SAFETY DATA SHEET



Date of issue 15 May 2024

Version 3.01

Section 1. Identification		
Chemical name	: SIGMASHIELD 880 BASE RAL 7035	
GHS product identifier	: SIGMASHIELD 880 BASE RAL 7035	
Code	: 00463239	
Relevant identified uses of	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

Signal word	: Warning	
Hazard pictograms		
GHS label elements		
	Percentage of the mixture consisting of ingredient(s) of unknown hazards to th aquatic environment: 52.1%	ne
	Percentage of the mixture consisting of ingredient(s) of unknown acute inhala toxicity: 65.1%	tion
	irritation) - Category 3 AQUATIC TOXICITY (ACUTE) - Category 3 AQUATIC TOXICITY (CHRONIC) - Category 3	
	SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory	tract
	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	
substance or mixture	ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2	
Classification of the	: FLAMMABLE LIQUIDS - Category 3	

Product name SIGMASHIELD 880 BASE RAL 7035

Section 2. Hazards identification

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. 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. Contaminated work clothing should not be allowed out of the workplace.
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: 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.
Storage	:	Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Disposal	1	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards which do not result in classification	1	Prolonged or repeated contact may dry skin and cause irritation.

result in classification

Section 3. Composition/information on ingredients

Substance/mixture : Mixture		
Hazardous ingredients	Concentration %	CAS number
bis-[4-(2,3-epoxipropoxi)phenyl]propaneTalc , not containing asbestiform fibresbarium sulfateEpoxy Resin (700 <mw<=1100)< td="">Phenol, methylstyrenatedethylbenzenexylene2-methylpropan-1-oloxirane, mono[(C12-14-alkyloxy)methyl] derivs.Octadecanamide, N,N'-1,6-hexanediylbis[12-hydroxy-</mw<=1100)<>	20 - <25 10 - <20 5 - <10 3 - <5 3 - <5 3 - <5 3 - <5 1 - <3 1 - <3 1 - <3	1675-54-3 14807-96-6 7727-43-7 25036-25-3 68512-30-1 100-41-4 1330-20-7 78-83-1 68609-97-2 55349-01-4

Section 3. Composition/information on ingredients

Hazardous ingredients	Concentration %	CAS number
bis-[4-(2,3-epoxipropoxi)phenyl]propane	20 - <25	1675-54-3
Talc , not containing asbestiform fibres	10 - <20	14807-96-6
barium sulfate	5 - <10	7727-43-7
Epoxy Resin (700 <mw<=1100)< td=""><td>3 - <5</td><td>25036-25-3</td></mw<=1100)<>	3 - <5	25036-25-3
Phenol, methylstyrenated	3 - <5	68512-30-1
ethylbenzene	3 - <5	100-41-4
xylene	3 - <5	1330-20-7
2-methylpropan-1-ol	1 - <3	78-83-1
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	1 - <3	68609-97-2
Octadecanamide, N,N'-1,6-hexanediylbis [12-hydroxy-	1 - <3	55349-01-4

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

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

Section 4. First aid measures

Description of necessary first aid measures

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 symp	toms/effects, acute and delayed
Potential acute healt	h 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	s/symptoms
Eye contact	: Adverse symptoms may include the following: pain or irritation

 Inhalation
 redness

 Inhalation
 Adverse symptoms may include the following: respiratory tract irritation coughing

watering

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Section 4. First aid measures

Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	: No specific data.
ndication of immediate me Notes to physician	 dical attention and special treatment needed, if necessary 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 Not suitable	 Use dry chemical, CO₂, water spray (fog) or foam. Do not use water jet.
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. 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 nitrogen 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 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 co	nta	ainment 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.

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. Do not get in eyes or on skin or clothing. Do not ingest. 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.
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
<mark>I</mark> Falc (Mg3H2(SiO3)4)	TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). STEL: 4 mg/m ³ 15 minutes. TWA: 2 mg/m ³ 8 hours.
ethylbenzene	TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). STEL: 542.5 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 434 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
xylene	TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). [xylenes] STEL: 542.5 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 434 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
2-methylpropan-1-ol	TWA. 100 ppm 8 hours. TW Minstry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). STEL: 228 mg/m ³ 15 minutes. STEL: 75 ppm 15 minutes. TWA: 152 mg/m ³ 8 hours. TWA: 50 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.
ndividual protection measu	ures de la constante de la const
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
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Section 8. Exposure controls/personal protection

	estimated.
Gloves	: butyl rubber
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. 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.

Section 9. Physical and chemical properties

Physical state : Liquid. Color : Not available. Odor : Characteristic. Odor threshold : Not available. pH : Not available. Melting point : Not available. Boiling point : >37.78°C (>100°F) Flash point : Closed cup: 30°C (86°F) Flammability (solid, gas) : Not available. Burning time : Not applicable. Burning time : Not available. Burning rate : Not available. Evaporation rate : Not available. Lower and upper explosive : Not available. (flammable) limits : Vapor density : Not available. Relative density : 1.44 Solubility(ies) : 1.44 Partition coefficient: n- : Not applicable. Partition coefficient: n- : Not applicable. Auto-ignition temperature : Not available.	<u>Appearance</u>			
Odor:Characteristic.Odor threshold:Not available.pH:Not available.Melting point:Not available.Boiling point:>37.78°C (>100°F)Flash point:Closed cup: 30°C (86°F)Flammability (solid, gas):Not available.Burning time:Not available.Burning time:Not available.Burning rate:Not available.Decomposition temperature:Not available.Evaporation rate:Not available.(flammable) limits:Not available.Vapor pressure:Not available.Vapor density:Not available.Relative density:1.44Solubility(ies):MediaPartition coefficient: n- octanol/water:Not applicable.	Physical state	:	Liquid.	
Odor threshold:Not available.pH:Not available.Melting point:Not available.Boiling point:>37.78°C (>100°F)Flash point:Closed cup: 30°C (86°F)Flammability (solid, gas):Not available.Burning time:Not available.Burning rate:Not available.Decomposition temperature:Not available.Evaporation rate:Not available.Lower and upper explosive:Not available.Vapor pressure:Not available.Vapor density:Not available.Relative density:I.44Solubility(ies):MediaPartition coefficient: n- octanol/water:Not applicable.	Color	:	Not available.	
pH : Not applicable. Melting point : Not available. Boiling point : >37.78°C (>100°F) Flash point : Closed cup: 30°C (86°F) 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 : Not available. (flammable) limits : Not available. Vapor pressure : Not available. Relative density : 1.44 Solubility(ies) : Media Partition coefficient: n- octanol/water : Not applicable.	Odor	:	Characteristic.	
Melting point : Not available. Boiling point : >37.78°C (>100°F) Flash point : Closed cup: 30°C (86°F) Flammability (solid, gas) : Not available. Burning time : Not available. Burning tate : 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 : 1.44 Solubility(ies) : Media Partition coefficient: n- octanol/water : Not applicable.	Odor threshold	:	Not available.	
Boiling point : >37.78°C (>100°F) Flash point : Closed cup: 30°C (86°F) 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 : 1.44 Solubility(ies) : Media Partition coefficient: n-octanol/water : Not applicable.	рН	:	Not applicable.	
Flash point : Closed cup: 30°C (86°F) 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 : 1.44 Solubility(ies) : Media Partition coefficient: n- octanol/water : Not applicable.	Melting point	:	Not available.	
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 : 1.44 Solubility(ies) : Media Partition coefficient: n- octanol/water : Not applicable.	Boiling point	:	>37.78°C (>100°F)	
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 : 1.44 Solubility(ies) : Media Partition coefficient: n- octanol/water : Not applicable.	Flash point	:	Closed cup: 30°C (86°F)	
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 : 1.44 Solubility(ies) : Media Partition coefficient: n- octanol/water : Not applicable.	Flammability (solid, gas)	:	Not available.	
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 : 1.44 Solubility(ies) : Media Result Cold water Not soluble Partition coefficient: n- octanol/water : Not applicable.	Burning time	:	Not applicable.	
Evaporation rate : Not available. Lower and upper explosive : Not available. (flammable) limits : Not available. Vapor pressure : Not available. Vapor density : Not available. Relative density : 1.44 Solubility(ies) : Media Result Cold water Not soluble Partition coefficient: n-octanol/water : Not applicable.	Burning rate	:	Not applicable.	
Lower and upper explosive (flammable) limits: Not available.Vapor pressure Vapor density Relative density: Not available.Relative density Solubility(ies): 1.44MediaResult cold waterPartition coefficient: n- octanol/water: Not applicable.	Decomposition temperature	:	Not available.	
(flammable) limits Vapor pressure : Not available. Vapor density : Not available. Relative density : 1.44 Solubility(ies) : Media Result Cold water Not soluble Partition coefficient: n-octanol/water : Not applicable.	Evaporation rate	:	Not available.	
Vapor density : Not available. Relative density : 1.44 Solubility(ies) : Media Result cold water Not soluble Partition coefficient: n-octanol/water : Not applicable.		1	Not available.	
Relative density : 1.44 Solubility(ies) : Media Result cold water Not soluble Partition coefficient: n-octanol/water : Not applicable.	Vapor pressure	:	Not available.	
Solubility(ies) Image: Media Result Cold water Not soluble Partition coefficient: n-octanol/water : Not applicable.	Vapor density	:	Not available.	
Solubility(ies) : cold water Not soluble Partition coefficient: n- octanol/water :	Relative density	1	1.44	
Partition coefficient: n- octanol/water : Not applicable.	Solubility(icc)		Media	Result
octanol/water	Solubility(les)	1	cold water	Not soluble
Auto-ignition temperature : Not available.		:	Not applicable.	
	Auto-ignition temperature	:	Not available.	
Viscosity: Kinematic (40°C): >21 mm²/s	Viscosity	1	Kinematic (40°C): >21 mm	n²/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 nitrogen oxides sulfur oxides halogenated compounds 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

Product/ingredient name	Result	Species	Dose	Exposure
2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane	LD50 Dermal	Rabbit	23000 mg/kg	-
	LD50 Oral	Rat	15000 mg/kg	-
barium sulfate	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Epoxy Resin (700 <mw <=1100)</mw 	LD50 Dermal	Rat	>2000 mg/kg	-
·	LD50 Oral	Rat	>2000 mg/kg	-
Phenol, methylstyrenated	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/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	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 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	-
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	LD50 Oral	Rat	17100 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane	Eyes - Mild irritant	Rabbit	-	24 hours	-
	Eyes - Redness of the conjunctivae	Rabbit	0.4	24 hours	-
	Skin - Edema	Rabbit	0.5	4 hours	-
	Skin - Erythema/Eschar	Rabbit	0.8	4 hours	-
	Skin - Mild irritant	Rabbit	-	4 hours	-
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
				mg	

Sensitization

Product/ingredient name	Route of exposure	Species	Result
2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane		Mouse	Sensitizing
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	skin	Guinea pig	Sensitizing

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
Talc (Mg3H2(SiO3)4)	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
xylene	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

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

Aspiration hazard

Name	Result
xylene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 2

ĺ			Taiwan GHS Page: 10/
	Potential delayed effects	:	Not available.
	Potential immediate effects	:	Not available.
	Long term exposure		
	Potential delayed effects	:	Not available.
	Short term exposure Potential immediate effects	:	Not available.
	Delayed and immediate effect	ts	and also chronic effects from short and long term exposure
	Ingestion	:	No specific data.
	Skin		Adverse symptoms may include the following: irritation redness dryness cracking
	Inhalation	:	Adverse symptoms may include the following: respiratory tract irritation coughing
	Eyes	:	Adverse symptoms may include the following: pain or irritation watering redness
	Symptoms related to the physical sectors of the sector sectors and	sic	al, chemical and toxicological characteristics
	Eye contact	•	Causes serious eye irritation.
	Skin contact	÷	Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
	Ingestion	÷	No known significant effects or critical hazards.
	Inhalation		Harmful if inhaled. May cause respiratory irritation.
	Potential acute health effects		
	Information on the likely routes of exposure	:	Not available.

Section 11. Toxicological information

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Potential chronic health effects

Not available.

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	1	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	:	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
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)
GMASHIELD 880 BASE RAL 7035	13996.3	6017.4	N/A	19.1	8.2
2,2'-[(1-methylethylidene)bis	15000	23000	N/A	N/A	N/A
(4,1-phenyleneoxymethylene)]bisoxirane					
Talc (Mg3H2(SiO3)4)	N/A	N/A	N/A	11	N/A
barium sulfate	N/A	2500	N/A	N/A	N/A
Epoxy Resin (700 <mw<=1100)< td=""><td>2500</td><td>2500</td><td>N/A</td><td>N/A</td><td>N/A</td></mw<=1100)<>	2500	2500	N/A	N/A	N/A
Phenol, methylstyrenated	2500	2500	N/A	N/A	N/A
ethylbenzene	3500	17800	N/A	17.8	1.5
xylene	4300	1700	N/A	11	1.5
2-methylpropan-1-ol	2830	2460	N/A	24.6	N/A
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	17100	N/A	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
2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane	Acute LC50 1.8 mg/l Fresh water	Daphnia - <i>daphnia magna</i>	48 hours
ethylbenzene	Chronic NOEC 0.3 mg/l Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water	Daphnia Daphnia Daphnia - Ceriodaphnia dubia	21 days 48 hours -
2-methylpropan-1-ol oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Acute EC50 1100 mg/l LC50 >100 mg/l	Daphnia Fish	48 hours 96 hours

Persistence and degradability

Product/ingredient name	Test	Result		Dose		Inoculum
ethylbenzene	-	79 % - Rea	adily - 10 days	-		-
Product/ingredient name	Aquatic half-li	fe	Photolysis		Biode	gradability
2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bisoxirane ethylbenzene	-		-		Not rea	
xylene	-		-		Readily	

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
henol, methylstyrenated ethylbenzene xylene 2-methylpropan-1-ol oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	3.627 3.6 3.12 1 3.77	- 79.43 7.4 to 18.5 - -	Low Low Low Low Low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

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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	ΙΑΤΑ
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

UN	: None identified.
IMDG	: None identified.
ΙΑΤΑ	: 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,
 - 2-methylpropan-1-ol, toluene, methanol, n-butyl acetate, 1,4-dioxane, butan-1-ol.

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	Name: PPG Industries International Inc., Taiwan Branch		
prepared the SDS	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	15 May 2024		
Date of previous issue	: 1/10/2024		
Version	: 3.01		
Indicates information	n that has changed from previously issued v	ersion.	
Remarks	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 		

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Section 16. Other information

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

<u>Disclaimer</u>

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.