

# SAFETY DATA SHEET



## SIGMADUR 595Y HARDENER

Date of issue 16 December 2019

Version 1

### 1. Product and company identification

**Product name** : SIGMADUR 595Y HARDENER  
**Product code** : 00427000  
**Product type** : Liquid.

#### Relevant identified uses of 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 PMC Japan Co., Ltd.  
8F, Shintetsu Bldg., 1-1, Daikaidori 1-chome, Kobe 652-0803  
Tel : +81 78 574 2777  
Fax : +81 78 576 0035

**Emergency telephone  
number** : 078 574 2777

### 2. Hazards identification

**GHS Classification** : FLAMMABLE LIQUIDS - Category 3  
ACUTE TOXICITY (inhalation) - Category 4  
RESPIRATORY SENSITIZATION - Category 1  
SKIN SENSITIZATION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
AQUATIC HAZARD (ACUTE) - Category 3  
AQUATIC HAZARD (LONG-TERM) - Category 3

#### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : Flammable liquid and vapor.  
Harmful if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause respiratory irritation.  
Harmful to aquatic life with long lasting effects.

**Precautionary statements**

## 2. Hazards identification

- Prevention** : Wear protective gloves. Wear eye or face protection. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Contaminated work clothing should not be allowed out of the workplace.
- Response** : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention.
- 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.

**Other hazards which do not result in classification** : Prolonged or repeated contact may dry skin and cause irritation.

## 3. Composition/information on ingredients

**Substance/mixture** : Mixture

### CAS number/other identifiers

**CAS number** : Not applicable.

**ENCS number** : Not available.

| Ingredient name   | %          | CAS number | ENCS           |
|---|------------|------------|----------------|
| Hexamethylene diisocyanate, oligomers (isocyanurate type) | 50 - 100   | 28182-81-2 | 7-873          |
| Butyl acetate   | 3 - <5     | 123-86-4   | 2-731          |
| Solvent naphtha (petroleum), light aromatic               | 2 - <3     | 64742-95-6 | Not available. |
| 1,2,4-Trimethylbenzene                                    | 1 - <2     | 95-63-6    | 3-3427; 3-7    |
| Hexamethylene diisocyanate                                | 0.1 - <0.2 | 822-06-0   | 2-2863         |
| Xylene  | <0.1       | 1330-20-7  | 3-3; 3-60      |

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.

## 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- 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.

## 4. First aid measures

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking
- Ingestion** : No specific data.

### 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.
- 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)

## 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, 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  
Cyanate and isocyanate.  
hydrogen cyanide

## 5. Fire-fighting measures

- 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.

## 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. Avoid breathing 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.
- Special provisions** : 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). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

## 7. Handling and storage

**Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). 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. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. 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 non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

**Conditions for safe storage** : 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.

Precautions should be taken to minimize exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurization.

## 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

| Ingredient name            | Exposure limits  |
|----------------------------|--|
| Butyl acetate              | <b>Japan Society for Occupational Health (Japan, 5/2018).</b><br>OEL-M: 475 mg/m <sup>3</sup> 8 hours.<br>OEL-M: 100 ppm 8 hours.<br><b>ISHL (Japan, 2/2019).</b><br>TWA: 150 ppm 8 hours. |
| 1,2,4-Trimethylbenzene     | <b>Japan Society for Occupational Health (Japan, 5/2018).</b><br>OEL-M: 120 mg/m <sup>3</sup> 8 hours.<br>OEL-M: 25 ppm 8 hours.   |
| Hexamethylene diisocyanate | <b>Japan Society for Occupational Health (Japan, 5/2018). Inhalation sensitizer.</b><br>OEL-M: 0.034 mg/m <sup>3</sup> 8 hours.<br>OEL-M: 0.005 ppm 8 hours.                               |
| Xylene                     | <b>ISHL (Japan, 2/2019).</b><br>TWA: 50 ppm 8 hours.<br><b>Japan Society for Occupational Health (Japan, 5/2018).</b><br>OEL-M: 50 ppm 8 hours.<br>OEL-M: 217 mg/m <sup>3</sup> 8 hours.   |

## 8. Exposure controls/personal protection

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**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 measures

**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 protection** : Safety glasses with side shields.

### 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** : By spraying: air-fed respirator. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. 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.

## 9. Physical and chemical properties

### Appearance

|                  |   |
|------------------|---|
| Physical state   | : Liquid.   |
| Color            | : Clear.  |
| Odor             | : Amine-like. [Slight]                              |
| Boiling point    | : >37.78°C (>100°F)                                 |
| Flash point      | : Closed cup: 56°C (132.8°F)                        |
| Relative density | : 1.13  |
| Solubility       | : Insoluble in the following materials: cold water. |
| Viscosity        | : Not Applicable                                    |

## 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                | : In a fire, hazardous decomposition products may be produced.   |
| Incompatible materials             | : Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.       |
| Hazardous decomposition products   | : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates. |

## 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

| Product/ingredient name                                   | Result                          | Species      | Dose                    | Exposure |
|---|---------------------------------|--------------|-------------------------|----------|
| Hexamethylene diisocyanate, oligomers (isocyanurate type) | LD50 Dermal                     | Rabbit       | >2000 mg/kg             | -        |
|   | LD50 Oral                       | Rat - Female | >2500 mg/kg             | -        |
| Butyl acetate   | LC50 Inhalation Vapor           | Rat          | >21.1 mg/l              | 4 hours  |
|   | LC50 Inhalation Vapor           | Rat          | 2000 ppm                | 4 hours  |
|   | LD50 Dermal                     | Rabbit       | >17600 mg/kg            | -        |
| Solvent naphtha (petroleum), light aromatic               | LD50 Oral                       | Rat          | 10.768 g/kg             | -        |
|   | LD50 Dermal                     | Rabbit       | 3.48 g/kg               | -        |
| 1,2,4-Trimethylbenzene                                    | LD50 Oral                       | Rat          | 8400 mg/kg              | -        |
|   | LC50 Inhalation Vapor           | Rat          | 18000 mg/m <sup>3</sup> | 4 hours  |
|   | LD50 Oral                       | Rat          | 5 g/kg                  | -        |
| Hexamethylene diisocyanate                                | LC50 Inhalation Dusts and mists | Rat          | 124 mg/m <sup>3</sup>   | 4 hours  |
|   | LC50 Inhalation Vapor           | Rat          | 151 mg/m <sup>3</sup>   | 4 hours  |
|   | LC50 Inhalation Vapor           | Rat          | 22 ppm                  | 4 hours  |
|   | LD50 Dermal                     | Rabbit       | 0.57 g/kg               | -        |
| Xylene  | LD50 Oral                       | Rat          | 0.71 g/kg               | -        |
|   | LD50 Dermal                     | Rabbit       | >1.7 g/kg               | -        |



**11. Toxicological information**

|  |           |     |          |   |
|--|-----------|-----|----------|---|
|  | LD50 Oral | Rat | 4.3 g/kg | - |
|--|-----------|-----|----------|---|

**Irritation/Corrosion**

| Product/ingredient name | Result                   | Species | Score | Exposure        | Observation |
|-------------------------|--------------------------|---------|-------|-----------------|-------------|
| Xylene                  | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500 mg | -           |

**Sensitization**

Not available.

**Mutagenicity**

Not available.

**Carcinogenicity**

Not available.

**Reproductive toxicity**

Not available.

**Teratogenicity**

Not available.

**Specific target organ toxicity (single exposure)**

| Name  | Category                 | Route of exposure                  | Target organs   |
|---|--------------------------|------------------------------------|---|
| Hexamethylene diisocyanate, oligomers (isocyanurate type) | Category 3               | Not applicable.                    | Respiratory tract irritation  |
| Butyl acetate   | Category 3<br>Category 3 | Not applicable.<br>Not applicable. | Narcotic effects<br>Respiratory tract irritation                          |
| Solvent naphtha (petroleum), light aromatic               | Category 3<br>Category 3 | Not applicable.<br>Not applicable. | Narcotic effects<br>Respiratory tract irritation                          |
| 1,2,4-Trimethylbenzene                                    | Category 3<br>Category 3 | Not applicable.<br>Not applicable. | Narcotic effects<br>Respiratory tract irritation                          |
| Hexamethylene diisocyanate                                | Category 1               | Not determined                     | respiratory system  |
| Xylene  | Category 1               | Not determined                     | central nervous system (CNS),<br>kidneys, liver and<br>respiratory system |
|   | Category 3               | Not applicable.                    | Narcotic effects  |

**Specific target organ toxicity (repeated exposure)**

| Name                       | Category   | Route of exposure | Target organs                             |
|----------------------------|------------|-------------------|---|
| 1,2,4-Trimethylbenzene     | Category 2 | Not determined    | central nervous system (CNS) and<br>lungs |
| Hexamethylene diisocyanate | Category 1 | Not determined    | respiratory system                        |
| Xylene                     | Category 1 | Not determined    | nervous system<br>and respiratory system  |

**Aspiration hazard**



## 11. Toxicological information

| Name  | Result                         |
|---|--------------------------------|
| Solvent naphtha (petroleum), light aromatic | ASPIRATION HAZARD - Category 1 |
| 1,2,4-Trimethylbenzene                      | ASPIRATION HAZARD - Category 1 |
| Xylene                                      | ASPIRATION HAZARD - Category 1 |

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking
- Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- 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 effects

- 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** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

## 11. Toxicological information

| Product/ingredient name                                   | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| SIGMADUR 595Y HARDENER                                    | 2782.4       | 2725.5         | N/A                      | N/A                        | 1.7                                 |
| Hexamethylene diisocyanate, oligomers (isocyanurate type) | 2500         | 2500           | N/A                      | N/A                        | 1.5                                 |
| Butyl acetate   | 10768        | N/A            | N/A                      | N/A                        | N/A                                 |
| Solvent naphtha (petroleum), light aromatic               | 8400         | 3480           | N/A                      | N/A                        | N/A                                 |
| 1,2,4-Trimethylbenzene                                    | 5000         | N/A            | N/A                      | N/A                        | N/A                                 |
| Hexamethylene diisocyanate                                | 710          | 570            | N/A                      | 0.151                      | N/A                                 |
| Xylene  | 4300         | 1100           | N/A                      | 11                         | N/A                                 |

### Other information :

Moisture-sensitive material. 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. Skin contact to isocyanate monomer may lead to allergic lung reaction. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.

## 12. Ecological information

### Toxicity

| Product/ingredient name                                   | Result                | Species                         | Exposure |
|---|-----------------------|---------------------------------|----------|
| Hexamethylene diisocyanate, oligomers (isocyanurate type) | Acute EC50 >1000 mg/l | Algae - scenedesmus subspicatus | 72 hours |
|   | Acute EC50 >100 mg/l  | Daphnia - daphnia magna         | 48 hours |
| Solvent naphtha (petroleum), light aromatic               | Acute LC50 >100 mg/l  | Fish - Danio rerio (zebra fish) | 96 hours |
|   | Acute LC50 8.2 mg/l   | Fish                            | 96 hours |

### Persistence/degradability

| Product/ingredient name                                   | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------|
| Hexamethylene diisocyanate, oligomers (isocyanurate type) | -                 | -          | Not readily      |
| Xylene  | -                 | -          | Readily          |

### Bioaccumulative potential

| Product/ingredient name                                   | LogP <sub>ow</sub> | BCF         | Potential |
|---|--------------------|-------------|-----------|
| Hexamethylene diisocyanate, oligomers (isocyanurate type) | -                  | 3.2         | low       |
| Butyl acetate   | 1.78               | -           | low       |
| 1,2,4-Trimethylbenzene                                    | 3.63               | 120.23      | low       |
| Hexamethylene diisocyanate                                | 1.08               | -           | low       |
| Xylene  | 3.16               | 7.4 to 18.5 | low       |

### Mobility in soil

## 12. Ecological information

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## 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.

## 14. Transport information

|                                    | UN              | IMDG            | IATA            |
|------------------------------------|-----------------|-----------------|-----------------|
| <b>UN number</b>                   | UN1263          | UN1263          | UN1263          |
| <b>UN proper shipping name</b>     | PAINT           | PAINT           | PAINT           |
| <b>Transport hazard class(es)</b>  | 3               | 3               | 3               |
| <b>Packing group</b>               | III             | III             | III             |
| <b>Environmental hazards</b>       | No.             | No.             | No.             |
| <b>Marine pollutant substances</b> | Not applicable. | Not applicable. | Not applicable. |

### Additional information

**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.

## 15. Regulatory information

### Fire Service Law

| Category    | Substance name/Type | Danger category | Signal word                | Designated quantity |
|-------------|---------------------|-----------------|----------------------------|---------------------|
| Category IV | Class II petroleum  | III             | Flammable - Keep Fire Away | 1000 L              |

### Pollutant Release and Transfer Registers (PRTR)

| Ingredient name        | %   | Status  | Reference number |
|------------------------|-----|---------|------------------|
| 1,2,4-Trimethylbenzene | 1.5 | Class 1 | 296              |

### ISHL

#### Use of specified chemical substances

None of the components are listed.

#### Label requirements

| Ingredient name   | %    | Status | Reference number |
|-------------------|------|--------|------------------|
| Trimethylbenzene  | ≤3.0 | Listed | 404              |
| Petroleum naphtha | ≤3.0 | Listed | 330              |
| Butyl acetate     | <10  | Listed | 181              |

#### Chemicals requiring notification

| Ingredient name                                    | %     | Status | Reference number |
|--|-------|--------|------------------|
| Trimethylbenzene                                   | ≤3.0  | Listed | 404              |
| Petroleum naphtha                                  | ≤3.0  | Listed | 330              |
| Xylene   | <0.30 | Listed | 136              |
| Butyl acetate                                      | <10   | Listed | 181              |
| Hexamethylene diisocyanate; 1,6-Diisocyanatohexane | ≤0.30 | Listed | 519              |

#### Carcinogen

None of the components are listed.

#### Mutagen

None of the components are listed.

|   |                            |
|---|----------------------------|
| <b>Corrosive liquid</b>   | : Not listed               |
| <b>Occupational Safety and Health Law</b>                                   | : Flammable liquid Class 4 |
| <b>Prevention of Tetraalkyl Lead Poisoning</b>                              | : Not listed               |
| <b>Harmful Substances Subject to Obtaining Permission for Manufacturing</b> | : Not listed               |
| <b>Harmful Substances, Prohibited for Manufacturing</b>                     | : Not listed               |
| <b>Dangerous Substances</b>   | : Not listed               |
| <b>Lead regulation</b>  | : Not listed               |

## 15. Regulatory information

**Organic solvents poisoning prevention** : Class 2

### Poisonous and Deleterious Substances

None of the components are listed.

### Chemical Substances Control Law (CSCL)

| Ingredient name        | %    | Status              | Reference number |
|------------------------|------|---------------------|------------------|
| 1,3,5-Trimethylbenzene | 0.2  | Priority assessment | 201              |
| 1,2,4-Trimethylbenzene | 1.5  | Priority assessment | 49               |
| 1,3,5-Trimethylbenzene | 0.25 | Priority assessment | 201              |
| Xylene                 | 0.1  | Priority assessment | 125              |

**High Pressure Gas Control Law** : Not available.

### Explosives Control Law

None of the components are listed.

**Law Concerning Prevention of Pollution of the Ocean and Maritime Disaster** : Not available.

### Maritime Safety Law

### Notification Regulating Transportation of Dangerous Materials by Sea

None of the components are listed.

### Container class

None of the components are listed.

**JSOH Carcinogen** : Not listed

**List of Specially Controlled Industrial Waste** : Not listed

**Japan inventory** : All components are listed or exempted.

**Road law** : Not available.

## 16. Other information

### History

**Date of issue/Date of revision** : 16 December 2019

**Date of previous issue** : No previous validation

**Version** : 1

**Prepared by** : 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

## 16. Other information

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.