# SAFETY DATA SHEET



Date of issue/Date of revision 25 March 2023 Version3

# **Section 1. Identification**

Product code : 00435908

Product name : SIGMASHIELD 220/420/460/880/880GF CURE

Other means of identification

: Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Coating.

Industrial applications, Used by spraying.

Uses advised against : Product is not intended, labelled or packaged for consumer use.

Supplier's details : PT PPG Coatings Indonesia

Jl. Rawagelam III No.1

13930 Jakarta Indonesia

Tel +62 21 4605710 PMC.Safety@PPG.com

**Emergency telephone** 

number

: CHEMTREC 001-803-017-9114 (CCN 17704)

# Section 2. Hazards identification

Classification of the substance or mixture

: ► AMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 1C

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

SKIN SENSITIZATION - Category 1

TOXIC TO REPRODUCTION - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

AQUATIC HAZARD (LONG-TERM) - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity:

33.4%

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation

toxicity: 56.6%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the

aquatic environment: 63%

GHS label elements, including precautionary statements

Indonesia <sup>:</sup> Page: 1/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

## Section 2. Hazards identification

**Hazard pictograms** 











Signal word

: Danger

**Hazard statements** 

: Mammable liquid and vapor.

Harmful if swallowed or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction. May cause respiratory irritation.

May damage fertility or the unborn child.

Very toxic to aquatic life with long lasting effects.

## **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. 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

: Collect spillage. 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: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Storage** 

: Store locked up. Store in a well-ventilated place. Keep container tightly closed. 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

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

# Section 3. Composition/information on ingredients

Substance/mixture : Mixture

**CAS** number/other identifiers

**CAS number** : Not applicable. **EC number** : Mixture.

Indonesia Page: 2/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 3. Composition/information on ingredients

Ingredient name	%	<b>CAS</b> number
Epoxy Amine Resin	25- <50	SUB123903
xylene	10- <20	1330-20-7
Propylidynetrimethanol, propoxylated, reaction products with ammonia	10- <20	39423-51-3
benzyl alcohol	10- <20	100-51-6
2-methylpropan-1-ol	5- <10	78-83-1
bisphenol A	3- <5	80-05-7
m-phenylenebis(methylamine)	3- <5	1477-55-0
ethylbenzene	3- <5	100-41-4
2,4,6-tris(dimethylaminomethyl)phenol	1- <3	90-72-2

There are no 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.

SUB codes represent substances without registered CAS Numbers.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

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

**Eye contact**: Check for and remove any contact lenses. Immediately flush eyes with running

water for at least 15 minutes, keeping eyelids open. Seek immediate medical

attention.

**Inhalation**: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is

irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by

trained personnel.

**Skin contact**: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and

water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show this container or label.

Keep person warm and at rest. Do NOT induce vomiting.

## Most important symptoms/effects, acute and delayed

## Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : Harmful if inhaled. May cause respiratory irritation.

**Skin contact**: Causes severe burns. Defatting to the skin. May cause an allergic skin reaction.

**Ingestion**: Harmful if swallowed.

### Over-exposure signs/symptoms

**Eye contact**: Adverse symptoms may include the following:

pain watering redness

**Inhalation** : Adverse symptoms may include the following:

respiratory tract irritation

coughing

reduced fetal weight increase in fetal deaths skeletal malformations

Indonesia <sup>1</sup> Page: 3/14

Product code 00435908 Version 3 Date of issue 25 March 2023

Product name SIGMASHIELD 220/420/460/880/880GF CURE

## Section 4. First aid measures

Skin contact

: Adverse symptoms may include the following:

pain or irritation redness dryness cracking

blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion

: Adverse symptoms may include the following:

stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

### Indication of immediate 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 Protection of first-aiders**  : No specific treatment.

: Do not use water jet.

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing

thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

# Section 5. Fire-fighting measures

### **Extinguishing media**

Suitable extinguishing

media

: Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing** 

media

Specific hazards arising from the chemical

: Mammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal** decomposition products : Decomposition products may include the following materials: carbon oxides nitrogen oxides

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective** equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

> Indonesia <sup>2</sup> Page: 4/14

Product code 00435908 Version 3 Date of issue 25 March 2023

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### **Environmental precautions**

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### 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 noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

# Section 7. Handling and storage

#### Precautions for safe handling

**Protective measures** 

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

> Indonesia Page: 5/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 7. Handling and storage

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

## **Control parameters**

### Occupational exposure limits

Ingredient name	Exposure limits
xylene	Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). [Xylene (o, m,p-isomers)]  TWA: 434 mg/m³ 8 hours.  TWA: 100 BDS 8 hours.  STEL: 651 mg/m³ 15 minutes.  STEL: 150 BDS 15 minutes.  Ministry of Employment and Labor (Indonesia, 2/1997).  STEL: 651 mg/m³ 15 minutes.  STEL: 150 BDS 15 minutes.
2-methylpropan-1-ol	Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). Absorbed through skin.  TWA: 152 mg/m³ 8 hours.  TWA: 50 BDS 8 hours.
m-phenylenebis(methylamine)	Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018). Absorbed through skin.  CEIL: 0.1 mg/m³
ethylbenzene	Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018).  TWA: 20 BDS 8 hours.  Ministry of Employment and Labor (Indonesia, 2/1997).  STEL: 543 mg/m³ 15 minutes.  STEL: 125 BDS 15 minutes.

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.

Indonesia Page: 6/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 8. Exposure controls/personal protection

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/face protection

Skin protection

Hand protection

: Chemical splash goggles and face shield.

: 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** 

: nitrile neoprene

**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

## **Appearance**

Physical state : Liquid.
Color : Various

Odor : Characteristic.
Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Indonesia Page: 7/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 9. Physical and chemical properties

**Boiling point** : >37.78°C (>100°F)

Flash point : Closed cup: 33.33°C (92°F)

**Evaporation rate** : 0.5 (butyl acetate = 1)

Flammability/Combustible properties (solid, gas)

: Not available.

Lower and upper explosive

(flammable) limits

: Greatest known range: Lower: 1.3% Upper: 13% (benzyl alcohol)

Vapor pressure : 0.71 kPa (5.3 mm Hg)

Vapor density : Not available.

Relative density : 1

Solubility(ies) : Media Result

cold water Not soluble

**Solubility in water** : 11.5 g/l

Partition coefficient: n-

octanol/water

: Not applicable.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C): >21 mm<sup>2</sup>/s

# Section 10. Stability and reactivity

**Reactivity**: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability**: The product is stable.

**Possibility of hazardous** 

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition

products.

**Incompatible materials**: Keep away from the following materials to prevent strong exothermic reactions:

oxidizing agents, strong alkalis, strong acids.

**Hazardous decomposition** 

products

: Depending on conditions, decomposition products may include the following

materials: carbon oxides nitrogen oxides

# Section 11. Toxicological information

Information on toxicological effects

**Acute toxicity** 

Indonesia Page: 8/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 11. Toxicological information

Result	Species	Dose	Exposure
LD50 Dermal	Rabbit	1.7 g/kg	-
LD50 Oral	Rat		-
LD50 Dermal	Rabbit	0.4 g/kg	-
LD50 Oral	Rat	0.22 g/kg	-
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	-
LC50 Inhalation Vapor	Rat	24.6 mg/l	4 hours
LD50 Dermal	Rabbit	2460 mg/kg	-
LD50 Oral	Rat	2830 mg/kg	-
LD50 Dermal	Rabbit	3600 mg/kg	-
LD50 Oral	Rat	3.25 g/kg	-
LC50 Inhalation Gas.	Rat	700 ppm	1 hours
LD50 Dermal	Rat - Male,	>3100 mg/kg	-
	Female		
LD50 Oral	Rat	930 mg/kg	-
	Rat	•	4 hours
LD50 Dermal	Rabbit		-
LD50 Oral	Rat	3.5 g/kg	-
LD50 Dermal	Rabbit	1.28 g/kg	-
LD50 Dermal	Rat	1280 mg/kg	_
LD50 Oral	Rat		-
	LD50 Dermal LD50 Oral LD50 Oral LD50 Oral LC50 Inhalation Dusts and mists LD50 Oral LC50 Inhalation Vapor LD50 Dermal LD50 Oral LD50 Oral LD50 Dermal LD50 Oral LC50 Inhalation Gas. LD50 Dermal LC50 Inhalation Vapor LD50 Dermal LC50 Inhalation Gas.	LD50 Dermal LD50 Oral LD50 Dermal  Rat Rabbit  LD50 Oral LC50 Inhalation Dusts and mists LD50 Dermal LD50 Oral Rat LC50 Inhalation Vapor LD50 Dermal LD50 Dermal Rabbit LD50 Oral Rat LD50 Dermal Rabbit Rat LD50 Dermal Rabbit Rat Rabbit	LD50 Dermal         Rabbit         1.7 g/kg           LD50 Oral         Rat         4.3 g/kg           LD50 Dermal         Rat         0.4 g/kg           LD50 Oral         Rat         0.22 g/kg           LC50 Inhalation Dusts and mists         Rat         >4178 mg/m³           LD50 Dermal         Rabbit         2000 mg/kg           LD50 Oral         Rat         1.23 g/kg           LC50 Inhalation Vapor         Rat         24.6 mg/l           LD50 Dermal         Rabbit         2460 mg/kg           LD50 Dermal         Rat         2830 mg/kg           LD50 Dermal         Rat         3.25 g/kg           LC50 Inhalation Gas.         Rat         700 ppm           LD50 Dermal         Rat         930 mg/kg           LC50 Inhalation Vapor         Rat         17.8 mg/l           LD50 Dermal         Rat         3.5 g/kg           LD50 Dermal         Rat         3.5 g/kg           LD50 Dermal         Rat         3.5 g/kg           LD50 Dermal         Rat         1.28 g/kg

## Conclusion/Summary Irritation/Corrosion

: There are no data available on the mixture itself.

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Skin - Moderate irritant	Rabbit		24 hours 500 mg	-
m-phenylenebis (methylamine)	Skin - Severe irritant	Rat		4 hours	4 hours
2,4,6-tris (dimethylaminomethyl) phenol	Skin - Visible necrosis	Rabbit	-	4 hours	7 days

## **Conclusion/Summary**

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

There are no data available on the mixture itself.There are no data available on the mixture itself.

## **Sensitization**

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

## **Conclusion/Summary**

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

Indonesia <sup>:</sup> Page: 9/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 11. Toxicological information

**Mutagenicity** 

**Conclusion/Summary** 

: There are no data available on the mixture itself.

**Carcinogenicity** 

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

**Reproductive toxicity** 

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

**Teratogenicity** 

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

## Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
bisphenol A	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

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

## **Aspiration hazard**

Name	Result
	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : Harmful if inhaled. May cause respiratory irritation.

**Skin contact**: Causes severe burns. Defatting to the skin. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed.

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

**Eye contact** : Adverse symptoms may include the following:

pain watering redness

**Inhalation** : Adverse symptoms may include the following:

respiratory tract irritation

coughing

reduced fetal weight increase in fetal deaths skeletal malformations

Indonesia Page: 10/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# **Section 11. Toxicological information**

**Skin contact**: Adverse symptoms may include the following:

pain or irritation redness dryness cracking

blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations

**Ingestion** : Adverse symptoms may include the following:

stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

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

### **Short term exposure**

**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** 

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 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.

**Reproductive toxicity**: May damage fertility or the unborn child.

## **Numerical measures of toxicity**

## **Acute toxicity estimates**

Route	ATE value
Oral	1417.81 mg/kg
Dermal	2022.08 mg/kg
Inhalation (gases)	47279.09 ppm
Inhalation (vapors)	22.4 mg/l
Inhalation (dusts and mists)	1.97 mg/l

### 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. 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.

Indonesia Page: 11/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 12. Ecological information

## **Toxicity**

Product/ingredient name	Result	Species	Exposure
<b>2</b> -methylpropan-1-ol	Acute EC50 1100 mg/l	Daphnia	48 hours
bisphenol A	Acute EC50 10.2 mg/l Fresh water	Daphnia	48 hours
·	Acute LC50 0.885 mg/l Fresh water	Crustaceans	48 hours
	Acute LC50 4.6 mg/l Fresh water	Fish	96 hours
	Chronic NOEC 0.000174 mg/l Fresh water	Fish	5 months
ethylbenzene	Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water	Daphnia Daphnia - Ceriodaphnia dubia	48 hours
2,4,6-tris (dimethylaminomethyl)pheno	Acute LC50 175 mg/l	Fish	96 hours

# Persistence/degradability

Product/ingredient name	Test	Result		Dose	Inoculum
ethylbenzene	-	79 % - Readily - 10	days	-	-
Product/ingredient name	Aquatic half-life	)	Photolysi	s	Biodegradability
xylene benzyl alcohol bisphenol A ethylbenzene	- - -		- - -		Readily Readily Readily Readily

## **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
xylene	3.12	7.4 to 18.5	low
Propylidynetrimethanol, propoxylated, reaction products with ammonia	-1.13	-	low
benzyl alcohol	0.87	-	low
2-methylpropan-1-ol	1	-	low
bisphenol A	3.4	43.65	low
m-phenylenebis (methylamine)	0.18	2.69	low
ethylbenzene	3.6	79.43	low
2,4,6-tris (dimethylaminomethyl)pheno	0.219	-	low

## **Mobility in soil**

Soil/water partition coefficient (Koc)

: Not available.

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

Indonesia Page: 12/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 13. Disposal considerations

**Disposal methods** 

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers

# **Section 14. Transport information**

	UN	IMDG	IATA
UN number	UN3469	UN3469	UN3469
UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE
Transport hazard class(es)	3 (8)	3 (8)	3 (8)
Packing group	III	III	III
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	Not applicable.	Polyoxy propylene diamine, bisphenol A)	Not applicable.

### **Additional information**

UN : None identified.

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

: The environmentally hazardous substance mark may appear if required by other transportation **IATA** 

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

Indonesia Page: 13/14

Product name SIGMASHIELD 220/420/460/880/880GF CURE

# Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

: No known specific national and/or regional regulations applicable to this product (including its ingredients).

Law No. 74/2001 - Banned

None of the components are listed.

### Law No. 74/2001 - Restricted

None of the components are listed.

Law No. 74/2001 - : Not determined

Chemicals that may be used

**International regulations** 

**Montreal Protocol** 

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

## Section 16. Other information

**History** 

Date of issue/Date of

revision

: 25 March 2023

Date of previous issue :

: 11/20/2022

Version
Prepared by

: 3 : 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.

Indonesia Page: 14/14