SAFETY DATA SHEET



The information in this Safety Data Sheet is required pursuant to GHS UN rev. 7

Date of issue/Date of revision 15 December 2023

Version 1

| Section 1. Identification | | |
|--|--|--|
| Product code | : 00475530 | |
| Product name | : SIGMAZINC 109 G HARDENER | |
| CAS number | : Not applicable. | |
| Product type | : Liquid. | |
| Other means of identification Not available. | ition | |
| Relevant identified uses | of the substance or mixture and uses advised against | |
| Product use | Coating. Professional applications, Used by spraying. | |
| Uses advised against | : Product is not intended, labelled or packaged for consumer use. | |
| Company/undertaking identification | : PPG Industries Sales, Inc. and PPG Coatings (Philippines), Inc. 3rd Floor First Life Center 174 Salcedo St., Legaspi Village Makati City 1229, Philippines Tel # 00632- 752-6773/ Fax # 00632-752-6771 | |
| Emergency telephone number | : CHEMTREC +(63) 2-395-3308 (CCN 17704) | |

Section 2. Hazards identification

| Classification of the substance or mixture | FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 5 ACUTE TOXICITY (dermal) - Category 5 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 1C SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 AQUATIC HAZARD (ACUTE) - Category 3 Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 21.2% Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 21.2% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 48.3% |
|---|---|
| | Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 21.2% |

Section 2. Hazards identification

| GHS label elements | |
|---|---|
| Hazard pictograms | |
| Signal word | : Danger |
| Hazard statements | Flammable liquid and vapor. May be harmful if swallowed or in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. (hearing organs) Harmful to aquatic life with long lasting effects. |
| Precautionary statements | |
| Prevention | : 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. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. |
| Response | : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. 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 | : Store locked up. Store in a well-ventilated place. Keep container tightly closed. |
| Disposal | : Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| 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. **Ingredient name** % **CAS** number 2-methylpropan-1-ol 20 - <25 78-83-1 Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil 20 - <25 68082-29-1 fatty acids and triethylenetetramine ethylbenzene 10 - <20 100-41-4 xylene 10 - <20 1330-20-7 2,4,6-tris(dimethylaminomethyl)phenol 3 - <5 90-72-2 3,6-diazaoctanethylenediamin 1 - <3 112-24-3

Philippines Page: 2/14

Product code 00475530 Product name SIGMAZINC 109 G HARDENER

Section 3. Composition/information on ingredients

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 necess | sary 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 symptoms/effects, acute and delayed

| Potential acute health | effects |
|------------------------|---|
| Eye contact | : Causes serious eye damage. |
| Inhalation | Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. |
| Skin contact | : Causes severe burns. May be harmful in contact with skin. Defatting to the skin. May cause an allergic skin reaction. |
| Ingestion | : May be harmful if swallowed. Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression. |

Over-exposure signs/symptoms

| Eye contact | : Adverse symptoms may include the following: pain watering redness |
|-------------------------|---|
| Inhalation | : Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness |
| Skin contact | : Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur |
| Ingestion | : Adverse symptoms may include the following: stomach pains |
| Indication of immediate | medical attention and special treatment needed, if necessary |
| Notes to physician | : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |

Philippines

Section 4. First aid measures

| Specific treatments | : No specific treatment. |
|----------------------------|---|
| 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) | Ì |
|-----|---------------|----------------------|-----------|-----|---|
| 000 | toxicological | in the second second | 100001011 | | , |

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 harmful 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 nitrogen oxides halogenated compounds |
| 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 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. | |
| 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". | |
| 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). Water polluting material. May be harmful to the environment if released in large quantities. | |

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

| 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. 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. |
| 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

<u>Control parameters</u> <u>Occupational exposure limits</u>

Section 8. Exposure controls/personal protection

| Ingredient name | | Exposure limits |
|---|--|--|
| 2-methylpropan-1-ol ethylbenzene xylene | | TLV (Philippines, 4/2016).TLV: 300 mg/m³ 8 hours.TLV: 100 ppm 8 hours.TLV (Philippines, 4/2016).TLV-Ceiling: 435 mg/m³ 8 hours.TLV-Ceiling: 100 ppm 8 hours.TLV (Philippines, 4/2016). [Xylene]TLV: 0.1 mg/m³ 8 hours. |
| Recommended monitoring procedures | | e made to appropriate monitoring standards. Reference to ocuments for methods for the determination of hazardous be required. |
| Appropriate engineering controls Environmental exposure controls | ventilation or other electron contaminants below also need to keep galimits. Use explosion Emissions from ventithey comply with the cases, fume scrubbe | ate ventilation. Use process enclosures, local exhaust ngineering controls to keep worker exposure to airborne any recommended or statutory limits. The engineering controls as, vapor or dust concentrations below any lower explosive n-proof ventilation equipment. ilation or work process equipment should be checked to ensure requirements of environmental protection legislation. In some ers, filters or engineering modifications to the process |
| ndividual protection measur | | cessary to reduce emissions to acceptable levels. |
| Hygiene measures Eye/face protection | Wash hands, forearr eating, smoking and Appropriate techniqu Contaminated work of contaminated clothin showers are close to Safety eyewear comp assessment indicate gases or dusts. If con- unless the assessment | ns and face thoroughly after handling chemical products, before using the lavatory and at the end of the working period. The should be used to remove potentially contaminated clothing. clothing should not be allowed out of the workplace. Wash ig before reusing. Ensure that eyewash stations and safety the workstation location. plying with an approved standard should be used when a risk is this is necessary to avoid exposure to liquid splashes, mists, ontact is possible, the following protection should be worn, ent indicates a higher degree of protection: chemical splash shield. If inhalation hazards exist, a full-face respirator may be |
| Skin protection | . Syan og moleau. | |
| Hand protection | be worn at all times we this is necessary. Co check during use that should be noted that different for different | mpervious gloves complying with an approved standard should when handling chemical products if a risk assessment indicates onsidering the parameters specified by the glove manufacturer, at the gloves are still retaining their protective properties. It the time to breakthrough for any glove material may be glove manufacturers. In the case of mixtures, consisting of the protection time of the gloves cannot be accurately |
| Gloves | : nitrile neoprene | |
| Body protection | being performed and before handling this wear anti-static prote | equipment for the body should be selected based on the task I the risks involved and should be approved by a specialist product. When there is a risk of ignition from static electricity, ective clothing. For the greatest protection from static should include anti-static overalls, boots and gloves. |
| Other skin protection | : Appropriate footwear selected based on th | r and any additional skin protection measures should be task being performed and the risks involved and should be alist before handling this product. |

Product code 00475530 Product name SIGMAZINC 109 G HARDENER

Section 8. Exposure controls/personal protection

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.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

| <u>Appearance</u> | | | | | | | | | | |
|---|---|-------------------------|-----------|-----------|-----------------|------|----------|---------|-----|------------|
| Physical state | | Liquid. | | | | | | | | |
| Color | ÷ | Cicali | | | | | | | | |
| Odor | | Aromatic. | | | | | | | | |
| Odor threshold | - | Not available. | | | | | | | | |
| Melting point/freezing point | | Not available. | | | | | | | | |
| Boiling point, initial boiling point, and boiling range | - | >37.78°C (>100°F) | | | | | | | | |
| Flammability | 1 | Not available. | | | | | | | | |
| Lower and upper explosive (flammable) limits | : | Not available. | | | | | | | | |
| Flash point | : | Closed cup: 26°C (7 | 8.8°F) | | | | | | | |
| Auto-ignition temperature | ; | Ingredient name | | °C | | °F | | Metho | d | |
| | | 3,6-diazaoctanethylened | iamin | 337.78 | | 640 | | | | |
| Decomposition temperature | : | Not available. | | | | | | | | |
| рН | : | Not applicable. | | | | | | | | |
| Viscosity | : | Kinematic (40°C): >2 | 21 mm²/s | | | | | | | |
| Solubility(ies) | | Media | Re | sult | | | | | | |
| Solubility(les) | 1 | cold water | Not | t soluble | • | | | | | |
| Partition coefficient: n- octanol/water | : | Not applicable. | | | | | | | | |
| Vapor pressure | 1 | | Vapor | · Pressu | ire at 2 | 20°C | Va | por pre | ssu | re at 50°C |
| | | Ingredient name | mm Hg | kPa | Meth | od | mm Hg | kPa | | Method |
| | | 2-methylpropan-1-ol | <12.00102 | <1.6 | DIN EI 13016 | - | | | | |
| Relative density | 1 | 0.92 | | | | | | | | |
| Bulk density (g/cm³) | : | 0.95 | | | | | | | | |
| Relative vapor density | : | Not available. | | | | | | | | |

Particle characteristics Median particle size

Evaporation rate

: Not applicable.

: Not available.

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 nitrogen oxides halogenated compounds |
| Hazardous polymerization | : Under normal conditions of storage and use, hazardous polymerization will not occur. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|------------------------------|-------------------------------|-------------------|-------------|----------|
| 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 | - |
| Fatty acids, C18-unsatd., | LD50 Dermal | Rat | >2000 mg/kg | - |
| dimers, oligomeric reaction | | | | |
| products with tall-oil fatty | | | | |
| acids and | | | | |
| triethylenetetramine | | | | |
| | LD50 Oral | Rat | >2000 mg/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 | - |
| xylene | LD50 Dermal | Rabbit | 1.7 g/kg | - |
| | LD50 Oral | Rat | 4.3 g/kg | - |
| 2,4,6-tris | LD50 Dermal | Rabbit | 1.28 g/kg | - |
| (dimethylaminomethyl) | | | | |
| phenol | | | | |
| | LD50 Dermal | Rat | 1280 mg/kg | - |
| | LD50 Oral | Rat | 1200 mg/kg | - |
| 3,6-diazaoctanethylenediamin | | Rabbit | 1465 mg/kg | - |
| | LD50 Oral | Rat | 1716 mg/kg | - |
| Conclusion/Summary | : There are no data available | on the mixture it | self. | |

Conclusion/Summary Irritation/Corrosion

Version 1

Section 11. Toxicological information

| | <u> </u> | | | | |
|---|--------------------------|---------|-------|--------------|-------------|
| Product/ingredient name | Result | Species | Score | Exposure | Observation |
| Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | Eyes - Severe irritant | Rabbit | - | - | - |
| | Skin - Irritant | Human | - | - | - |
| xylene | Skin - Moderate irritant | Rabbit | - | 24 hours 500 | - |
| | | | | mg | |
| 2,4,6-tris (dimethylaminomethyl) phenol | Skin - Visible necrosis | Rabbit | - | 4 hours | 7 days |

Conclusion/Summary

Skin Eyes : There are no data available on the mixture itself.

: There are no data available on the mixture itself.

: There are no data available on the mixture itself.

Respiratory

Sensitization

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|------------|-------------|
| Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine | skin | Mouse | Sensitizing |
| 3,6-diazaoctanethylenediamin | skin | Guinea pig | Sensitizing |

| Conclusion/Summary | |
|---------------------------|--|
| Skin | : There are no data available on the mixture itself. |
| 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 |
|-------------------------------|--|-------------------|--|
| 2-methylpropan-1-ol xylene | Category 3 Category 3 Category 3 | - | Respiratory tract irritation Narcotic effects Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

| Name | | Route of exposure | Target organs |
|--------------|------------|----------------------|----------------|
| ethylbenzene | Category 2 | - | hearing organs |

Aspiration hazard

| Name | Result |
|---------------------|--------------------------------|
| 2-methylpropan-1-ol | ASPIRATION HAZARD - Category 2 |
| ethylbenzene | ASPIRATION HAZARD - Category 1 |
| xylene | ASPIRATION HAZARD - Category 1 |

| Information on the likely routes of exposure | : | Not available. |
|--|-----------|---|
| Potential acute health effects | | |
| Eye contact | : | Causes serious eye damage. |
| Inhalation | : | Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. |
| Skin contact | 1 | Causes severe burns. May be harmful in contact with skin. Defatting to the skin. May cause an allergic skin reaction. |
| Ingestion | : | May be harmful if swallowed. Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression. |
| Symptoms related to the phy | sic | cal, chemical and toxicological characteristics |
| Eye contact | : | Adverse symptoms may include the following: |
| | | pain watering redness |
| Inhalation | : | Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness |
| Skin contact | : | Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur |
| Ingestion | : | Adverse symptoms may include the following: stomach pains |
| Delayed and immediate effec | <u>ts</u> | and also chronic effects from short and long term exposure |
| <u>Short term exposure</u> | | |
| Potential immediate effects | : | Not available. |
| Potential delayed effects | 1 | Not available. |
| Long term exposure | | |

Section 11. Toxicological information

| Potential immediate effects | Not available. | |
|------------------------------|--|-----|
| Potential delayed effects | Not available. | |
| Potential chronic health eff | | |
| Not available. | | |
| General | May cause damage to organs through prolonged or repeated exposure. Prolong 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. | jed |
| Carcinogenicity | No known significant effects or critical hazards. | |
| Mutagenicity | No known significant effects or critical hazards. | |
| Reproductive toxicity | No known significant effects or critical hazards. | |

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|------------------------------|--------------|
| Oral | 2724.7 mg/kg |
| Dermal | 2603.8 mg/kg |
| Inhalation (vapors) | 24.68 mg/l |
| Inhalation (dusts and mists) | 2.67 mg/l |

Other information

Causes digestive tract burns. Prolonged or repeated contact may dry skin and cause irritation. 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 |
|--|---|--|---------------------------|
| 2-methylpropan-1-ol Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and | Acute EC50 1100 mg/l EC10 1.78 mg/l | Daphnia Algae | 48 hours 72 hours |
| triethylenetetramine ethylbenzene 2,4,6-tris (dimethylaminomethyl)phenol | Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water Acute LC50 175 mg/l | Daphnia Daphnia - <i>Ceriodaphnia dubia</i> Fish | 48 hours - 96 hours |

Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|-------------------------|------|--------------------------|------|----------|
| ethylbenzene | - | 79 % - Readily - 10 days | - | - |

Version 1

Section 12. Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|-----------------------------------|
| Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine ethylbenzene xylene | - | - | Not readily Readily Readily |

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|------------------------------|---------------|-------------|-----------|
| 2-methylpropan-1-ol | 1 | - | Low |
| ethylbenzene | 3.6 | 79.43 | Low |
| xylene | 3.12 | 7.4 to 18.5 | Low |
| 2,4,6-tris | 0.219 | - | Low |
| (dimethylaminomethyl)phenol | | | |
| 3,6-diazaoctanethylenediamin | -1.66 to -1.4 | - | Low |

Mobility in soil

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

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

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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.
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Section 14. Transport information

| | UN | IMDG | ΙΑΤΑ |
|----------------------------|--------------------------------|--------------------------------|--------------------------------|
| UN number | UN3469 | UN3469 | UN3469 |
| UN proper shipping name | PAINT, FLAMMABLE, CORROSIVE | PAINT, FLAMMABLE, CORROSIVE | PAINT, FLAMMABLE, CORROSIVE |
| Transport hazard class(es) | 3 (8) | 3 (8) | 3 (8) |
| | III | III | III |
| | | Ph | ilippines Page: 12/1 |

Section 14. Transport information

| Packing group | | | |
|-----------------------------|-----------------|-----------------|-----------------|
| Environmental hazards | No. | No. | No. |
| Marine pollutant substances | Not applicable. | Not applicable. | Not applicable. |

Additional information

| UN | : None identified. |
|------|--------------------|
| IMDG | : None identified. |
| ΙΑΤΑ | : None identified. |

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.

Transport in bulk according : Not applicable. to IMO instruments

Section 15. Regulatory information

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 | : 15 December 2023 |
| Date of previous issue | : No previous validation |
| Version | : 1 |
| Prepared by | : EHS |
| 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 |

Procedure used to derive the classification

Section 16. Other information

| Classification | Justification |
|--|-----------------------|
| FLAMMABLE LIQUIDS - Category 3 | On basis of test data |
| ACUTE TOXICITY (oral) - Category 5 | Calculation method |
| ACUTE TOXICITY (dermal) - Category 5 | Calculation method |
| ACUTE TOXICITY (inhalation) - Category 4 | Calculation method |
| SKIN CORROSION/IRRITATION - Category 1C | Calculation method |
| SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 | Calculation method |
| SKIN SENSITIZATION - Category 1 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 | Calculation method |
| AQUATIC HAZARD (ACUTE) - Category 3 | Calculation method |
| AQUATIC HAZARD (LONG-TERM) - Category 3 | Calculation method |

Indicates information that has changed from previously issued version.

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