal LD50</td>
<td>3400 mg/kg (rabbit)</td>
</tr>
<tr>
<td></td>
<td>Inhalative LC50/4 h</td>
<td>8000 mg/l (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Strong irritant with the danger of severe eye injury.
  - Sensitization: Sensitization possible through skin contact.
  - Additional toxicological information:
    The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    Harmful
    Irritant

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
  - Behaviour in environmental systems:
    - Bioaccumulative potential: No further relevant information available.
    - Mobility in soil: No further relevant information available.
  - Additional ecological information:
    - General notes:
      Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
      Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - ADR, IMDG, IATA
  - UN1263
Trade name: Transpoxy Barrier

- UN proper shipping name
  - ADR 1263 PAINT RELATED MATERIAL
  - IMDG, IATA PAINT RELATED MATERIAL

- Transport hazard class(es)
  - ADR, IMDG, IATA Class 3 Flammable liquids.

- Packing group
  - ADR, IMDG, IATA III

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  - Warning: Flammable liquids.
  - EMS Number: F-E,S-E

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

- UN "Model Regulation": UN1263, PAINT RELATED MATERIAL, 3, III

15 Regulatory information

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
  - H226 Flammable liquid and vapour.
  - H302 Harmful if swallowed.
  - H312 Harmful in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H318 Causes serious eye damage.
  - H335 May cause respiratory irritation.
  - H36 May cause drowsiness or dizziness.
  - H412 Harmful to aquatic life with long lasting effects.
  - R10 Flammable.
  - R21 Harmful in contact with skin.
  - R22 Harmful if swallowed.
  - R34 Causes burns.
  - R37/38 Irritating to respiratory system and skin.
  - R41 Risk of serious damage to eyes.
  - R43 May cause sensitisation by skin contact.
  - R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
  - R67 Vapours may cause drowsiness and dizziness.

- Department issuing MSDS: Product safety department.
- Contact: Mr. S.K. Lim

(Contd. on page 8)
Trade name: Transpoxy Barrier

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
- *Data compared to the previous version altered.*