## **SAFETY DATA SHEET**



Date of issue/Date of revision 4 March 2024

Version 1

# Section 1. Identification of the substance/mixture and of the company/undertaking

Product code : 00468619

Product name : STEELGUARD 951 HARDENER BLACK

Other means of : Not available.

identification

Product type : Liquid.

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

Product use : Coating.

Professional applications, Used by spraying.

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

Supplier's details : PPG Coatings (Thailand) Co., Ltd.

15 Rama 9 Road, Kwaeng Huamark, Khet Bangkapi, Bangkok 10240 Thailand

T: 662-319-4190 #224 F: 662-319-4189

**Emergency telephone** number (with hours of

operation)

: CHEMTREC 001-800-13-203-9987 (CCN 17704)

## Section 2. Hazards identification

Classification of the substance or mixture

: ACUTE TOXICITY (oral) - Category 5
ACUTE TOXICITY (dermal) - Category 5
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 1

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

SKIN SENSITIZATION - Category 1A
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 2

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

AQUATIC HAZARD (LONG-TERM) - Category 3

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## Section 2. Hazards identification

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

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 58.5%

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 28.3%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 4.1%

## **GHS label elements**

**Hazard pictograms** 







Signal word

**Hazard statements** 

Danger

May be harmful if swallowed or in contact with skin.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Harmful if inhaled.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure. (urinary

system)

Harmful 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. Use personal protective equipment as required. Wear protective gloves, protective clothing and eye or face protection. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response

: IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Storage** 

: Store locked up.

**Disposal** 

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not : Causes digestive tract burns.

result in classification

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**Product name STEELGUARD 951 HARDENER BLACK** 

## Section 3. Composition/information on ingredients

Substance/mixture : Mixture

### **CAS** number/other identifiers

**CAS number** : Not applicable.

Ingredient name	%	CAS number
melamine	50-100	108-78-1
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil	20- <25	68082-29-1
fatty acids and triethylenetetramine		
m-phenylenebis(methylamine)	10- <20	1477-55-0
3,6-diazaoctanethylenediamin	1- <3	112-24-3
carbon	1- <3	7440-44-0

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.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

SUB codes represent substances without registered CAS Numbers.

## Section 4. First aid measures

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

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

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

attention.

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

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

trained personnel.

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

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

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

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

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

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

**Inhalation** : Harmful if inhaled.

Skin contact : Causes severe burns. May be harmful in contact with skin. May cause an allergic

skin reaction.

**Ingestion**: May be harmful if swallowed. Corrosive to the digestive tract. Causes burns.

Over-exposure signs/symptoms

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## Section 4. First aid measures

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

pain watering redness

Inhalation : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

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

pain or irritation

redness

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**: 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)

## Section 5. Fire-fighting 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. 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.

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## Section 5. Fire-fighting measures

**Hazardous thermal** decomposition products

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: Decomposition products may include the following materials:

carbon oxides nitrogen oxides

halogenated compounds metal oxide/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.

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

## Section 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

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

For emergency responders:

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

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

### Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. 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. 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.

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## Section 7. Handling and storage

## **Precautions for safe** handling

: 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. 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.

Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

## including any incompatibilities

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 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. 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
m-phenylenebis(methylamine)	ACGIH TLV (United States, 1/2023). Absorbed through skin.
carbon	C: 0.018 ppm <b>ACGIH TLV (United States).</b> TWA: 10 mg/m³, (Inhalable)

## 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 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.

### **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.

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## Section 8. Exposure controls/personal protection

### **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

: Chemical splash goggles and face shield.

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** 

: 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.

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 : Not available.

Odor : Characteristic.

Odor threshold : Not available.

pH : Not applicable.

**Melting point** : May start to solidify at the following temperature: 14°C (57.2°F) This is based on

data for the following ingredient: m-phenylenebis(methylamine). Weighted average:

-29.48°C (-21.1°F)

**Boiling point** : >37.78°C (>100°F)

Flash point : Closed cup: Not applicable.

**Evaporation rate** : Not available.

Flammability (solid, gas) : liquid

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## Section 9. Physical and chemical properties

Lower and upper explosive

(flammable) limits

: Greatest known range: Lower: 1.1% Upper: 6.4% (3,6-diazaoctanethylenediamin)

Vapor pressure : Highest known value: <0.001 kPa (<0.01 mm Hg) (at 20°C)

(3,6-diazaoctanethylenediamin). Weighted average: 0.0003 kPa (0.002 mm Hg) (at

20°C)

Vapor density Relative density : Highest known value: 5.04 (Air = 1) (3,6-diazaoctanethylenediamin).

: 1.28

Solubility(ies)

Media Result

cold water Not soluble

Partition coefficient: n-

octanol/water

Not applicable.

Auto-ignition temperature

Decomposition temperature

Lowest known value: 337.78°C (640°F) (3,6-diazaoctanethylenediamin). Stable under recommended storage and handling conditions (see Section 7).

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 halogenated compounds metal oxide/

oxides

## Section 11. Toxicological information

Information on toxicological effects

**Acute toxicity** 

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## Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
melamine	LC50 Inhalation Dusts and mists	Rat	>5190 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	3161 mg/kg	-
Fatty acids, C18-unsatd., dimers,	LD50 Dermal	Rat	>2000 mg/kg	-
oligomeric reaction products with tall-				
oil fatty acids and				
triethylenetetramine				
	LD50 Oral	Rat	>2000 mg/kg	-
m-phenylenebis(methylamine)	LC50 Inhalation Gas.	Rat	700 ppm	1 hours
	LD50 Dermal	Rat - Male,	>3100 mg/kg	-
		Female		
	LD50 Oral	Rat	930 mg/kg	-
3,6-diazaoctanethylenediamin	LD50 Dermal	Rabbit	1465 mg/kg	-
	LD50 Oral	Rat	1716 mg/kg	-

**Conclusion/Summary** 

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: There are no data available on the mixture itself.

## **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Eyes - Severe irritant	Rabbit	-	-	-
m-phenylenebis (methylamine)	Skin - Irritant Skin - Severe irritant	Human Rat	-	- 4 hours	- 4 hours

## **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**

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

## **Conclusion/Summary**

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

**Mutagenicity** 

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

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## **Section 11. Toxicological information**

**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
carbon	Category 3	-	Respiratory tract irritation

## Specific target organ toxicity (repeated exposure)

Name		Route of exposure	Target organs
melamine	Category 2	-	urinary system

### **Aspiration hazard**

Not available.

Information on the likely

routes of exposure

: Not available.

## Potential acute health effects

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

Inhalation : Harmful if inhaled.

Skin contact : Causes severe burns. May be harmful in contact with skin. May cause an allergic

skin reaction.

**Ingestion**: May be harmful if swallowed. Corrosive to the digestive tract. Causes burns.

### 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:

reduced fetal weight increase in fetal deaths skeletal malformations

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## Section 11. Toxicological information

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

pain or irritation

redness

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

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: Not available.

Potential delayed effects

: Not available.

Long term exposure

**Potential immediate** 

effects

effects

: Not available.

Potential delayed effects : Not available.

Potential chronic health effects

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 : Suspected of causing cancer. Risk of cancer depends on duration and level of

exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : Suspected of damaging fertility or the unborn child.

### **Numerical measures of toxicity**

### **Acute toxicity estimates**

Route	ATE value
	2225.42 mg/kg 2459.9 mg/kg
	19652.07 ppm

### Other information

Causes digestive tract burns. 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.

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**Product name STEELGUARD 951 HARDENER BLACK** 

## Section 12. Ecological information

## **Toxicity**

Product/ingredient name	Result	Species	Exposure
melamine Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Acute EC50 200 mg/l	Daphnia	48 hours
	EC10 1.78 mg/l	Algae	72 hours

**Conclusion/Summary**: Not available.

## Persistence/degradability

**Conclusion/Summary**: Not available.

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

### Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
melamine	-1.22	1 1 1	Low
m-phenylenebis(methylamine)	0.18		Low
3,6-diazaoctanethylenediamin	-1.66 to -1.4		Low

### **Mobility in soil**

Soil/water partition coefficient (Koc)

: Not available.

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

## Section 13. Disposal considerations

## **Disposal methods**

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its 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.

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## **Section 14. Transport information**

	UN	IMDG	IATA
UN number	UN3066	UN3066	UN3066
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	8	8	8
Packing group	II	II	II
Environmental hazards	No.	No.	No.
Marine pollutant substances	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.

Transport in bulk according : Not applicable.

to IMO instruments

## Section 15. Regulatory information

**Harmful Chemicals List** 

Safety, health and environmental regulations specific for the product

: Listed

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

### **International regulations**

## **Montreal Protocol**

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

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## **Section 16. Other information**

**History** 

Date of issue/Date of : 4 March 2024

revision

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

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.

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