SAFETY DATA SHEET



Penguard HSP Comp A

| Section 1. Identification | | |
|--|---|--|
| GHS product identifier | : 快乾環氧漆HSP 組份A | |
| Other means of identification | : Not available. | |
| Product code | : 16600 | |
| Product type | : Liquid. | |
| Product description | : Paint. | |
| Relevant identified uses o | f the substance or mixture and uses advised against | |
| Identified uses | | |
| Use in coatings - Industrial Use in coatings - Profession | | |
| Supplier's details | : 佐敦涂料(张家港)有限公司 江苏省张家港保税区扬子江化学工业园长江路15号 215634 电话: +86 512 58937988 传真: +86 512 58937986 Jotun Coatings (Zhangjiagang) Co. Ltd No.15 Changjiang Road Jiangsu Yangtze River International Chemical Industry Park, Zhangjiagang Free Trade Zone, Jiangsu Province 215634 Tel: +86 512 58937988 Fax: +86 512 58937986 Jotun Paints (Malaysia) Sdn Bhd, Lot 7 Persiaran Perusahaan, Section 23 40300 SHAH ALAM, Selangor Darul Ehsan Malaysia Tel: +603 51235500 Fax: +603 51235599 SDSJotun@jotun.com | |
| Emergency telephone number (with hours of operation) | : Jotun Coatings (Taiwan) Ltd. Co. Tel: +886 2 87705061 | |

Section 2. Hazards identification

| Classification of the substance or mixture | : FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 |
|--|---|
| | Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 18% Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 18% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 18% |
| | Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 18% |

GHS label elements

| Hazard pictograms | : | |
|----------------------------|---|--|
| Signal word | : | Danger. |
| Hazard statements | : | Flammable liquid and vapor. Causes serious eye damage. Causes skin irritation. May cause an allergic skin reaction. |
| Precautionary statements | | |
| Prevention | : | Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Wash hands thoroughly after handling. |
| Response | : | IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention. 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 physician. |
| Storage | 1 | Store in a well-ventilated place. Keep cool. |
| Disposal | : | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Other hazards which do not | | None known |

Other hazards which do not : None known. result in classification

Section 3. Composition/information on ingredients

| Substance/mixture | : Mixture |
|-------------------|------------------|
| Other means of | : Not available. |
| identification | |

| CAS number/other identifiers |
|-------------------------------------|
|-------------------------------------|

| CAS number | : Not applicable. |
|--------------|-------------------|
| Product code | : 16600 |

| Product name | Concentration | CAS number |
|---|--------------------|------------------------|
| epoxy resin (MW ≤ 700) xylene | ≥10 - ≤25 ≤5 | 1675-54-3 1330-20-7 |
| 2-methylpropan-1-ol | ≤5 | 78-83-1 |
| hydrocarbons, c9-unsatd., polymd. 1-methoxy-2-propanol | ≤3 ≤3 | 71302-83-5 107-98-2 |
| ethylbenzene | ≤3 | 100-41-4 |
| Solvent naphtha (petroleum), light arom. | ≤2 | 64742-95-6 |
| 物品名稱 | 濃度 | 化學文摘社登記號碼(CAS No.) |
| 環氧樹脂 (MW≤700) | ≥10 - ≤25 | 1675-54-3 |
| 二甲苯 異丁醇 | $\leq \frac{5}{5}$ | 1330-20-7 78-83-1 |
| Hydrocarbons, C9-unsatd., polymd. | $\leq 5 \leq 3$ | 71302-83-5 |
| 丙二醇甲醚 | ≤3 | 107-98-2 |
| 苯乙烷 輕質芳香烴石腦油 | $\leq^3 \leq^2$ | 100-41-4 64742-95-6 |
| | | |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

| Description of necessary first aid measures | | | |
|---|--|--|--|
| Eye contact | : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. | | |
| Inhalation | : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. | | |
| Skin contact | : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. | | |
| Ingestion | : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. | | |

Most important symptoms/effects, acute and delayed

| Most important sympto | oms/effects, acute and delayed |
|-------------------------|---|
| Potential acute health | <u>effects</u> |
| Eye contact | : Causes serious eye damage. |
| Inhalation | : No known significant effects or critical hazards. |
| Skin contact | : Causes skin irritation. May cause an allergic skin reaction. |
| Ingestion | : No known significant effects or critical hazards. |
| Over-exposure signs/ | symptoms |
| Eye contact | : Adverse symptoms may include the following: pain watering redness |
| Inhalation | : No specific data. |
| Skin contact | : Adverse symptoms may include the following: pain or irritation redness blistering may occur |
| Ingestion | : Adverse symptoms may include the following: stomach pains |
| Indication of immediate | e medical attention and special treatment needed, if necessary |
| Notes to physician | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : No specific treatment. |

Section 4. First aid measures

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

| U | 5 |
|---|--|
| Extinguishing media | |
| Suitable extinguishing media | : Use dry chemical, CO ₂ , water spray (fog) or foam. |
| Unsuitable extinguishing media | : Do not use water jet. |
| Specific hazards arising from the chemical | : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. |
| Hazardous thermal decomposition products | : Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides |
| Special protective actions for fire-fighters | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 6. Accidental release measures

| Personal precautions, protective equipment and emergency procedures | - | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
|---|-----|--|
| Environmental precautions | : | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| Methods and materials for co | ont | ainment and cleaning up |
| Small spill | : | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Large spill | : | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |

Section 7. Handling and storage

| Precautions for safe handling | |
|--|---|
| Protective measures | : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general occupational hygiene | : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| Conditions for safe storage, including any incompatibilities | : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| | |

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|----------------------|---|
| xylene | TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 6/2014). STEL: 542.5 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 434 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. |
| 2-methylpropan-1-ol | TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 6/2014). STEL: 228 mg/m ³ 15 minutes. STEL: 75 ppm 15 minutes. TWA: 152 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. |
| 1-methoxy-2-propanol | TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 6/2014). STEL: 461.25 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 369 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. |
| ethylbenzene | TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 6/2014). STEL: 125 ppm 15 minutes. STEL: 542.5 mg/m ³ 15 minutes. TWA: 100 ppm 8 hours. TWA: 434 mg/m ³ 8 hours. |

| Appropriate engineering controls | : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. |
|----------------------------------|---|
| Individual protection measures | <u>S</u> |
| Respiratory protection | Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. |
| Hand protection | : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. |
| | There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove |
| | material. Always ensure that gloves are free from defects and that they are stored and used correctly. |
| | The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be |
| | applied once exposure has occurred. |
| | Wear suitable gloves tested to EN374. May be used, gloves(breakthrough time) 4 - 8 hours: butyl rubber, neoprene, PVC, 4H, polyvinyl alcohol (PVA) Recommended, gloves(breakthrough time) > 8 hours: Viton®, Responder, Teflon, nitrile rubber |
| Eye protection | : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. |
| Body protection | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. |
| Other skin protection | : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Hygiene measures | : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |

Section 9. Physical and chemical properties

| - | |
|--|---|
| Appearance | |
| Physical state | : Liquid. |
| Color | : Various colors. |
| Odor | : Characteristic. |
| Odor threshold | : Not available. |
| рН | Not applicable. |
| Melting point | : Not applicable. |
| Boiling point | : Lowest known value: 108°C (226.4°F) (2-methylpropan-1-ol). Weighted average: 225.3°C (437.5°F) |
| Flash point | : Closed cup: 29°C (84.2°F) |
| Evaporation rate | : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.75compared with butyl acetate |
| Flammability (solid, gas) | : Not applicable. |
| Lower and upper explosive (flammable) limits | : 0.8 - 13.74% |
| Vapor pressure | : Highest known value: <1.6 kPa (<12 mm Hg) (at 20°C) (2-methylpropan-1-ol). Weighted average: 0.42 kPa (3.15 mm Hg) (at 20°C) |
| Vapor density | Highest known value: 11.7 (Air = 1) (epoxy resin (MW ≤ 700)). Weighted average 8.32 (Air = 1) |
| Relative density | : 1.691 to 1.759 g/cm ³ |
| Solubility | : Insoluble in the following materials: cold water and hot water. |
| Partition coefficient: n- octanol/water | : Not available. |
| Auto-ignition temperature | : Lowest known value: 270°C (518°F) (1-methoxy-2-propanol). |
| Decomposition temperature | : Not available. |
| Viscosity | : Kinematic (40°C (104°F)): >0.205 cm²/s (>20.5 mm²/s) |

Section 10. Stability and reactivity

| Chemical stability | : The product is stable. |
|------------------------------------|---|
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| Incompatible materials | : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids. |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-----------------------------------|-----------------------|---------|-------------|----------|
| 2,2'-[(1-methylethylidene)bis (4, | LD50 Dermal | Rabbit | 20 g/kg | - |
| 1-phenyleneoxymethylene)] | | | | |
| bisoxirane | | | | |
| | LD50 Oral | Mouse | 15600 mg/kg | - |
| xylene | LC50 Inhalation Vapor | Rat | 20 mg/l | 4 hours |
| - | LD50 Oral | Rat | 4300 mg/kg | - |
| | TDLo Dermal | Rabbit | 4300 mg/kg | - |

Section 11. Toxicological information

| 2-methylpropan-1-ol | LC50 Inhalation Vapor | Rat | 19200 mg/m ³ | 4 hours |
|----------------------|-----------------------|--------|-------------------------|---------|
| | LD50 Dermal | Rabbit | 3400 mg/kg | - |
| | LD50 Oral | Rat | 2460 mg/kg | - |
| 1-methoxy-2-propanol | LD50 Dermal | Rabbit | 13 g/kg | - |
| | LD50 Oral | Rat | 6600 mg/kg | - |
| ethylbenzene | LC50 Inhalation Gas. | Rabbit | 4000 ppm | 4 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |
| | I | | | |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|------------------------|---------|-------|--------------------|-------------|
| 2,2'-[(1-methylethylidene)bis (4, | Eyes - Severe irritant | Rabbit | - | 24 hours 2 mg | - |
| 1-phenyleneoxymethylene)] bisoxirane | | | | | |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| 1-methoxy-2-propanol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|--|------------|-------------------|---|
| xylene | Category 3 | Not applicable. | Respiratory tract irritation |
| 2-methylpropan-1-ol | Category 3 | Not applicable. | Respiratory tract irritation and Narcotic effects |
| 1-methoxy-2-propanol | Category 3 | Not applicable. | Narcotic effects |
| Solvent naphtha (petroleum), light arom. | Category 3 | Not applicable. | Respiratory tract irritation and Narcotic effects |

Specific target organ toxicity (repeated exposure)

| Name | | Route of exposure | Target organs |
|--------------|------------|----------------------|----------------|
| ethylbenzene | Category 2 | Not determined | hearing organs |

Aspiration hazard

| Name | Result |
|--------------|--|
| ethylbenzene | ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 |

Information on the likely : Not available. routes of exposure

Potential acute health effects

| Date of issue : | 15.07.2019 |
|-----------------|------------|
|-----------------|------------|

Section 11. Toxicological information

| Eye contact | : Causes serious eye damage. |
|---|--|
| Inhalation | : No known significant effects or critical hazards. |
| Skin contact | : Causes skin irritation. May cause an allergic skin reaction. |
| Ingestion | : No known significant effects or critical hazards. |
| Symptoms related to the phy | vsical, chemical and toxicological characteristics |
| Eye contact | : Adverse symptoms may include the following: pain watering redness |
| Inhalation | : No specific data. |
| Skin contact | : Adverse symptoms may include the following: pain or irritation redness blistering may occur |
| Ingestion | : Adverse symptoms may include the following: stomach pains |
| Delayed and immediate effect Short term exposure Potential immediate effects | cts and also chronic effects from short and long term exposure Not available. |
| Potential delayed effects | : Not available. |
| Long term exposure | |
| Potential immediate effects | : Not available. |
| Potential delayed effects | : Not available. |
| Potential chronic health eff | <u>ects</u> |
| Not available. | |
| General | : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |
| Carcinogenicity | : No known significant effects or critical hazards. |
| Mutagenicity | : No known significant effects or critical hazards. |
| Teratogenicity | : No known significant effects or critical hazards. |
| Developmental effects | : No known significant effects or critical hazards. |
| Fertility effects | : No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|-------|-----------------------------|
| | 18417.6 mg/kg 138.1 mg/l |

Section 12. Ecological information

Toxicity

Section 12. Ecological information

| Product/ingredient name | Result | Species | Exposure |
|--|------------------------------------|----------------------------|----------|
| 2,2'-[(1-methylethylidene)bis (4, | Acute EC50 1.4 mg/l | Daphnia | 48 hours |
| 1-phenyleneoxymethylene)] | | | |
| bisoxirane | | | |
| | Acute LC50 3.1 mg/l | Fish - pimephales promelas | 96 hours |
| | Chronic NOEC 0.3 mg/l | Fish | 21 days |
| 2-methylpropan-1-ol | Chronic NOEC 4000 µg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| ethylbenzene | Acute EC50 7.2 mg/l | Algae | 48 hours |
| - | Acute EC50 2.93 mg/l | Daphnia | 48 hours |
| | Acute LC50 4.2 mg/l | Fish | 96 hours |
| Solvent naphtha (petroleum), light arom. | Acute EC50 <10 mg/l | Daphnia | 48 hours |
| - | Acute IC50 <10 mg/l | Algae | 72 hours |
| | Acute LC50 <10 mg/l | Fish | 96 hours |

Persistence and degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------------|
| 2,2'-[(1-methylethylidene)bis (4, 1-phenyleneoxymethylene)] | - | - | Not readily |
| bisoxirane xylene | - | - | Readily |
| ethylbenzene Solvent naphtha (petroleum), | - | - | Readily Not readily |
| light arom. | | | literoadiny |

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|--|--------------|------------------|------------|
| 2,2'-[(1-methylethylidene)bis (4, | 2.64 to 3.78 | 31 | low |
| 1-phenyleneoxymethylene)] bisoxirane | 2.42 | 0.4 to 05.0 | levu |
| xylene 2-methylpropan-1-ol | 3.12 | 8.1 to 25.9 - | low low |
| hydrocarbons, C9-unsaturated, polymerized | 3.627 | - | low |
| 1-methoxy-2-propanol ethylbenzene | <1 3.6 | - | low low |
| Solvent naphtha (petroleum), light arom. | - | 10 to 2500 | high |

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

| Disposal methods | : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non- recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty |
|------------------|---|
|------------------|---|

Section 13. Disposal considerations

containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | UN | IMDG | IATA |
|-------------------------------|--------|---------------------------------|--------|
| UN number | UN1263 | UN1263 | UN1263 |
| UN proper shipping name | Paint | Paint | Paint |
| Transport hazard class(es) | 3 | 3 | 3 |
| Packing group | Ш | III | III |
| Environmental hazards | No. | No. | No. |
| Additional information | - | Emergency schedules F-E, S-E | - |

ADR / RID : Tunnel restriction code: (D/E)

Hazard identification number: 30

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

| 0 | |
|--|--|
| | his product contains substances "Specially hazardous to health": xylene, -methylpropan-1-ol, butan-1-ol. |
| • | his product contains substances considered to be a "Threat of imminent danger": ylene, 2-methylpropan-1-ol, 1-methoxy-2-propanol, ethylbenzene, butan-1-ol. |
| | lo known specific national and/or regional regulations applicable to this product ncluding its ingredients). |
| Taiwan Chemical : N Substances Inventory (TCSI) | lot determined. |
| International regulations | |
| Chemical Weapon Convention L | ist Schedules I, II & III Chemicals |
| Not listed. | |
| Montreal Protocol (Annexes A, B | ь, С , <u>Е)</u> |
| Not listed. | |
| Stockholm Convention on Persis Not listed. | stent Organic Pollutants |
| Rotterdam Convention on Prior I | nformed Consent (PIC) |
| Not listed. | |
| UNECE Aarhus Protocol on POP Not listed. | s and Heavy Metals |
| | |

| Date of issue | : 15.07.2019 |
|---------------|--------------|
| | |

Section 16. Other information

| <u>History</u> | |
|------------------------|---|
| Date of printing | : 15.07.2019 |
| Date of previous issue | : 01.06.2018 |
| Version | : 1.04 |
| Key to abbreviations | : ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations |

Indicates information that has changed from previously issued version.

Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.