SAFETY DATA SHEET

ppg

Safety Data Sheet according to GB/T 16483-2008 and GB/T 17519-2013

Date of issue/Date of revision 29 November 2023

Version 1.03

| Section 1. Chemical product and company identification | | | |
|--|---|--|--|
| Product code | : 00463854 | | |
| Product name | : PHENGUARD 985 HARDENER | | |
| Product name | : PHENGUARD 985 HARDENER | | |
| Product type | : Liquid. | | |
| Relevant identified uses of | f the substance or mixture and uses advised against | | |
| Product use | : Professional applications, Used by spraying. | | |
| Use of the substance/ mixture | : Coating. | | |
| Uses advised against | : Not applicable. | | |
| Supplier's details | : PPG Coatings (Kunshan) Co., Ltd 53 Jinyang Road, Lujia Town, 215331 Kunshan City, Jiangsu Province, P.R. China Tel: 86 512 57678859 Fax: 86 512 57678857 | | |
| Emergency telephone number (with hours of operation) | : 00 86 532 83889090 | | |

Section 2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 and GB 30000-2013

Emergency overview Liquid. Characteristic. Flammable liquid and vapor. Harmful if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing cancer. Toxic to aquatic life. Prolonged or repeated contact may dry skin and cause irritation.

IF exposed or concerned: Get medical advice or attention. IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. IF ON SKIN (or hair): Immediately call a POISON CENTER or doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Immediately call a POISON CENTER or doctor.

See Section 12 for environmental precautions.

| Section 2. Hazard | | | |
|---|---|--|--|
| Classification of the substance or mixture | FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 AQUATIC HAZARD (ACUTE) - Category 2 Fercentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: | | |
| | 22.2% Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 22.2% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 43.4% | | |
| | Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 34.5% | | |
| GHS label elements | | | |
| Hazard pictograms | | | |
| Signal word | : Danger | | |
| Hazard statements | : Flammable liquid and vapor. Harmful if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing cancer. Toxic to aquatic life. | | |
| Precautionary statements | | | |
| Prevention | : Obtain special instructions before use. 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. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. | | |
| Response | : IF exposed or concerned: Get medical advice or attention. 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. | | |
| Suitable extinguishing | : Use dry chemical, CO ₂ , water spray (fog) or foam. | | |

media

Product name PHENGUARD 985 HARDENER

Section 2. Hazards identification

| Storage | : | Store locked up. Store in a well-ventilated place. Keep cool. | | | |
|---|-----|---|--|--|--|
| Disposal | : | Dispose of contents and container in accordance with all local, regional, national and international regulations. | | | |
| Physical and chemical hazards | : | Flammable liquid and vapor. | | | |
| Health hazards | : | Harmful if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing cancer. Prolonged or repeated contact may dry skin and cause irritation. | | | |
| Symptoms related to the phy | sic | al, 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 dryness cracking blistering may occur | | | |
| Ingestion | : | Adverse symptoms may include the following: stomach pains | | | |
| Delayed and immediate effec | ts | and also chronic effects from short and long term exposure | | | |
| Short term exposure Potential immediate effects | : | Not available. | | | |
| Potential delayed effects Long term exposure | : | Not available. | | | |
| Potential immediate effects | : | Not available. | | | |
| Potential delayed effects | : | Not available. | | | |
| Environmental hazards | : | Toxic to aquatic life. | | | |
| Other hazards which do not result in classification | : | Prolonged or repeated contact may dry skin and cause irritation. | | | |

Product name PHENGUARD 985 HARDENER

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

CAS number/other identifiers

| CAS number | : Not applicable |
|------------|------------------|
|------------|------------------|

| Ingredient name | % | CAS number |
|--|----------|------------|
| vers mixture | 10 - <25 | 1330-20-7 |
| N,N-diethyl-1,3-diaminopropane | 10 - <25 | 104-78-9 |
| benzyl alcohol | 10 - <25 | 100-51-6 |
| 2-methylpropan-1-ol | 1 - <10 | 78-83-1 |
| m-phenylenebis(methylamine) | 1 - <10 | 1477-55-0 |
| ethylbenzene | 1 - <10 | 100-41-4 |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine | 1 - <10 | 1760-24-3 |

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. |

| Potential acute health effects | | | |
|--------------------------------|--|--|--|
| Eye contact | Causes serious eye damage. | | |
| Inhalation | : Harmful if inhaled. | | |
| Skin contact | Causes severe burns. Harmful in contact with skin. Defatting to the skin. May cause an allergic skin reaction. | | |
| Ingestion | : Harmful if swallowed. | | |
| Over-exposure signs/sympto | <u>ms</u> | | |
| Eye contact | Adverse symptoms may include the following: pain watering redness | | |
| Inhalation | No specific data. | | |

Product name PHENGUARD 985 HARDENER Section 4. First aid measures

| 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 |
| ndication of immediate me | dical attention and special treatment needed, if necessary |
| | alour attention and special reatment needed, in needsbary |
| 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. |
| Notes to physician Specific treatments | : In case of inhalation of decomposition products in a fire, symptoms may be delayed |

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 toxic to aquatic life. 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 metal oxide/oxides Formaldehyde. |
| 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 ec | uipment 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

| 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 ÷. 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 handling which this product is used. Avoid exposure - obtain special instructions before use. 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.

Section 7. Handling and storage

| Conditions for safe storage, | : Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in |
|------------------------------|---|
| including any | accordance with local regulations. Store in a segregated and approved area. Store |
| incompatibilities | 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 |
|--|--|--|
| ylene isomers mixture | | GBZ 2.1 (China, 8/2019). [Xylene (all isomers)] PC-STEL: 100 mg/m ³ 15 minutes. PC-TWA: 50 mg/m ³ 8 hours. |
| 2-methylpropan-1-ol | | ACGIH TLV (United States, 1/2022). TWA: 152 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. |
| m-phenylenebis(methylamine) | | ACGIH TLV (United States, 1/2022). Absorbed through skin. |
| ethylbenzene | | C: 0.018 ppm GBZ 2.1 (China, 8/2019). PC-STEL: 150 mg/m ³ 15 minutes. PC-TWA: 100 mg/m ³ 8 hours. |
| Recommended monitoring : procedures | | riate monitoring standards. Reference to nods for the determination of hazardous |
| Appropriate engineering : controls | contaminants below any recommende | ls to keep worker exposure to airborne ed or statutory limits. The engineering controls concentrations below any lower explosive |
| Environmental exposure : controls | | |
| ndividual protection measures | 2 | |
| Hygiene measures : | Wash hands, forearms and face thore | bughly after handling chemical products, before |
| | Appropriate techniques should be use Contaminated work clothing should ne | y and at the end of the working period. d to remove potentially contaminated clothing. ot be allowed out of the workplace. Wash Ensure that eyewash stations and safety |
| | Appropriate techniques should be use Contaminated work clothing should no contaminated clothing before reusing. | y and at the end of the working period. In the the the the the working period. In the |
| | Appropriate techniques should be use Contaminated work clothing should ne contaminated clothing before reusing showers are close to the workstation | y and at the end of the working period. d to remove potentially contaminated clothing. of be allowed out of the workplace. Wash Ensure that eyewash stations and safety ocation. |

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Section 8. Exposure controls/personal 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 | |
| Odor | ristic. |
| Boiling point | C (>100°F) |
| Flash point | up: 34°C (93.2°F) |
| Lower and upper explosive (flammable) limits | known range: Lower: 1.3% Upper: 13% (benzyl alcohol) |
| Relative density | |
| Solubility(ies) | Result |
| Colubility(ICS) | er Not soluble |
| Viscosity | c (40°C): >21 mm²/s |

Section 10. Stability and reactivity

| | China Page: 8/14 |
|------------------------------------|--|
| Conditions to avoid | : When exposed to high temperatures may produce hazardous decomposition products. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Chemical stability | : The product is stable. |
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |

Product name PHENGUARD 985 HARDENER

Section 10. Stability and reactivity

| 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 Formaldehyde. metal oxide/oxides |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--------------------------------|-----------------------|-------------|-------------------------|----------|
| xylene isomers mixture | LD50 Dermal | Rabbit | 1.7 g/kg | - |
| | LD50 Oral | Rat | 4.3 g/kg | - |
| N,N-diethyl-1,3-diaminopropane | LD50 Dermal | Rabbit | 524 mg/kg | - |
| | LD50 Oral | Rat | 830 mg/kg | - |
| benzyl alcohol | LC50 Inhalation Dusts | Rat | >4178 mg/m ³ | 4 hours |
| - | and mists | | | |
| | LD50 Dermal | Rabbit | 2000 mg/kg | - |
| | LD50 Oral | Rat | 1.23 g/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 | - |
| m-phenylenebis(methylamine) | LC50 Inhalation Gas. | Rat | 700 ppm | 1 hours |
| | LD50 Dermal | Rat - Male, | >3100 mg/kg | - |
| | | Female | | |
| | LD50 Oral | Rat | 930 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 | - |
| N-(3-(trimethoxysilyl)propyl) | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| ethylenediamine | | | | |
| - | LD50 Oral | Rat | 2413 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|------------------------------------|--------------------------|---------|-------|-----------------|-------------|
| xylene isomers mixture | Skin - Moderate irritant | Rabbit | - | 24 hours 500 | - |
| N,N-diethyl- 1,3-diaminopropane | Skin - Visible necrosis | Rabbit | - | mg 1 minutes | 8 days |
| m-phenylenebis (methylamine) | Skin - Severe irritant | Rat | - | 4 hours | 4 hours |

Sensitization

| ····· • | Route of exposure | Species | Result |
|---------------------------------|-------------------|---------|-------------|
| m-phenylenebis (methylamine) | skin | Mouse | Sensitizing |

Mutagenicity

Not available.

Carcinogenicity

Section 11. Toxicological information

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|--|--------------------------|-------------------|---|
| ₽-methylpropan-1-ol | Category 3 Category 3 | - | Respiratory tract irritation Narcotic effects |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

| Name | Result |
|---------------------------------------|--|
| , , , , , , , , , , , , , , , , , , , | ASPIRATION HAZARD - Category 2 ASPIRATION HAZARD - Category 1 |

| Information on the likely routes of exposure | : Not available. |
|--|---|
| Potential acute health effe | <u>S</u> |
| Eye contact | : Causes serious eye damage. |
| Inhalation | : Harmful if inhaled. |
| Skin contact | : Causes severe burns. Harmful in contact with skin. Defatting to the skin. May cause an allergic skin reaction. |
| Ingestion | : Harmful if swallowed. |
| Symptoms related to the p Eye contact | ysical, chemical and toxicological characteristics 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 dryness cracking blistering may occur |
| Ingestion | : Adverse symptoms may include the following: stomach pains |
| | |

Product name PHENGUARD 985 HARDENER

Section 11. Toxicological information

| Delayed and immediate effects and also chronic effects from short and long term exp | osure |
|---|-------|
| | |

| <u>Short term exposure</u> | |
|------------------------------|---|
| Potential immediate effects | : Not available. |
| Potential delayed effects | : Not available. |
| Long term exposure | |
| Potential immediate effects | : Not available. |
| Potential delayed effects | : Not available. |
| Potential chronic health eff | ects |
| General | 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 | : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. |
| Mutagenicity | : No known significant effects or critical hazards. |
| Reproductive toxicity | : No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

| Product/ingredient name | Oral (mg/ kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|--|--|--|---|--|--|
| HENGUARD 985 HARDENER xylene isomers mixture N,N-diethyl-1,3-diaminopropane benzyl alcohol 2-methylpropan-1-ol m-phenylenebis(methylamine) ethylbenzene N-(3-(trimethoxysilyl)propyl)ethylenediamine | 1564.3 4300 830 1230 2830 930 3500 2413 | 1272.9 1700 524 2000 2460 2500 17800 2500 | 37576.3 N/A N/A N/A N/A 4500 N/A N/A | 23.5 11 N/A N/A 24.6 N/A 17.8 N/A | 2.1 1.5 N/A 1.5 N/A N/A 1.5 N/A |

Other information

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. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C (140F). Avoid contact with skin and clothing. Exposure to amine vapor has been reported to cause transient corneal edema described as blue haze, halo effect, foggy or blurred vision for several hours. This condition is typically temporary and does not cause permanent visual effects. When the proper eye protection specified in Section 8 is worn, exposure is significantly reduced and the condition has not been observed.

Product name PHENGUARD 985 HARDENER

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--|---|---|---------------------------------------|
| N-diethyl- 1,3-diaminopropane | Acute EC50 30.2 mg/l | Daphnia | 48 hours |
| 2-methylpropan-1-ol ethylbenzene | Acute EC50 146.6 mg/l Acute EC50 1100 mg/l Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water | Fish Daphnia Daphnia Daphnia - <i>Ceriodaphnia dubia</i> | 96 hours 48 hours 48 hours - |
| N-(3-(trimethoxysilyl)propyl) ethylenediamine | EC50 597 mg/l | Fish | 96 hours |

Persistence/degradability

| Product/ingredient name | Test | Result | | Dose | | Inoculum |
|--|-------------------|--------|------------------------------------|------|--|------------|
| N,N-diethyl- 1,3-diaminopropane ethylbenzene | OECD 301A - | | idily - 28 days idily - 10 days | - | | - |
| Product/ingredient name | Aquatic half-life | | Photolysis | | Biodeg | radability |
| xylene isomers mixture N,N-diethyl- 1,3-diaminopropane benzyl alcohol ethylbenzene | - - - | | - - - | | Readily Readily Readily Readily | , , |

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|--|--------------|-------------|------------|
| xylene isomers mixture benzyl alcohol | 3.12 0.87 | 7.4 to 18.5 | Low Low |
| 2-methylpropan-1-ol | 1 | - | Low |
| m-phenylenebis (methylamine) | 0.18 | 2.69 | Low |
| ethylbenzene | 3.6 | 79.43 | Low |

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

Section 13. Disposal considerations

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

| | China | UN | IMDG | ΙΑΤΑ |
|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| UN number | UN3470 | UN3470 | UN3470 | UN3470 |
| UN proper shipping name | PAINT, CORROSIVE, FLAMMABLE | PAINT, CORROSIVE, FLAMMABLE | PAINT, CORROSIVE, FLAMMABLE | PAINT, CORROSIVE, FLAMMABLE |
| Transport hazard class(es) | 8 (3) | 8 (3) | 8 (3) | 8 (3) |
| Packing group | П | П | П | II |
| Environmental hazards | No. | No. | No. | No. |
| Marine pollutant substances | Not applicable. | Not applicable. | Not applicable. | Not applicable. |

Additional information

CN: None identified.UN: None identified.IMDG: None identified.IATA: 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

| China inventory (IECSC) | : All components are listed or exempted. |
|-------------------------|--|
| References | Production Safety Law of the People's Republic of China Code of Occupational Disease Prevention of the People's Republic of China Environmental Protection Law of the People's Republic of China Fire Control Law of the People's Republic of China Regulations on the Control over Safety of Dangerous Chemicals Occupational exposure limits for hazardous agents in the workplace chemical hazardous agents (GBZ2.1) General rule for classification and hazard communication of chemicals (GB13690) Safety data sheet for chemical products - Content and order of sections (GB/ |

Section 15. Regulatory information

T16483)

Guidance on the compilation of safety data sheet for chemical products (GB/ T17519)

General rule for preparation of precautionary label for chemicals (GB15258) Safety rules for classification, precautionary labeling and precautionary statements of chemicals (GB30000.2-29)

Section 16. Other information

| <u>History</u> | |
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| Date of issue/Date of revision | : 29 November 2023 |
| Date of previous issue | : 3/17/2023 |
| Version | : 1.03 |
| | EHS |
| Key to abbreviations | : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway |
| | ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor |
| | GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association 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) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail |
| _ | 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.