SAFETY DATA SHEET



Date of issue 16 February 2024

Version 2

Section 1. Identification

Chemical name : SIGMARINE 28 REDBROWN

GHS product identifier : SIGMARINE 28 REDBROWN

Code : 000001191691 **Synonyms** : 00210338; 00210339

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 International Inc. Taiwan Branch.

No.209, Hong Tzuenn Rd Ping Chen City, Taoyuan County, Taiwan

Tel: 886 3 3663922

886 3 3751639 (Automotive OEM Coatings Products).

Fax: 886 3 2182667

Emergency telephone

number

: North: +886-3-3663922 North: +886-911998320 South: +886-7-8718105 South: +886-932793707

Section 2. Hazards identification

Classification of the substance or mixture

: FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (dermal) - Category 5
SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

AQUATIC TOXICITY (ACUTE) - Category 2 AQUATIC TOXICITY (CHRONIC) - Category 3

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

toxicity: 69.5%

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

aquatic environment: 24.6%

GHS label elements

Hazard pictograms :





Signal word : Warning

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Section 2. Hazards identification

Hazard statements

: Mammable liquid and vapor.

May be harmful in contact with skin.

Causes skin irritation.

Causes serious eye irritation. May cause respiratory irritation.

Toxic to aquatic life.

Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

: 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. Wash thoroughly after handling.

Response

: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water. If skin irritation 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.

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		
Hazardous ingredients	Concentration %	CAS number
Talc , not containing asbestiform fibres ethylbenzene Quaternary ammonium compounds, C12-14 (evennumbered)-alkylethyldimethyl, ethyl sulphates	20 - <25 5 - <10 3 - <5 0.3 - <1	1330-20-7 14807-96-6 100-41-4 1474044-65-9
Hazardous ingredients	Concentration %	CAS number
Talc , not containing asbestiform fibres ethylbenzene Quaternary ammonium compounds, C12-14 (evennumbered)-alkylethyldimethyl, ethyl sulphates	20 - <25 5 - <10 3 - <5 0.3 - <1	1330-20-7 14807-96-6 100-41-4 1474044-65-9

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.

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Section 4. First aid measures

Description of necessary first aid measures

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.

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

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

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.

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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.Inhalation : May cause respiratory irritation.

Skin contact: May be harmful in contact with skin. Causes skin irritation. Defatting to the skin.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eve 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)

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Section 5. Fire-fighting measures

Extinguishing media

Suitable

: Use dry chemical, CO2, water spray (fog) or foam.

Not suitable

: Do not use water jet.

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 toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

 Decomposition products may include the following materials: carbon oxides 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 mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

: 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.

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

Large spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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.

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Section 7. Handling and storage

Precautions for safe handling

: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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.

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 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
x ylene	TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). [xylenes
	(o-, m-, p-isomer)] STEL: 542.5 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 434 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
Talc (Mg3H2(SiO3)4)	TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). STEL: 4 mg/m³ 15 minutes. TWA: 2 mg/m³ 8 hours.
ethylbenzene	TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). STEL: 542.5 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes.

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Section 8. Exposure controls/personal protection

TWA: 434 mg/m³ 8 hours. TWA: 100 ppm 8 hours.

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.

Individual protection measures

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.

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

: For prolonged or repeated handling, use the following type of gloves:

Not recommended: nitrile rubber

Recommended: polyvinyl alcohol (PVA), Viton®

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.

Eye protection

: Chemical splash goggles.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Brownish-red.

Odor : Aromatic.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : >37.78°C (>100°F)

Flash point : Cosed cup: 31°C (87.8°F)

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Section 9. Physical and chemical properties

Flammability (solid, gas) : Not available.

Burning time : Not applicable.

Burning rate : Not applicable.

Decomposition temperature : Not available.

Evaporation rate : Not available.

Lower and upper explosive

(flammable) limits

: Not available.

Vapor pressure : Not available.
Vapor density : Not available.

Relative density : 1.48

Solubility(ies) : Media Result

cold water Not soluble

Partition coefficient: n-

octanol/water

: Not applicable.

Auto-ignition temperature: Not available.

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

Section 10. Stability and reactivity

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 metal oxide/oxides

Hazardous polymerization: Under normal conditions of storage and use, hazardous polymerization will not

occur.

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
kylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 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	-
Quaternary ammonium compounds, C12-14 (even-numbered)-alkylethyldimethyl, ethyl sulphates	LD50 Dermal	Rabbit	528 mg/kg	-
	LD50 Oral	Rat	570 mg/kg	-

Irritation/Corrosion

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

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
Talc (Mg3H2(SiO3)4)	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

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Section 11. Toxicological information

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

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Inhalation : May cause respiratory irritation.

Ingestion : No known significant effects or critical hazards.

Skin contact: May be harmful in contact with skin. Causes skin irritation. Defatting to the skin.

Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Eyes : Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin : 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

Not available.

General: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/

or dermatitis.

Carcinogenicity: No known significant effects or critical hazards.

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Section 11. Toxicological information

Mutagenicity: No known significant effects or critical hazards.Reproductive toxicity: No known significant effects or critical hazards.Inhalation: No known significant effects or critical hazards.Ingestion: No known significant effects or critical hazards.Skin contact: No known significant effects or critical hazards.Eye contact: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMARINE 28 REDBROWN xvlene	13857.9	2466.8	N/A	30.6	5.3
	4300	1700	N/A	11	1.5
Talc (Mg3H2(SiO3)4) ethylbenzene	N/A	N/A	N/A	11	N/A
	3500	17800	N/A	17.8	1.5
Quaternary ammonium compounds, C12-14 (even- numbered)-alkylethyldimethyl, ethyl sulphates	570	528	N/A	N/A	N/A

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.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia Caria dan karia da kira	48 hours
Ougtornery emmenium	Chronic NOEC 1 mg/l Fresh water	Daphnia - Ceriodaphnia dubia	72 hours
Quaternary ammonium compounds, C12-14 (even-numbered)-alkylethyldimethyl, ethyl sulphates	EC50 0.14 mg/l	Algae	72 Hours
	EC50 0.036 mg/l	Daphnia	48 hours
	LC50 13.8 mg/l	Fish	96 hours
	NOEC 10 mg/m ³	Algae	72 hours
	NOEC 7 mg/m³	Daphnia	21 days
	NOEC 3.2 mg/m ³	Fish	28 days

Persistence and degradability

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Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene Quaternary ammonium compounds, C12-14 (even- numbered)- alkylethyldimethyl, ethyl sulphates	-	79 % - Readily - 10 days 67.77 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethylbenzene Quaternary ammonium compounds, C12-14 (even- numbered)- alkylethyldimethyl, ethyl sulphates	-	-	Readily Readily Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
ethylbenzene Quaternary ammonium compounds, C12-14 (even- numbered)- alkylethyldimethyl, ethyl sulphates		79.43	Low Low 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. 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

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Section 13. Disposal considerations

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

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

TCCSCA List of toxic chemicals

Not applicable.

TCCSCA List of concerned chemicals

Not applicable.

List of chemicals for which manufacturing or handling is defined as "work specially hazardous to health"

: This product contains substances "Specially hazardous to health": xylene, butan-1-ol, toluene, 2-butoxyethanol, lead massive.

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Section 15. Regulatory information

Regulations Applicable:

- 1. Rules for Occupational Safety and Health Facilities
- 2. Regulations for the Labeling and Hazard Communication of Hazardous Chemicals
- 3. Prevention Rules for Organic Solvent Intoxication/Poisoning.
- 4. Standards of Permissible Exposure Limits of Airborne Hazardous Substances in Workplace
- 5. Traffic Safety Regulation of Road.

Section 16. Other information

References	Not available.		
Organization that prepared the SDS	Name: PPG Industries International Inc., Taiwan Branch		
	Address / Telephone: No.209, Hong Tzuenn Rd Ping Chen City, Taoyuan County, Taiwan North: +886-3-3663922 North: +886-911998320 South: +886-7-8718105 South: +886-932793707		
Person who prepared the SDS	Title: Technical manager Technical manager	Name: (Signature): Tony Cheng Daniel Wu	
Date of issue	16 February 2024		

Date of previous issue : 12/18/2022

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▼ Indicates information that has changed from previously issued version.

Remarks

: New SDS layout incorporating TW Table 2017

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

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.

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