## **SAFETY DATA SHEET**



#### Conforms to Official Mexican Standard NOM-018-STPS-2015

Date of revision 28 June 2024

Version 1

Date of issue 28 June 2024

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

| Product name                                | : SIGMASHIELD 1200 BLACK HARDENER   |
|---|---|
| Product code                                | : 00478326  |
| Other means of<br>identification            | : Not applicable.   |
| Product type                                | : Liquid.   |
| Relevant identified uses o                  | f the substance or mixture and uses advised against   |
| Product use                                 | : Professional applications, Used by spraying.  |
| Use of the substance/<br>mixture            | : Coating.  |
| Uses advised against                        | : Not applicable.   |
| Manufacturer                                | : PPG Industries, Inc.<br>One PPG Place<br>Pittsburgh, PA 15272   |
| <u>Emergency telephone</u><br><u>number</u> | : (412) 434-4515 (U.S.)<br>(514) 645-1320 (Canada)<br>SETIQ Interior de la República: 800-00-214-00 (México)<br>SETIQ Ciudad de México: (55) 5559-1588 (México) |
| Technical Phone Number                      | : 888-977-4762  |
|   |   |

## **SECTION 2: Hazards identification**

| Classification of the | : ACUTE TOXICITY (oral) - Category 4   |
|-----------------------|--|
| substance or mixture  | ACUTE TOXICITY (dermal) - Category 3   |
|                       | ACUTE TOXICITY (inhalation) - Category 3   |
|                       | SKIN CORROSION - Category 1A   |
|                       | SERIOUS EYE DAMAGE - Category 1  |
|                       | SKIN SENSITIZATION - Category 1  |
|                       | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2                                |
|                       | Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 5% |
| GHS label elements    |  |
| Hazard pictograms     |  |
| Signal word           | : Danger   |
|                       |  |

#### Product name SIGMASHIELD 1200 BLACK HARDENER

## **SECTION 2: Hazards identification**

| Hazard statements Precautionary statements          | :    | <ul> <li>H302 - Harmful if swallowed.</li> <li>H311 + H331 - Toxic in contact with skin or if inhaled.</li> <li>H314 - Causes severe skin burns and eye damage.</li> <li>H317 - May cause an allergic skin reaction.</li> <li>H373 - May cause damage to organs through prolonged or repeated exposure.</li> </ul>  |
|---|------|---|
|   |      | DOOD Mission to the state of the left in the left in the first state of the   |
| Prevention  | •    | <ul> <li>P280 - Wear protective gloves, protective clothing and eye or face protection.</li> <li>P271 - Use only outdoors or in a well-ventilated area.</li> <li>P260 - Do not breathe vapor.</li> <li>P270 - Do not eat, drink or smoke when using this product.</li> <li>P264 - Wash thoroughly after handling.</li> <li>P272 - Contaminated work clothing should not be allowed out of the workplace.</li> </ul>   |
| Response  | :    | <ul> <li>P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.</li> <li>P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.</li> <li>P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.</li> <li>P363 - Wash contaminated clothing before reuse.</li> <li>P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water.</li> <li>P333 + P351 - If skin irritation or rash occurs: Get medical advice or attention.</li> <li>P305 + P351 + P338, P310 - 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.</li> </ul> |
| Storage   | :    | P405 - Store locked up.   |
| Disposal  |      | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  |
| Other hazards which do not result in classification |      | 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. Emits toxic fumes when heated.  |
| Can taxing logical information                      | . /C | Section 44)   |

See toxicological information (Section 11)

## **SECTION 3: Composition/information on ingredients**

| Substance/mixture | : Mixture                         |
|-------------------|-----------------------------------|
| Product name      | : SIGMASHIELD 1200 BLACK HARDENER |
| Other means of    | : Not applicable.                 |
| identification    |                                   |

| Ingredient name                         | %  | CAS number                                    |
|---|--|---|
| ··· (• (······························· | ≥75 - ≤90<br>≥10 - ≤14<br>≥1.0 - ≤5.0<br>≥1.0 - ≤3.6 | 6864-37-5<br>100-51-6<br>1760-24-3<br>90-72-2 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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|--------|------------|
|--------|------------|

#### Product name SIGMASHIELD 1200 BLACK 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.

## **SECTION 4: First aid measures**

#### **Description of necessary first aid measures**

| Eye contact  | <ul> <li>Check for and remove any contact lenses. Immediately flush eyes with running<br/>water for at least 15 minutes, keeping eyelids open. Seek immediate medical<br/>attention.</li> </ul>        |
|--------------|--|
| Inhalation   | : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is<br>irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by<br>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    | <ul> <li>If swallowed, seek medical advice immediately and show this container or label.</li> <li>Keep person warm and at rest. Do NOT induce vomiting.</li> </ul>                                     |

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

Potential acute health effects

| Eye contact  | : Causes serious eye damage.  |
|--------------|---|
| Inhalation   | : Toxic if inhaled.   |
| Skin contact | : Causes severe burns. Toxic in contact with skin. May cause an allergic skin reaction. |
| Ingestion    | : Harmful if swallowed.   |

**Over-exposure signs/symptoms** 

See toxicological information (Section 11)

| ecessary                            | <u>ded, if</u>             | t need          | eatmen   | and | attention | medical           | <u>nmediate</u>           | <u>ו of i</u>                      | ndicatio                                 |
|-------------------------------------|----------------------------|-----------------|----------|-----|-----------|-------------------|---------------------------|------------------------------------|--|
| <u>treatment needed, if n</u> e     | <u>treatment nee</u>       | <u>treatmen</u> | tr       | spe | and spe   | attention and spe | medical attention and spe | mmediate medical attention and spe | n of immediate medical attention and spe |
| <u>ecial treatment needed, if n</u> | <u>ecial treatment nee</u> | ecial treatmen  | ecial tr |     | and       | attention and     | medical attention and     | mmediate medical attention and     | n of immediate medical attention and     |

| Notes to physician         | <ul> <li>In case of inhalation of decomposition products in a fire, symptoms may be delayed.</li></ul>  |
|----------------------------|---|
| Specific treatments        | The exposed person may need to be kept under medical surveillance for 48 hours. <li>No specific treatment.</li>   |
| 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. |

## **SECTION 5: Firefighting measures**

| Extinguishing media                        |   |
|--|---|
| Suitable extinguishing media               | : Use an extinguishing agent suitable for the surrounding fire.                       |
| Unsuitable extinguishing media             | : None known.   |
| Specific hazards arising from the chemical | : In a fire or if heated, a pressure increase will occur and the container may burst. |

#### Product name SIGMASHIELD 1200 BLACK HARDENER

## **SECTION 5: Firefighting measures**

| Hazardous thermal decomposition products       | : Decomposition products may include the following materials:<br>carbon oxides<br>nitrogen oxides<br>metal oxide/oxides<br>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.   |
| Special protective equipment for fire-fighters | <ul> <li>Fire-fighters should wear appropriate protective equipment and self-contained<br/>breathing apparatus (SCBA) with a full face-piece operated in positive pressure<br/>mode.</li> </ul> |

## **SECTION 6: Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

| For non-emergency<br>personnel | :   | No action shall be taken involving any personal risk or without suitable training.<br>Evacuate surrounding areas. Keep unnecessary and unprotected personnel from<br>entering. Do not touch or walk through spilled material. Do not breathe vapor or<br>mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is<br>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).   |
| Methods and materials for co   | ont | ainment and cleaning up   |
| Small spill                    | :   | Stop leak if without risk. Move containers from spill area. Dilute with water and mop<br>up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry<br>material and place in an appropriate waste disposal container. Dispose of via a<br>licensed waste disposal contractor.  |
| Large spill                    | :   | Stop leak if without risk. Move containers from spill area. 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

## **SECTION 7: Handling and storage**

13 for waste disposal.

Precautions for safe handling

#### Product name SIGMASHIELD 1200 BLACK HARDENER

## **SECTION 7: Handling and storage**

| Protective measures  | : | Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
|--|---|--|
| Special precautions  | : | Vapors may accumulate in low or confined areas or travel a considerable distance to<br>a source of ignition and flash back. Vapors are heavier than air and may spread<br>along floors. If this material is part of a multiple component system, read the Safety<br>Data Sheet(s) for the other component or components before blending as the<br>resulting mixture may have the hazards of all of its parts.  |
| 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,<br>including any<br>incompatibilities | : | Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. 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. 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.                            |

## **SECTION 8: Exposure controls/personal protection**

#### **Control parameters**

#### **Occupational exposure limits**

| Ingredient name   | Exposure limits                                  |  |
|---|--|--|
| 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)<br>benzyl alcohol                    | None.<br>IPEL (-).<br>TWA: 5 ppm<br>STEL: 10 ppm |  |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine<br>2,4,6-tris(dimethylaminomethyl)phenol | None.<br>None.                                   |  |

# C = Ceiling Limit IPEL = Internal Permissible Exposure Limit TLV = Threshold Limit Value TWA = Time Weighted Average

**Recommended monitoring procedures** : 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<br/>controls: Use only with adequate ventilation. Use process enclosures, local exhaust<br/>ventilation or other engineering controls to keep worker exposure to airborne<br/>contaminants below any recommended or statutory limits.

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## **SECTION 8: Exposure controls/personal protection**

| Environmental exposure : controls  |     | Emissions from ventilation or work process equipment should be checked to ensure<br>they comply with the requirements of environmental protection legislation. In some<br>cases, fume scrubbers, filters or engineering modifications to the process<br>equipment will be necessary to reduce emissions to acceptable levels.   |  |  |
|--|-----|---|--|--|
| Individual protection measured   | res |   |  |  |
| eating, smoking and using the lavatory and at the end of<br>Appropriate techniques should be used to remove poten<br>Contaminated work clothing should not be allowed out of |     | Wash hands, forearms and face thoroughly after handling chemical products, before<br>eating, smoking and using the lavatory and at the end of the working period.<br>Appropriate techniques should be used to remove potentially contaminated clothing.<br>Contaminated work clothing should not be allowed out of the workplace. Wash<br>contaminated clothing before reusing. Ensure that eyewash stations and safety<br>showers are close to the workstation location.   |  |  |
| Eye/face protection  | 1   | Chemical splash goggles and face shield.  |  |  |
| Skin protection  |     |   |  |  |
| Hand protection  | :   | Chemical-resistant, impervious gloves complying with an approved standard should<br>be worn at all times when handling chemical products if a risk assessment indicates<br>this is necessary. Considering the parameters specified by the glove manufacturer,<br>check during use that the gloves are still retaining their protective properties. It<br>should be noted that the time to breakthrough for any glove material may be<br>different for different glove manufacturers. In the case of mixtures, consisting of<br>several substances, the protection time of the gloves cannot be accurately<br>estimated. |  |  |
| Gloves   | 1   | nitrile neoprene  |  |  |
| Body protection  | :   | Personal protective equipment for the body should be selected based on the task<br>being performed and the risks involved and should be approved by a specialist<br>before handling this product.   |  |  |
| 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**

| Appearance                |                             |
|---------------------------|-----------------------------|
| Physical state            | : Liquid.                   |
| Color                     | : Black.                    |
| Odor                      | : Amine-like.               |
| Odor threshold            | : Not available.            |
| Molecular weight          | : Not applicable.           |
| рН                        | : Not applicable.           |
| Melting point             | : Not available.            |
| Boiling point             | : >37.78°C (>100°F)         |
| Flash point               | : Closed cup: 105°C (221°F) |
| Auto-ignition temperature | : Not available.            |
| Decomposition temperature | : Not available.            |
| Flammability              | : Not available.            |

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## **SECTION 9: Physical and chemical properties**

| Lower and upper explosive (flammable) limits | : | Not available.                                |             |  |
|--|---|---|-------------|--|
| Evaporation rate                             | : | Not available.                                |             |  |
| Vapor pressure                               | : | Not available.                                |             |  |
| Vapor density                                | : | Not available.                                |             |  |
| Relative density                             | : | 0.97  |             |  |
| Density(lbs / gal)                           | : | 8.1   |             |  |
|  |   | Media   | Result      |  |
| Solubility(ies)                              |   | cold water                                    | Not soluble |  |
| Solubility in water                          | : | Not available.                                |             |  |
| Partition coefficient: n-<br>octanol/water   | : | Not applicable.                               |             |  |
| Viscosity                                    |   | Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt) |             |  |
| Volatility<br>% Solid. (w/w)                 |   | 12% (v/v), 12.504% (w/w)<br>87.496            |             |  |

## **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.<br>Refer to protective measures listed in sections 7 and 8.        |
| 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 |
|--|---------------------------------|---------|-------------------------|----------|
| 2,2'-dimethyl-4,4'-<br>methylenebis<br>(cyclohexylamine) | LC50 Inhalation Dusts and mists | Rat     | 420 mg/m <sup>3</sup>   | 4 hours  |
|  | LD50 Dermal                     | Rabbit  | >0.2 g/kg               | -        |
|  | LD50 Oral                       | Rat     | >0.32 g/kg              | -        |
| benzyl alcohol   | LC50 Inhalation Dusts and mists | Rat     | >4178 mg/m <sup>3</sup> | 4 hours  |
| -  | LD50 Dermal                     | Rabbit  | 2000 mg/kg              | -        |
|  | LD50 Oral                       | Rat     | 1.23 g/kg               | -        |
| N-(3-(trimethoxysilyl)propyl)                            | LD50 Dermal                     | Rabbit  | >2000 mg/kg             | -        |
|  |                                 |         |                         |          |

Product code 00478326 Date of issue 28 June 2024 Version 1 Product name SIGMASHIELD 1200 BLACK HARDENER **SECTION 11: Toxicological information** ethylenediamine LD50 Oral Rat 2413 mg/kg 2,4,6-tris LD50 Dermal Rat 1280 mg/kg (dimethylaminomethyl) phenol LD50 Oral Rat 1200 mg/kg **Conclusion/Summary** : There are no data available on the mixture itself. Irritation/Corrosion **Conclusion/Summary** Skin : There are no data available on the mixture itself. **Eyes** There are no data available on the mixture itself. Respiratory : There are no data available on the mixture itself. **Sensitization 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. **Classification Product/ingredient name OSHA** IARC NTP 2B carbon black -\_ **Carcinogen Classification code:** IARC: 1, 2A, 2B, 3, 4 NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen OSHA: + Not listed/not regulated: -**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 Target organs** exposure

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

N-(3-(trimethoxysilyl)propyl)ethylenediamine

| Name   |            | Route of exposure | Target organs |
|--|------------|-------------------|---------------|
| 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) | Category 2 | -                 | -             |

Category 3

| Mexico P | age: 8/13 |  |
|----------|-----------|--|
|----------|-----------|--|

Respiratory tract

irritation

#### Product name SIGMASHIELD 1200 BLACK HARDENER

## **SECTION 11: Toxicological information** 1

| Tar | qet | org | ans |
|-----|-----|-----|-----|
|     |     |     |     |

Contains material which causes damage to the following organs: blood, liver, heart, brain.

Contains material which may cause damage to the following organs: kidneys, the nervous system, upper respiratory tract, skin, eyes, adrenal, central nervous system (CNS).

#### **Aspiration hazard**

| Name           | Result                         |  |
|----------------|--------------------------------|--|
| benzyl alcohol | ASPIRATION HAZARD - Category 2 |  |

#### Information on the likely routes of exposure

#### Potential acute health effects

| Eye contact                  | : Causes serious eye damage.  |
|------------------------------|---|
| Inhalation                   | : Toxic if inhaled.   |
| Skin contact                 | : Causes severe burns. Toxic in contact with skin. May cause an allergic skin reaction.   |
| Ingestion                    | : Harmful if swallowed.   |
| Over-exposure signs/sympto   | i <u>ms</u>   |
| Eye contact                  | : Adverse symptoms may include the following:<br>pain<br>watering<br>redness  |
| Inhalation                   | : No specific data.   |
| Skin contact                 | : Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>blistering may occur  |
| Ingestion                    | : Adverse symptoms may include the following:<br>stomach pains  |
| Delayed and immediate effect | ts and also chronic effects from short and long term exposure   |
| Conclusion/Summary           | : There are no data available on the mixture itself. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. This product either contains formaldehyde or is capable of releasing formaldehyde above 0.5 ppm under certain conditions. Formaldehyde is a known cancer hazard, a skin sensitizer and a respiratory sensitizer. Carbon black is utilized as a raw material in many liquid coating formulations. In this case, the carbon black particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of carbon black when the product is applied with a brush or roller. Sanding the coating surface or mist from spray applications may be harmful depending on the duration and level of exposure and require the use of appropriate personal protective equipment and/or engineering controls (see Section 8). Most carbon blacks contain trace quantities of polyaromatic hydrocarbons (PAH). PAHs are not expected to be released in biological fluids and are therefore not likely available for biological activity. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may |

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## **SECTION 11: Toxicological information**

cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from shortterm and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

|                                | •  |  |
|--------------------------------|--|--|
| <u>Short term exposure</u>     |  |  |
| Potential immediate effects    | There are no data available on the mixture itself.   |  |
| Potential delayed effects      | There are no data available on the mixture itself.   |  |
| Long term exposure             |  |  |
| Potential immediate<br>effects | There are no data available on the mixture itself.   |  |
| Potential delayed effects      | There are no data available on the mixture itself.   |  |
| Potential chronic health effe  |  |  |
| General                        | May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |  |
| Carcinogenicity                | No known significant effects or critical hazards.  |  |
| Mutagenicity                   | No known significant effects or critical hazards.  |  |
| Reproductive toxicity          | No known significant effects or critical hazards.  |  |
|                                |  |  |

#### Numerical measures of toxicity

#### Acute toxicity estimates

| Product/ingredient name                          | Oral (mg/<br>kg) | Dermal<br>(mg/kg) | Inhalation<br>(gases)<br>(ppm) | Inhalation<br>(vapors)<br>(mg/l) | Inhalation<br>(dusts<br>and mists)<br>(mg/l) |
|--|------------------|-------------------|--------------------------------|----------------------------------|--|
| SIGMASHIELD 1200 BLACK HARDENER                  | 573.0            | 359.1             | N/A                            | N/A                              | 0.59   |
| 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) | 500              | 300               | N/A                            | N/A                              | 0.5  |
| benzyl alcohol                                   | 1230             | 2000              | N/A                            | N/A                              | 1.5  |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine     | 2413             | 2500              | N/A                            | N/A                              | N/A  |
| 2,4,6-tris(dimethylaminomethyl)phenol            | 1200             | 1280              | N/A                            | N/A                              | N/A  |

## **SECTION 12: Ecological information**

#### **Toxicity**

| Product/ingredient name                          | Result               | Species | Exposure |
|--|----------------------|---------|----------|
| N-(3-(trimethoxysilyl)propyl)<br>ethylenediamine | EC50 597 mg/l        | Fish    | 96 hours |
| 2,4,6-tris<br>(dimethylaminomethyl)phenol        | Acute LC50 >100 mg/l | Daphnia | 48 hours |
|  | Acute LC50 >100 mg/l | Fish    | 96 hours |

#### Persistence and degradability

| Product/ingredient name                   | Test  | Result                      | Dose | Inoculum |
|---|---|-----------------------------|------|----------|
| 2,4,6-tris<br>(dimethylaminomethyl)phenol | OECD 301D<br>Ready<br>Biodegradability -<br>Closed Bottle<br>Test | 4 % - Not readily - 28 days | -    | -        |

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#### Product name SIGMASHIELD 1200 BLACK HARDENER

## **SECTION 12: Ecological information**

| Product/ingredient name                                     | Aquatic half-life | Photolysis | Biodegradability       |
|---|-------------------|------------|------------------------|
| benzyl alcohol<br>2,4,6-tris<br>(dimethylaminomethyl)phenol | -                 |            | Readily<br>Not readily |

#### **Bioaccumulative potential**

| Product/ingredient name | LogPow               | BCF | Potential         |
|-------------------------|----------------------|-----|-------------------|
| 5                       | 1.8<br>0.87<br>0.219 | -   | Low<br>Low<br>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

 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

## **SECTION 14: Transport information**

|                               | Mexico Classification   | IMDG  | ΙΑΤΑ  |
|-------------------------------|---|---|---|
| UN number                     | UN2922  | UN2922  | UN2922  |
| UN proper<br>shipping name    | LIQUIDO CORROSIVO, TOXICO, N.E.<br>P.   | CORROSIVE LIQUID, TOXIC, N.O.S.   | Corrosive liquid, toxic, n.o.s.   |
|                               | (2,2'-dimethyl-4,4'-methylenebis<br>(cyclohexylamine), 2,4,6-tris<br>(dimethylaminomethyl)phenol) | (2,2'-dimethyl-4,4'-methylenebis<br>(cyclohexylamine), 2,4,6-tris<br>(dimethylaminomethyl)phenol) | (2,2'-dimethyl-4,4'-methylenebis<br>(cyclohexylamine), 2,4,6-tris<br>(dimethylaminomethyl)phenol) |
| Transport<br>hazard class(es) | 8 (6.1)   | 8 (6.1)   | 8 (6.1)   |
| ·                             |   |   | Mexico Page: 11/13  |

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## **SECTION 14: Transport information**

| Packing group                     | I  | II   | II   |
|-----------------------------------|--|--|--|
| Environmental<br>hazards          | Yes. The environmentally<br>hazardous substance mark is<br>not required. | Yes.   | Yes. The environmentally<br>hazardous substance mark is<br>not required. |
| Marine<br>pollutant<br>substances | Not applicable.  | (2,2'-dimethyl-4,4'-methylenebis<br>(cyclohexylamine)) | Not applicable.  |

#### Additional information

| Mexico | : None identified.   |
|--------|--|
| IMDG   | : The marine pollutant mark is not required when transported in sizes of $\leq$ 5 L or $\leq$ 5 kg.        |
| IATA   | : The environmentally hazardous substance mark may appear if required by other transportation regulations. |

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**

#### **Mexico**

#### Classification

Flammability : 1 Health : Reactivity : 1 4

#### International regulations

**Montreal Protocol** 

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC) Not listed.

## SECTION 16: Other information

Hazardous Material Information System (U.S.A.)

```
Health :
           4
                    Flammability : 1 Physical hazards :
                                                           1
(*) - Chronic
```

#### effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Date of previous issue : No previous validation

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## **SECTION 16: Other information**

| Organization that prepared the SDS | : EHS  |
|------------------------------------|--|
| Key to abbreviations               | : ATE = Acute Toxicity Estimate<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonized System of Classification and Labelling of Chemicals<br>IATA = International Air Transport Association<br>IBC = International Air Transport Association<br>IBC = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL = International Convention for the Prevention of Pollution From Ships,<br>1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)<br>N/A = Not available<br>SGG = Segregation Group<br>UN = United Nations |
|                                    |  |

#### ✓ Indicates information that has changed from previously issued version.

#### Notice to reader

The information, which is based on the current knowledge of the chemical substance or mixture and applies to appropriate safety precautions for the product, is deemed correct but is not exhaustive and will be used only as a guide.

#### **Disclaimer**

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.