1 Identification of the hazardous chemical and of the supplier

- Product identifier
  - Trade name: Transpoxy Intermediate 2.19 pack A
  - Article number: 219a

- Recommended use of the chemical and restrictions on use
  No further relevant information available.

- Application of the substance/preparation:
  Epoxy coating
  Paint

- Details of the supplier of the safety data sheet
  - Manufacturer/supplier:
    Transocean Coatings
    Kossan Paint (M) Sdn. Bhd.
    1, Jalan Koporat 1/KU 9, Taman Perindustrian Meru
    42200 Kapar Selangor, Malaysia
    Phone: +60-3-33922799
    Fax: +60-3-33923799
  - Emergency telephone number: Manufacturer/Supplier

2 Hazard identification

- Classification of the substance or mixture
  Flam. Liq. 3  H226 Flammable liquid and vapour.
  Skin Irrit. 2  H315 Causes skin irritation.
  Eye Irrit. 2  H319 Causes serious eye irritation.
  Skin Sens. 1  H317 May cause allergic skin reaction.
  Aquatic Chronic 3  H412 Harmful to aquatic life with long lasting effects.

- Label elements
  - GHS label elements
    The product is classified and labelled according to the Globally Harmonised System (GHS).

- Hazard pictograms
  
  GHS02  GHS07

- Signal word
  Warning

- Hazard-determining components of labelling:
  xylene
  reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weigh > 700)
  isobutyl methyl ketone

- Hazard statements
  Flammable liquid and vapour.
  Causes skin irritation.
  Causes serious eye irritation.
  May cause allergic skin reaction.
  Harmful to aquatic life with long lasting effects.
Precautionary statements
Keep away from heat/sparks/open flames/hot surfaces – No smoking.
Use explosion-proof electrical/ventilating/lighting equipment.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3 Composition and information of the ingredients of the hazardous chemical

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

Dangerous components:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>25036-25-3</td>
<td>10-25%</td>
<td>Reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weigh &gt; 700)</td>
</tr>
<tr>
<td>1330-20-7</td>
<td>10-25%</td>
<td>Xylene</td>
</tr>
<tr>
<td>64742-95-6</td>
<td>2,5-10%</td>
<td>Hydrocarbons, C9, aromatics</td>
</tr>
<tr>
<td>108-10-1</td>
<td>2,5-10%</td>
<td>Isobutyl methyl ketone</td>
</tr>
<tr>
<td>12001-26-2</td>
<td>2,5-10%</td>
<td>Mica</td>
</tr>
<tr>
<td>67-63-0</td>
<td>≤ 2,5%</td>
<td>Isopropanol</td>
</tr>
<tr>
<td>107-98-2</td>
<td>≤ 2,5%</td>
<td>Monopropylene glycol methyl ether</td>
</tr>
<tr>
<td>67762-90-7</td>
<td>≤ 2,5%</td>
<td>Reaction product of dimethyl silicones with silica.</td>
</tr>
</tbody>
</table>

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

4 First-aid measures

Description of first aid measures
- 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 Fire-fighting 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:**
  - Inform respective authorities in case of seepage into water course or sewage system.
  - 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).
  - 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.

(Contd. on page 4)
## 8 Exposure controls and personal protection

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

- **Control parameters**

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
<th>PEL (Malaysia) Long-term value: 205 mg/m³, 50 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-10-1 isobutyl methyl ketone</td>
<td></td>
</tr>
<tr>
<td>12001-26-2 Mica</td>
<td>PEL (Malaysia) Long-term value: 3 mg/m³</td>
</tr>
<tr>
<td>67-63-0 isopropanol</td>
<td>PEL (Malaysia) Long-term value: 49 mg/m³, 10 ppm</td>
</tr>
<tr>
<td>107-98-2 monopropylene glycol methyl ether</td>
<td>PEL (Malaysia) Long-term value: 369 mg/m³, 100 ppm</td>
</tr>
</tbody>
</table>

- **DNELs**

<table>
<thead>
<tr>
<th>Hydrocarbons, C9, aromatics</th>
<th>Oral long term DNEL 11 mg/kg/d (General Population)</th>
<th>Dermal long term DNEL 11 mg/kg/d (General Population)</th>
<th>Inhalative long term DNEL 32 mg/m³ (General Population)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25 mg/kg/d (Workers)</td>
<td></td>
<td>150 mg/m³ (Workers)</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 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:** Fluid
    - **Colour:** According to product specification
  - **Odour:** Characteristic
  - **Odour threshold:** Not determined.
  - **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/freezing point**
    Undetermined.
  - **Initial boiling point and boiling range**
    114 °C

- **Flash point:**
  26 °C

- **Flammability (solid, gas)**
  Not applicable.

- **Ignition temperature:**
  450 °C

- **Decomposition temperature:**
  Not determined.

- **Auto-ignition temperature**
  Product is not selfigniting.

- **Explosive properties:**
  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:**
  6,7 hPa

- **Density at 20 °C:**
  1,45482 g/cm³

- **Relative density**
  Not determined.

- **Vapour density**
  Not determined.

- **Evaporation rate**
  Not determined.

- **Solubility in / Miscibility with water:**
  Not miscible or difficult to mix.

- **Partition coefficient: n-octanol/water**
  Not determined.
10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **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**

<table>
<thead>
<tr>
<th>LD/EC50 values relevant for classification:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-95-6 Hydrocarbons, C9, aromatics</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>3492 mg/kg (rat)</td>
</tr>
<tr>
<td>LC50/96 hr</td>
<td>9,2 mg/l (Rainbow trout (Oncorhynchus mykiss))</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>&gt;3160 mg/kg (rab)</td>
</tr>
<tr>
<td>Inhalative LD50</td>
<td>&gt;6193 mg/l (rat)</td>
</tr>
</tbody>
</table>

- **Primary irritant effect:**
  - **Skin corrosion or irritation** Irritant to skin and mucous membranes.
  - **Serious eye damage or eye irritation** Irritating effect.
  - **Respiratory / skin sensitization** Sensitisation 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:
  Irritant

12 Ecological information

- **Toxicity**

<table>
<thead>
<tr>
<th>Aquatic toxicity:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-95-6 Hydrocarbons, C9, aromatics</td>
<td></td>
</tr>
<tr>
<td>EC 50 (48 hr)</td>
<td>3,2 mg/l (daphnia)</td>
</tr>
<tr>
<td>EC 50 (72 hr)</td>
<td>2,9 mg/l (Algae)</td>
</tr>
</tbody>
</table>

- **Persistence and degradability** No further relevant information available.
### 44.0 Behaviour in environmental systems:
- **Bioaccumulative potential**: No further relevant information available.
- **Mobility in soil**: No further relevant information available.
- **Ecotoxicological effects**:
  - **Remark**: Harmful to fish
- **Additional 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.
  - Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**:
  - **PBT**: Not applicable.
  - **vPvB**: Not applicable.
- **Other adverse effects**: No further relevant information available.

### 13 Disposal information
- **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 Transportation information
- **UN-Number**
  - **ADR, IMDG, IATA**
  - **UN1300**
- **UN proper shipping name**
  - **ADR**
  - **IMDG, IATA**
  - **1300 TURPENTINE SUBSTITUTE**
- **Transport hazard class(es)**
  - **ADR, IMDG, IATA**
- **Class**
  - **Label**
  - **3 Flammable liquids.**
  - **3**
- **Packing group**
  - **ADR, IMDG, IATA**
  - **III**
- **Environmental hazards**:
  - **Marine pollutant**: No
- **Special precautions for user**
  - **Warning**: Flammable liquids.
Trade name: Transpoxy Intermediate 2.19 pack A

* Danger code (Kemler): 30
* EMS Number: F-E,S-E
* Stowage Category A

* Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

* Transport/Additional information:
  * ADR
  * Limited quantities (LQ) 5L
  * Excepted quantities (EQ) Code: E1
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 1000 ml
  * Transport category 3
  * Tunnel restriction code D/E

* IMDG
  * Limited quantities (LQ) 5L
  * Excepted quantities (EQ) Code: E1
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 1000 ml

* UN "Model Regulation": UN 1300 TURPENTINE SUBSTITUTE, 3, III

15 Regulatory information

* Safety, health and environmental regulations/legislation specific for the substance or mixture
* GHS label elements
  The product is classified and labelled according to the Globally Harmonised System (GHS).
* Hazard pictograms
  
  GHS02  GHS07

* Signal word Warning

* Hazard-determining components of labelling:
  xylene
  reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weigh > 700)
  isobutyl methyl ketone

* Hazard statements
  Flammable liquid and vapour.
  Causes skin irritation.
  Causes serious eye irritation.
  May cause allergic skin reaction.
  Harmful to aquatic life with long lasting effects.

* Precautionary statements
  Keep away from heat/sparks/open flames/hot surfaces – No smoking.

(Contd. of page 8)
Use explosion-proof electrical/ventilating/lighting equipment.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Dispose of contents/container in accordance with local/regional/national/international regulations.

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t
- 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.

- Abbreviations and acronyms:
  RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  ICAO: International Civil Aviation Organisation
  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
  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)
  DNEL: Derived No-Effect Level (REACH)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 2: Flammable liquids – Category 2
  Flam. Liq. 3: Flammable liquids – Category 3
  Acute Tox. 4: Acute toxicity - oral – Category 4
  Skin Irrit. 2: Skin corrosion or irritation – Category 2
  Eye Irrit. 2: Serious eye damage or eye irritation – Category 2
  Skin Sens. 1: Skin sensitization – Category 1
  Asp. Haz.: Aspiration hazard – Category 1
  Aquatic Chronic 2: Hazardous to the aquatic environment - chronic hazard – Category 2
  Aquatic Chronic 3: Hazardous to the aquatic environment - chronic hazard – Category 3