# SAFETY DATA SHEET



Date of issue/Date of revision 23 October 2023

Version 3.01

### Section 1. Identification

Product code : 00257061

Product name : SIGMACOVER 456 BASE RAL 9002

Product type : Liquid.

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

Product use : Coating.

Professional applications, Used by spraying.

Supplier's details : PPG Industries (Singapore) Pte. Ltd., No. 1 Tuas Basin Close, Singapore 638803.

Tel +65 68653737

**Emergency telephone** number (with hours of

operation)

: CHEMTREC +(65)-31581349 (CCN 17704)

# Section 2. Hazards identification

Classification of the substance or mixture

: FLAMMABLE LIQUIDS - Category 3

ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

SKIN SENSITIZATION - Category 1

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

#### GHS label elements, including precautionary statements

Hazard pictograms :







Signal word : Danger

**Hazard statements** : Flammable liquid and vapor.

Causes skin irritation.

May cause an allergic skin reaction. Causes serious eye irritation.

Harmful if inhaled.

May cause respiratory irritation.

Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements** 

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### Section 2. Hazards identification

**Prevention** : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot

surfaces, sparks, open flames and other ignition sources. No smoking. Do not

breathe vapor. Wash thoroughly after handling.

: Get medical advice or attention if you feel unwell. IF INHALED: Call a POISON Response

> CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it 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.

If eye irritation persists: Get medical advice or attention.

: Store in a well-ventilated place. Keep container tightly closed. **Storage** 

: Not applicable. **Disposal** 

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

result in classification

# Section 3. Composition/information on ingredients

Substance/mixture : Mixture

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

**CAS** number : Not applicable.

: Mixture. **EC** number

Ingredient name	%	CAS number
<b>E</b> poxy Resin	20 - <25	SUB110652
crystalline silica, respirable powder (<10 microns)	10 - <20	14808-60-7
xylene	10 - <20	1330-20-7
Epoxy resin (MW ≤ 700)	5 - <10	25068-38-6
Talc , not containing asbestiform fibres	5 - <10	14807-96-6
ethylbenzene	1 - <3	100-41-4
2-methylpropan-1-ol	1 - <3	78-83-1
Fatty acids, C14-18 and C16-18-unsatd., maleated	0.1 - < 0.3	85711-46-2

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

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

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.

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### Section 4. First aid measures

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 irritation.

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

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

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

#### Over-exposure signs/symptoms

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

pain or irritation watering redness

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

respiratory tract irritation

coughing

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

irritation redness dryness cracking

**Ingestion**: No specific data.

#### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician :

 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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

Unsuitable extinguishing

media

: Do not use water jet.

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### Section 5. Fire-fighting measures

Specific hazards arising from the chemical

: Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

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

carbon oxides sulfur 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. 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

### 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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

**Environmental precautions**: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

#### 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.

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### Section 6. Accidental release measures

respirator when ventilation is inadequate. Do not enter storage areas and commed 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.

# 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

Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

#### **Control parameters**

Occupational exposure limits

Ingredient name	Exposure limits
rystalline silica, respirable powder (<10 microns)	ACGIH TLV (United States, 1/2022). [Silica, crystalline] TWA: 0.025 mg/m³ 8 hours. Form: Respirable
xylene	Workplace Safety and Health Act (Singapore, 2/2006). [Xylene] PEL (short term): 651 mg/m³ 15 minutes. PEL (short term): 150 ppm 15 minutes. PEL (long term): 434 mg/m³ 8 hours. PEL (long term): 100 ppm 8 hours.
Talc , not containing asbestiform fibres	Workplace Safety and Health Act (Singapore, 2/2006). PEL (long term): 2 mg/m³ 8 hours.
ethylbenzene	Workplace Safety and Health Act (Singapore, 2/2006).  PEL (short term): 543 mg/m³ 15 minutes.  PEL (short term): 125 ppm 15 minutes.  PEL (long term): 434 mg/m³ 8 hours.  PEL (long term): 100 ppm 8 hours.
2-methylpropan-1-ol	Workplace Safety and Health Act

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### Section 8. Exposure controls/personal protection

(Singapore, 2/2006).

PEL (long term): 152 mg/m<sup>3</sup> 8 hours. PEL (long term): 50 ppm 8 hours.

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. 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.

: 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
Body protection

: butyl rubber

: 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.

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### Section 8. Exposure controls/personal protection

**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 : White.

Odor : Aromatic.

pH : insoluble in water.

Boiling point : >37.78°C (>100°F)

Flash point : Closed cup: 27°C (80.6°F)

**Evaporation rate**: Highest known value: 0.84 (ethylbenzene) Weighted average: 0.77compared with

butyl acetate

Flammability (solid, gas) : liquid

Vapor pressure : Highest known value: <1.6 kPa (<12 mm Hg) (at 20°C) (2-methylpropan-1-ol).

Weighted average: 0.97 kPa (7.28 mm Hg) (at 20°C)

Vapor density : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.63 (Air = 1)

Relative density : 1.51

Solubility(ies) : Media Result

cold water Not soluble

**Auto-ignition temperature**: Lowest known value: 415°C (779°F) (2-methylpropan-1-ol).

Viscosity : Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt)

# 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.

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### Section 10. Stability and reactivity

Hazardous decomposition products

: Depending on conditions, decomposition products may include the following materials: carbon oxides sulfur oxides halogenated compounds metal oxide/ oxides

# Section 11. Toxicological information

### Information on toxicological effects

### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
<b>x</b> ylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
Epoxy resin (MW ≤ 700)	LD50 Dermal	Rabbit	>2 g/kg	-
,	LD50 Oral	Rat	>2 g/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
·	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapor	Rat	24.6 mg/l	4 hours
	LD50 Dermal	Rabbit	2460 mg/kg	-
	LD50 Oral	Rat	2830 mg/kg	-

Conclusion/Summary

: There are no data available on the mixture itself.

#### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
kylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Epoxy resin (MW ≤ 700)	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rabbit	- -	- -	-

#### **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
Epoxy resin (MW ≤ 700)	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.

**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.

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# **Section 11. Toxicological information**

**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
kylene	Category 3	-	Respiratory tract irritation
Talc , not containing asbestiform fibres	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Fatty acids, C14-18 and C16-18-unsatd., maleated	Category 3	-	Respiratory tract irritation

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

Name		Route of exposure	Target organs
crystalline silica, respirable powder (<10 microns) ethylbenzene	Category 1	inhalation	-
	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 irritation.

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

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

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

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

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

pain or irritation watering

redness

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

respiratory tract irritation

coughing

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### **Section 11. Toxicological information**

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

irritation redness dryness cracking

Ingestion : No specific data.

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

#### **Short term exposure**

**Potential immediate** 

: Not available.

effects

Potential delayed effects : Not available.

**Long term exposure** 

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

#### Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure. 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 : No known significant effects or critical hazards.

### **Numerical measures of toxicity**

#### **Acute toxicity estimates**

Route	ATE value
Inhalation (vapors)	6062.42 mg/kg 21.67 mg/l 2.78 mg/l

#### Other information

Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. 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.

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# **Section 12. Ecological information**

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
poxy resin (MW ≤ 700)	Acute LC50 1.8 mg/l	Daphnia	48 hours
	Chronic NOEC 0.3 mg/l	Daphnia	21 days
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
-	Chronic NOEC 1 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	-
2-methylpropan-1-ol	Acute EC50 1100 mg/l	Daphnia	48 hours

**Conclusion/Summary** 

: There are no data available on the mixture itself.

#### Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
, ,	OECD 301F	5 % - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-

#### **Conclusion/Summary**

: There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>x</b> ylene	-		Readily
Epoxy resin (MW ≤ 700)	-	-	Not readily
ethylbenzene	-	-	Readily

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
<b>x</b> ylene	3.12	7.4 to 18.5	Low
Epoxy resin (MW ≤ 700)	3	31	Low
ethylbenzene	3.6	79.43	Low
2-methylpropan-1-ol	1	-	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

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# Section 13. Disposal considerations

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

# **Section 14. Transport information**

	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
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

Singapore - hazardous chemicals under government control

None.

**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 : 23 October 2023

revision

Date of previous issue : 5/18/2021 Version : 3.01

Prepared by : EHS

**Key to abbreviations** : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

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)

**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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