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

- **Product details**
- **Trade name:** Transpoxy Sealer 1.99 pack B
- **Article number:** 199b
- **Application of the substance/preparation:** Epoxy curing agent
- **Manufacturer/supplier:**
  KOSSAN PAINT (M) SDN. BHD.
  1, Jalan Koporat 1/KU 9, Taman Perindustrian Meru
  42200 Kapar, Selangor D.E. Malaysia.
  (Member of Transocean Coating)
- **Information in case of emergency:**
  Manufacturer/supplier.
  lskheong@kop.com.my

2 Hazards identification

- **Hazard description:**
  Xn Harmful
  F Highly flammable

- **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 11       Highly flammable.
  R 20/21    Harmful by inhalation and in contact with skin.
  R 38       Irritating to skin.
  R 41       Risk of serious damage to eyes.

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

- **GHS label elements**

  - **Danger**
    2.6/2 - Highly flammable liquid and vapour.

  - **Danger**
    3.3/1 - Causes serious eye damage.
    3.2/2 - Causes skin irritation.

  - **Warning**
    3.1/4 - Harmful in contact with skin.
    3.1/4 - Harmful if inhaled.

- **Prevention:**
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  Keep container tightly closed.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting/ equipment.
  Use only non-sparking tools.

(Contd. on page 2)
Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**
- IF ON SKIN: Wash with plenty of soap and water.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.
- Specific treatment (see label).
- Specific measures (see label).
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.
- In case of fire: Use for extinction: CO2, powder or water spray.

**Storage:**
- Store in a well-ventilated place. Keep cool.

**Disposal:**
- Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3 Composition/information on ingredients

**Chemical characterization**

**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Description</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>68410-23-1</td>
<td>reaction product based on fatty acids and polyethyleneamine</td>
<td>25-50%</td>
</tr>
<tr>
<td></td>
<td>Xi; R 41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Danger: 3.3/1</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>toluene</td>
<td>25-50%</td>
</tr>
<tr>
<td>EINECS: 203-625-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Xi, F; R 11-38-48/20-63-65-67</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Danger: 2.6/2, 3.1/1, 3.7/2, 3.9/2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warning: 3.2/2, 3.8/3</td>
<td></td>
</tr>
<tr>
<td>1330-20-7</td>
<td>xylene, mixture of isomers</td>
<td>10-25%</td>
</tr>
<tr>
<td>EINECS: 215-535-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Xi; R 10-20/21-38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Danger: 3.1.D/3, 3.1.I/4, 3.2/2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warning: 2.6/3</td>
<td></td>
</tr>
<tr>
<td>90-72-2</td>
<td>2,4,6-tris(dimethylaminomethyl)phenol</td>
<td>2.5-10%</td>
</tr>
<tr>
<td></td>
<td>Xi; R 22-36/38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Danger: 3.1.O/3, 3.2/1C</td>
<td></td>
</tr>
</tbody>
</table>

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

### 4 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.
Trade name: Transpoxy Sealer 1.99 pack B

- **After inhalation:**
  Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
  In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**
  Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:**
  Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**
  If symptoms persist consult doctor.

### 5 Fire-fighting measures

- **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.

- **Measures for environmental protection:** Do not allow to enter sewers/surface or ground water.

- **Measures for cleaning/collection:**
  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

### 7 Handling and storage

- **Handling:**
  - **Information 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.

- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:**
    Keep container tightly sealed.
    Store in cool, dry conditions in well sealed receptacles.

### 8 Exposure controls/personal protection

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

- **Ingredients with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>WEL Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 toluene (25-50%)</td>
<td>384 mg/m³, 100 ppm</td>
<td>191 mg/m³, 50 ppm</td>
</tr>
<tr>
<td>Sk</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Contd. on page 4)
Trade name: Transpoxy Sealer 1.99 pack B

1330-20-7 xylene, mixture of isomers (10-25%)
WEL Short-term value: 441 mg/m³, 100 ppm
Long-term value: 220 mg/m³, 50 ppm
Sk: BMGV

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

· 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 break trough 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

· General Information

  Form: Fluid
  Colour: According to product specification
  Odour: Characteristic

· Change in condition

  Boiling point/Boiling range: 110°C

· Flash point: 4°C
Trade name: Transpoxy Sealer 1.99 pack B

- Ignition temperature: 500°C
- Self-igniting: Product is not selfigniting.
- Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
  
  - Explosion limits:
    - Lower: 1.1 Vol %
    - Upper: 7.0 Vol %
  
  - Vapour pressure at 20°C: 29 hPa
  
  - Density at 20°C: 0.92 g/cm³
  
  - Solubility in / Miscibility with water: Not miscible or difficult to mix.

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Dangerous reactions: No dangerous reactions known.
- Dangerous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:
  
  - LD/LC50 values relevant for classification:

  108-88-3 toluene
  
<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>5000 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>12124 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>5320 mg/l (mouse)</td>
</tr>
</tbody>
</table>

  1330-20-7 xylene, mixture of isomers
  
<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>4300 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>2000 mg/kg (rabbit)</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: No sensitizing effects known.

- 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

- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

- Product:
  - 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

- Land transport ADR/RID (cross-border)
  - ADR/RID class: 3 Flammable liquids.
  - Danger code (Kemler): 38
  - UN-Number: 1263
  - Packaging group: III
  - Hazard label: 3
  - Description of goods: 1263 PAINT RELATED MATERIAL, special provision 640E

- Maritime transport IMDG:
  - IMDG Class: 3
  - UN Number: 1263
  - Label: 3
  - Packaging group: III
  - EMS Number: F-E,S-C
  - Marine pollutant: No
  - Proper shipping name: PAINT RELATED MATERIAL

- Air transport ICAO-TI and IATA-DGR:
  - ICAO/IATA Class: 3
  - UN/ID Number: 1263
Trade name: Transpoxy Sealer 1.99 pack B

- Label 3
- Packaging group: III
- Proper shipping name: PAINT RELATED MATERIAL
- UN "Model Regulation": UN1263; PAINT RELATED MATERIAL; 3; III

* 15 Regulatory information

- 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
  F Highly flammable

- Hazard-determining components of labelling:
xylene, mixture of isomers
toluene

- Risk phrases:
  11 Highly flammable.
  20/21 Harmful by inhalation and in contact with skin.
  38 Irritating to skin.
  41 Risk of serious damage to eyes.

- Safety phrases:
  23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

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 R-phrases
  10 Flammable.
  11 Highly flammable.
  20/21 Harmful by inhalation and in contact with skin.
  22 Harmful if swallowed.
  36/38 Irritating to eyes and skin.
  38 Irritating to skin.
  41 Risk of serious damage to eyes.
  48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
  63 Possible risk of harm to the unborn child.
  65 Harmful: may cause lung damage if swallowed.
  67 Vapours may cause drowsiness and dizziness.

- 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)
  RID: Reglement internationale concernent le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  IMDG: International Maritime Code for Dangerous Goods
**Trade name: Transpoxy Sealer 1.99 pack B**

- **IATA**: International Air Transport Association
- **IATA-DGR**: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
- **ICAO**: International Civil Aviation Organization
- **ICAO-TI**: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
- **GHS**: Globally Harmonized System of Classification and Labelling of Chemicals
- **GefStoffV**: Gefährstoffverordnung (Ordinance on Hazardous Substances, Germany)
- **VOC**: Volatile Organic Compounds (USA, EU)
- **LC50**: Lethal concentration, 50 percent
- **LD50**: Lethal dose, 50 percent

* * Data compared to the previous version altered. *