SAFETY DATA SHEET



Date of issue/Date of revision 4 April 2024 Version 2.02

| Section 1. Identification | | |
|--|---|--|
| Product code | : 00426919 | |
| Product name | : SIGMACAP 620 ZP BASE DK GREY | |
| Product type | : Liquid. | |
| Relevant identified uses o | f the substance or mixture and uses advised against | |
| Product use | Coating. Professional applications, Used by spraying. | |
| Supplier's details | : PPG Industries (Singapore) Pte. Ltd., No. 1 Tuas Basin Close, Singapore 638803. Tel +65 68653737 | |
| Emergency telephone number (with hours of operation) | : CHEMTREC +(65)-31581349 (CCN 17704) | |

Section 2. Hazards identification

| Classification of the | : FLAMMABLE LIQUIDS - Category 3 |
|------------------------------|---|
| substance or mixture | SKIN CORROSION/IRRITATION - Category 2 |
| | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| | SKIN SENSITIZATION - Category 1 |
| | TOXIC TO REPRODUCTION - Category 2 |
| | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 |
| | AQUATIC HAZARD (ACUTE) - Category 1 |
| | AQUATIC HAZARD (LONG-TERM) - Category 1 |

GHS label elements, including precautionary statements

| Hazard pictograms | |
|--------------------------|--|
| Signal word | : Danger |
| Hazard statements | Flammable liquid and vapor. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects. |
| Precautionary statements | |

Precautionary statements

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Section 2. Hazards identification

| Prevention | : | Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapor. Wash thoroughly after handling. |
|---|---|--|
| Response | : | Collect spillage. IF exposed or concerned: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or 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 doctor. |
| Storage | : | Not applicable. |
| Disposal | ; | Not applicable. |
| Other hazards which do not result in classification | : | Causes digestive tract burns. Prolonged or repeated contact may dry skin and cause irritation. |

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

| CAS number | : Not applicable. |
|------------|-------------------|
| EC number | : Mixture. |
| | |

| Ingredient name | % | CAS number |
|---|------------|------------|
| ∉rystalline silica, respirable powder (<10 microns) | 20 - <25 | 14808-60-7 |
| bis-[4-(2,3-epoxipropoxi)phenyl]propane | 10 - <20 | 1675-54-3 |
| xylene | 5 - <10 | 1330-20-7 |
| 4-nonylphenol, branched | 3 - <5 | 84852-15-3 |
| Epoxy Resin (700 <mw<=1100)< td=""><td>3 - <5</td><td>25036-25-3</td></mw<=1100)<> | 3 - <5 | 25036-25-3 |
| Phenol, methylstyrenated | 3 - <5 | 68512-30-1 |
| 2-methylpropan-1-ol | 1 - <3 | 78-83-1 |
| Solvent naphtha (petroleum), heavy arom. | 1 - <3 | 64742-94-5 |
| calcium oxide | 1 - <3 | 1305-78-8 |
| ethylbenzene | 1 - <3 | 100-41-4 |
| Phenol, 2-nonyl-, branched | 0.1 - <0.3 | 91672-41-2 |

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.

SUB codes represent substances without registered CAS Numbers.

Section 4. First aid measures

Description of necessary first aid measures

| Eye contact | Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention. |
|--------------|--|
| Inhalation | Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. |
| Skin contact | Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. |
| Ingestion | If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting. |

| Most important symptom | s/effects, acute and delayed |
|---------------------------|---|
| Potential acute health ef | <u>fects</u> |
| Eye contact | : Causes serious eye damage. |
| Inhalation | : No known significant effects or critical hazards. |
| Skin contact | : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction. |
| Ingestion | : Corrosive to the digestive tract. Causes burns. |
| Over-exposure signs/sy | <u>mptoms</u> |
| Eye contact | : Adverse symptoms may include the following: pain watering redness |
| Inhalation | : Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |
| Skin contact | : Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations |
| Ingestion | : Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations |
| Indication of immediate m | nedical 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. |

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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

| 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. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| Hazardous thermal decomposition products | : Decomposition products may include the following materials: carbon oxides 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

| For non-emergency personnel | 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 sour No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Pro- adequate ventilation. Wear appropriate respirator when ventilation is inadequate Put on appropriate personal protective equipment. | ces. vide |
|--------------------------------|--|--------------|
| For emergency responders | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". | |

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Section 6. Accidental release measures

| Environmental precautions | 1 | 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). Water polluting material. |
| | | May be harmful to the environment if released in large quantities. Collect spillage. |

| Methods and materials for | r cont | 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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. 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. |

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities
 Store between the following temperatures: 0 to 35°C (32 to 95°F). 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 |
|---|---|
| ørystalline silica, respirable powder (<10 microns) | ACGIH TLV (United States, 1/2023). [Silica, crystalline] TWA: 0.025 mg/m ³ 8 hours. Form: |
| xylene | Respirable Workplace Safety and Health Act (Singapore, 2/2006). [Xylene] PEL (short term): 651 mg/m ³ 15 minutes. PEL (short term): 150 ppm 15 minutes. |
| 2-methylpropan-1-ol | PEL (long term): 434 mg/m ³ 8 hours. PEL (long term): 100 ppm 8 hours. Workplace Safety and Health Act |
| | (Singapore, 2/2006). PEL (long term): 152 mg/m ³ 8 hours. PEL (long term): 50 ppm 8 hours. |
| calcium oxide | Workplace Safety and Health Act (Singapore, 2/2006). PEL (long term): 2 mg/m ³ 8 hours. |
| ethylbenzene | Workplace Safety and Health Act (Singapore, 2/2006). PEL (short term): 543 mg/m ³ 15 minutes. PEL (short term): 125 ppm 15 minutes. PEL (long term): 434 mg/m ³ 8 hours. PEL (long term): 100 ppm 8 hours. |
| | de to appropriate monitoring standards. Reference to ents for methods for the determination of hazardous equired. |
| controls ventilation or other engine contaminants below any | ventilation. Use process enclosures, local exhaust eering controls to keep worker exposure to airborne recommended or statutory limits. The engineering controls apor or dust concentrations below any lower explosive |

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limits. Use explosion-proof ventilation equipment.

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Section 8. Exposure controls/personal protection

| Environmental exposure controls | : | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process |
|---------------------------------|-----------|---|
| | | equipment will be necessary to reduce emissions to acceptable levels. |
| Individual protection measure | <u>es</u> | |
| 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. |
| Eye/face protection | ÷ | Chemical splash goggles and face shield. |
| Skin protection | | |
| 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. |
| Gloves | ÷ | butyl rubber |
| 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. |
| Respiratory protection | : | Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. |

Section 9. Physical and chemical properties

| <u>Appearance</u> | |
|-------------------|---------------------------|
| Physical state | : Liquid. |
| Color | : Dark grey. |
| Odor | : Aromatic. [Strong] |
| рН | insoluble in water. |
| Boiling point | : >37.78°C (>100°F) |
| Flash point | : Closed cup: 30°C (86°F) |

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Product name SIGMACAP 620 ZP BASE DK GREY

Section 9. Physical and chemical properties

| • | | |
|---------------------------|---|---|
| Evaporation rate | : | Highest known value: 0.84 (ethylbenzene) Weighted average: 0.75compared with butyl acetate |
| Flammability (solid, gas) | : | liquid |
| Vapor pressure | : | Highest known value: <1.6 kPa (<12 mm Hg) (at 20°C) (2-methylpropan-1-ol). Weighted average: 0.41 kPa (3.08 mm Hg) (at 20°C) |
| Vapor density | : | Highest known value: 11.7 (Air = 1) (bis-[4-(2,3-epoxipropoxi)phenyl]propane). Weighted average: 7.81 (Air = 1) |
| Relative density | 1 | 1.54 |
| Solubility(ies) | | Media Result |
| | 1 | cold water Not soluble |
| Auto-ignition temperature | : | Lowest known value: 220 to 250°C (428 to 482°F) (Solvent naphtha (petroleum), heavy arom.). |
| Viscosity | : | Kinematic (room temperature): >400 mm²/s (>400 cSt) Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt) |
| Viscosity | : | > 100 s (ISO 6mm) |

Section 10. Stability and reactivity

| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
|------------------------------------|--|
| 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 | : When exposed to high temperatures may produce hazardous decomposition products. |
| Incompatible materials | : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids. |
| Hazardous decomposition products | : Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides |

Section 11. Toxicological information

Information on toxicological effects Acute toxicity Product name SIGMACAP 620 ZP BASE DK GREY

Section 11. Toxicological information

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---------------------------------|---------|-------------|----------|
| øis-[4-(2,3-epoxipropoxi) | LD50 Dermal | Rabbit | 23000 mg/kg | - |
| phenyl]propane | | | | |
| | LD50 Oral | Rat | 15000 mg/kg | - |
| xylene | LD50 Dermal | Rabbit | 1.7 g/kg | - |
| | LD50 Oral | Rat | 4.3 g/kg | - |
| 4-nonylphenol, branched | LD50 Dermal | Rabbit | 2.14 g/kg | - |
| | LD50 Oral | Rat | 1300 mg/kg | - |
| Epoxy Resin (700 <mw< td=""><td>LD50 Dermal</td><td>Rat</td><td>>2000 mg/kg</td><td>-</td></mw<> | LD50 Dermal | Rat | >2000 mg/kg | - |
| <=1100) | | | | |
| · | LD50 Oral | Rat | >2000 mg/kg | - |
| Phenol, methylstyrenated | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >2000 mg/kg | - |
| 2-methylpropan-1-ol | LC50 Inhalation Vapor | Rat | 24.6 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | 2460 mg/kg | - |
| | LD50 Oral | Rat | 2830 mg/kg | - |
| Solvent naphtha (petroleum), | LC50 Inhalation Dusts and mists | Rat | >5.2 mg/l | 4 hours |
| heavy arom. | | | | |
| - | LD50 Oral | Rat | >5 g/kg | - |
| ethylbenzene | LC50 Inhalation Vapor | Rat | 17.8 mg/l | 4 hours |
| - | LD50 Dermal | Rabbit | 17.8 g/kg | - |
| | LD50 Oral | Rat | 3.5 g/kg | - |

Conclusion/Summary : There are no data available on the mixture itself.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---------------------------------------|---------|-------|--------------|-------------|
| bis-[4-(2,3-epoxipropoxi) phenyl]propane | Eyes - Mild irritant | Rabbit | - | 24 hours | - |
| | Eyes - Redness of the conjunctivae | Rabbit | 0.4 | 24 hours | - |
| | Skin - Edema | Rabbit | 0.5 | 4 hours | - |
| | Skin - Erythema/Eschar | Rabbit | 0.8 | 4 hours | - |
| | Skin - Mild irritant | Rabbit | - | 4 hours | - |
| xylene | Skin - Moderate irritant | Rabbit | - | 24 hours 500 | - |
| | | | | mg | |
| 4-nonylphenol, branched | Skin - Erythema/Eschar | Rabbit | 4 | - | - |

Conclusion/Summary

: There are no data available on the mixture itself.

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Respiratory : There are no data available on the mixture itself.
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Sensitization

Eyes

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|---------|-------------|
| øis-[4-(2,3-epoxipropoxi) phenyl]propane | skin | Mouse | Sensitizing |

Conclusion/Summary

Skin

: There are no data available on the mixture itself.

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Section 11. Toxicological information

| Respiratory | : There are no data available on the mixture itself. |
|---------------------------|--|
| Mutagenicity | |
| Conclusion/Summary | : There are no data available on the mixture itself. |
| Carcinogenicity | |
| Conclusion/Summary | : There are no data available on the mixture itself. |
| Reproductive toxicity | |
| Conclusion/Summary | : There are no data available on the mixture itself. |
| Teratogenicity | |
| Conclusion/Summary | : There are no data available on the mixture itself. |
| | |

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|--|------------|-------------------|---------------------------------|
| xylene | Category 3 | - | Respiratory tract irritation |
| 2-methylpropan-1-ol | Category 3 | - | Respiratory tract irritation |
| | Category 3 | | Narcotic effects |
| Solvent naphtha (petroleum), heavy arom. | Category 3 | - | Narcotic effects |
| calcium oxide | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|---|------------|-------------------|----------------|
| crystalline silica, respirable powder (<10 microns) | Category 1 | inhalation | - |
| ethylbenzene | Category 2 | - | hearing organs |

Aspiration hazard

| Name | Result |
|--|--|
| Solvent naphtha (petroleum), heavy arom. | 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

| Eye contact | : Causes serious eye damage. |
|--------------|---|
| Inhalation | : No known significant effects or critical hazards. |
| Skin contact | : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction. |
| Ingestion | : Corrosive to the digestive tract. Causes burns. |

Symptoms related to the physical, chemical and toxicological characteristics

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Section 11. Toxicological information

| | 5 |
|--------------|---|
| Eye contact | : Adverse symptoms may include the following: pain watering redness |
| Inhalation | : Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |
| Skin contact | : Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations |
| Ingestion | : Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations |

| Delayed and immediate effe | cts and also chronic effects from short and long term exposure |
|--------------------------------|--|
| Short term exposure | |
| Potential immediate effects | : Not available. |
| Potential delayed effects | : Not available. |
| <u>Long term exposure</u> | |
| Potential immediate effects | : Not available. |
| Potential delayed effects | : Not available. |
| Potential chronic health eff | ects |
| General | : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. 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. |
| Reproductive toxicity | : Suspected of damaging fertility or the unborn child. |

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

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| Route | ATE value |
|------------------------------|----------------|
| Øral | 17354.74 mg/kg |
| Dermal | 12856.79 mg/kg |
| Inhalation (vapors) | 57.36 mg/l |
| Inhalation (dusts and mists) | 7.37 mg/l |

Other information

Causes digestive tract burns. Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--|--------------------------------------|--------------------------------|----------|
| s-[4-(2,3-epoxipropoxi) | Acute LC50 1.8 mg/l Fresh water | Daphnia - daphnia magna | 48 hours |
| | Chronic NOEC 0.3 mg/l | Daphnia | 21 days |
| 4-nonylphenol, branched | Acute EC50 0.044 mg/l | Crustaceans - Moina macrocopa | 48 hours |
| | Acute LC50 0.221 mg/l | Fish | 96 hours |
| 2-methylpropan-1-ol | Acute EC50 1100 mg/l | Daphnia | 48 hours |
| Solvent naphtha (petroleum), heavy arom. | NOEL 0.48 mg/l Fresh water | Daphnia | 21 days |
| ethylbenzene | Acute EC50 1.8 mg/l Fresh water | Daphnia | 48 hours |
| - | Chronic NOEC 1 mg/l Fresh water | Daphnia - Ceriodaphnia dubia | - |
| Phenol, 2-nonyl-, branched | Acute LC50 0.017 mg/l | Fish - Pleuronectes americanus | 96 hours |
| Conclusion/Summary | : There are no data available on the | mixture itself. | |

Persistence/degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|-------------------|--------------------------|----------|------------------|
| ethylbenzene | - | 79 % - Readily - 10 days | 6 - | - |
| Conclusion/Summary : There are no data available on the mixture itself. | | | | |
| Product/ingredient name | Aquatic half-life | Pho | otolysis | Biodegradability |
| bis-[4-(2.3-epoxipropoxi) | - | - | | Not readily |

| s-[4-(2,3-epoxipropoxi) phenyl]propane | - | - | Not readily |
|--|---|---|-------------|
| xylene | - | | Readily |
| ethylbenzene | - | - | Readily |

Bioaccumulative potential

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Section 12. Ecological information

| | - | | |
|--|------------|-------------|-----------|
| Product/ingredient name | LogPow | BCF | Potential |
| x ylene | 3.12 | 7.4 to 18.5 | Low |
| 4-nonylphenol, branched | 5.4 | 251.19 | Low |
| Phenol, methylstyrenated | 3.627 | - | Low |
| 2-methylpropan-1-ol | 1 | - | Low |
| Solvent naphtha (petroleum), heavy arom. | 2.8 to 6.5 | - | High |
| ethylbenzene | 3.6 | 79.43 | Low |

Mobility in soil

Singapore

| Soil/water partition | : Not available. |
|----------------------|------------------|
| coefficient (Koc) | |

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 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

English (US)

| | UN | IMDG | ΙΑΤΑ |
|----------------------------|--|--------|--|
| UN number | UN1263 | UN1263 | UN1263 |
| UN proper shipping name | PAINT | PAINT | PAINT |
| Transport hazard class(es) | 3 | 3 | 3 |
| Packing group | III | III | III |
| Environmental hazards | Yes. The environmentally hazardous substance mark is not required. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

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Section 14. Transport information

| Manda a statistication | NL 4 CONPOSED | | NL 4 COMPANIEL |
|------------------------|-----------------|------------------------------|-----------------|
| Marine pollutant | Not applicable. | / (bis-[4-(2,3-epoxipropoxi) | Not applicable. |
| substances | | phenyl]propane) | |

Additional information

| UN | This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 according to 2.3.2.5.2. |
|--------------|---|
| IMDG | This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 according to 2.3.2.5. |
| ΙΑΤΑ | : The environmentally hazardous substance mark may appear if required by other transportation regulations. |
| Special prec | cautions 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. |

Transport in bulk according : Not applicable. to IMO instruments

Section 15. Regulatory information

Singapore - hazardous chemicals under government control

| Ingredient name | Status |
|---|--------|
| ronylphenol and nonylphenol ethoxylates | Listed |

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 16. Other information

| <u>History</u> | |
|--------------------------------|----------------|
| Date of issue/Date of revision | : 4 April 2024 |
| Date of previous issue | : 11/8/2022 |
| Version | : 2.02 |
| Prepared by | : EHS |

| Singapore | English | (US) |
|-----------|---------|------|
|-----------|---------|------|

Section 16. Other information

| 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 = Intermediate 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 contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.