

# SAFETY DATA SHEET



PPG SSC Co.,Ltd.

Date of issue 1/1/2026

(month/day/year)

SDS Number:

AA00147-5110000103

Version 2

## Section 1. Chemical product and company identification

A. Product name : SIGMA NEXEON 710 REDBROWN  
Product code : 000010023544

### Other means of identification

00393196

### B. Relevant identified uses of the substance or mixture and uses advised against

Product use : Professional applications, Used by spraying.  
Use of the substance/ mixture : Antifouling products  
Uses advised against : Product is not intended, labelled or packaged for consumer use.

C. Supplier's or Importer's information : PPG SSC  
(44714)  
19, Yeocheon-ro 217beon-gil, Nam-gu,  
Ulsan, Korea  
Tel: +82-52-210-8222

Email Address Korea.MSDS@PPG.COM

Emergency telephone number: +82-52-210-8331

## Section 2. Hazards identification

A. Hazard classification : FLAMMABLE LIQUIDS - Category 3  
ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (inhalation) - Category 3  
SKIN IRRITATION - Category 2  
SERIOUS EYE DAMAGE - Category 1  
GERM CELL MUTAGENICITY - Category 1B  
CARCINOGENICITY - Category 1A  
TOXIC TO REPRODUCTION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1  
AQUATIC HAZARD (ACUTE) - Category 1  
AQUATIC HAZARD (LONG-TERM) - Category 1  
This product is classified in accordance with the Industrial Safety and Health Act and the Chemical Control Act.

### B. GHS label elements, including precautionary statements

Symbol :



## Section 2. Hazards identification

**Signal word**

: Danger

**Hazard statements**

- : H226 - Flammable liquid and vapor.
- H302 - Harmful if swallowed.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H331 - Toxic if inhaled.
- H340 - May cause genetic defects.
- H350 - May cause cancer.
- H361 - Suspected of damaging fertility or the unborn child.
- H372 - Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS), kidneys, liver, nervous system)
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

- : P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves, protective clothing and eye or face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 - Use explosion-proof electrical, ventilating or lighting equipment.
- P241 - Use explosion-proof electrical, ventilating or lighting equipment.
- P242 - Use non-sparking tools.
- P243 - Take action to prevent static discharges.
- P240 - Ground and bond container and receiving equipment.
- P273 - Avoid release to the environment.
- P260 - Do not breathe vapor.
- P270 - Do not eat, drink or smoke when using this product.
- P264 - Wash thoroughly after handling.

**Response**

- : P391 - Collect spillage.
- P370 + P378 - In case of fire: Never use water to extinguish.
- P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- P304 + P340, P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P305 + P351 + P338, P310 - 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.
- P321 - Specific treatment (see the label).

**Storage**

- : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 - Keep cool.

**Disposal**

- : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**C. Other hazards which do not result in classification** : Prolonged or repeated contact may dry skin and cause irritation.

## Section 3. Composition/information on ingredients

### CAS number/other identifiers

**CAS number** : Not applicable.

Chemical name	Common name	Identifiers	%
Xylene	XYLEMES	CAS: 1330-20-7 EC: 215-535-7	10 -<20
ethylbenzene	ETHYLBENZENE	CAS: 100-41-4 EC: 202-849-4	10 -<20
propylene glycol methyl ether	PROPYLENE GLYCOL MONOMETHYL ETHER	CAS: 107-98-2	5 - <10
zinc pyrithione	pyrithione zinc	EC: 203-539-1 CAS: 13463-41-7	5 - <10
Iron oxide	Diiron trioxide	EC: 236-671-3 CAS: 1309-37-1	5 - <10
Talc , not containing asbestiform fibres	Talc, non-asbestos form	EC: 215-168-2 CAS: 14807-96-6	5 - <10
4-Bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile	1H-pyrrole-3-carbonitrile,4-bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-	EC: 238-877-9 CAS: 122454-29-9	1 - <5
Dimethyl carbonate	DIMETHYL CARBONATE	CAS: 616-38-6	1 - <5
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	EC: 210-478-4 CAS: 64742-95-6	0.1 - <1
Ethanol	ETHYL ALCOHOL	EC: 265-199-0 CAS: 64-17-5	0.1 - <1
Methyl alcohol	METHYL ALCOHOL	EC: 200-578-6 CAS: 67-56-1	0.1 - <1
		EC: 200-659-6	

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

### **A. 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.
- In case of accidental eye contact, avoid direct exposure to the sun or other sources of UV light as severe irritation including burns may result. These reactions can be delayed – get medical attention if pain, irritation or blistering occurs after contact.

### **B. 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.

### **C. 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.

### **D. Ingestion**

- : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

## Section 4. First aid measures

**E. 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

### A. 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.

### B. Specific hazards arising from the chemical

**Hazardous thermal decomposition products** : 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 very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon oxides  
nitrogen oxides  
sulfur oxides  
halogenated compounds  
metal oxide/oxides

### C. Special equipment for fire-fighting

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

**Fire-fighting procedures** : 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.

## Section 6. Accidental release measures

### A. Personal precautions, protective equipment and emergency procedures

**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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

## Section 6. Accidental release measures

### B. Environmental precautions

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

### C. 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 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.

## Section 7. Handling and storage

### A. Precautions for safe handling

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

### B. 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

### A. Occupational exposure limits

Ingredient name	Exposure limits
Xylene	ISHA Article 42 (Republic of Korea, 1/2020) [Xylene] STEL 15 minutes: 150 ppm. TWA 8 hours: 100 ppm.
ethylbenzene	ISHA Article 42 (Republic of Korea, 1/2020) STEL 15 minutes: 125 ppm. TWA 8 hours: 100 ppm.
propylene glycol methyl ether	ISHA Article 42 (Republic of Korea, 1/2020) STEL 15 minutes: 150 ppm. TWA 8 hours: 100 ppm.
Iron oxide	ISHA Article 42 (Republic of Korea, 1/2020) [Iron oxide] TWA 8 hours: 5 mg/m <sup>3</sup> (as Fe). Form: Fume. TWA 8 hours: 5 mg/m <sup>3</sup> (as Fe).
Talc , not containing asbestosiform fibres	ISHA Article 42 (Republic of Korea, 1/2020) TWA 8 hours: 2 mg/m <sup>3</sup> (as asbestos). Form: fibers.
Ethanol	ISHA Article 42 (Republic of Korea, 1/2020) TWA 8 hours: 1000 ppm.
Methyl alcohol	ISHA Article 42 (Republic of Korea, 1/2020) Absorbed through skin. STEL 15 minutes: 250 ppm. TWA 8 hours: 200 ppm.

**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.

**B. 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.

### C. Personal protective equipment

**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 8. Exposure controls/personal protection

**Eye protection** : Chemical splash goggles and face shield.

**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: butyl rubber, neoprene, natural rubber (latex), polyvinyl alcohol (PVA), Viton®

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### A. Appearance

**Physical state** : Liquid.

**Color** : Brownish-red.

### B. Odor

: Characteristic.

### C. Odor threshold

: Not available.

### D. pH

: Not applicable.

### E. Melting/freezing point

: Not available.

### F. Boiling point/boiling range

: >37.78°C (>100°F)

### G. Flash point

: Closed cup: 28°C (82.4°F)

### H. Evaporation rate

: Not available.

### I. Flammability (solid, gas)

: Not available.

### J. Lower and upper explosive (flammable) limits

: Not available.

### K. Vapor pressure

	Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	dimethyl carbonate	56.78	7.6	OECD 104			

## Section 9. Physical and chemical properties

	<b>Media</b>	<b>Result</b>	
L. Solubility(ies)	cold water	Not soluble	
Solubility in water		Not available.	
M. Vapor density		Not available.	
N. Relative density		1.41	
O. Partition coefficient: n-octanol/water		Not applicable.	
P. Auto-ignition temperature		:	
Q. Decomposition temperature		Not available.	
R. Viscosity		Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): >21 mm <sup>2</sup> /s (>21 cSt)	
Flow time (ISO 2431)		Not available.	
S. Molecular weight		Not applicable.	

<b>Ingredient name</b>	<b>°C</b>	<b>°F</b>	<b>Method</b>
1-methoxy-2-propanol	270	518	

## Section 10. Stability and reactivity

A. Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
B. Conditions to avoid	:	When exposed to high temperatures may produce hazardous decomposition products.
C. Incompatible materials	:	Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
D. Hazardous decomposition products	:	Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides

## Section 11. Toxicological information

A. Information on the likely routes of exposure	:	Not available.
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### Potential acute health effects

Inhalation	:	Toxic if inhaled.
Ingestion	:	Harmful if swallowed.
Skin contact	:	Causes skin irritation. Defatting to the skin.
Eye contact	:	Causes serious eye damage.

### Over-exposure signs/symptoms

## Section 11. Toxicological information

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

**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 dryness  
 cracking  
 blistering may occur  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness

### B. Health hazards

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	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	-
propylene glycol methyl ether	LD50 Oral	Rat	3.5 g/kg	-
	LC50 Inhalation Vapor	Rat	>7000 ppm	6 hours
	LD50 Dermal	Rabbit	13 g/kg	-
zinc pyrithione	LD50 Oral	Rat	5.2 g/kg	-
	LC50 Inhalation Dusts and mists	Rat	0.14 mg/l	4 hours
	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Oral	Rat	177 mg/kg	-
Iron oxide	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Oral	Rat	10 g/kg	-
4-Bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile	LC50 Inhalation Dusts and mists	Rat	<0.25 mg/l	4 hours
	LD50 Dermal	Rat	520 to 750 mg/kg	-
	LD50 Oral	Rat	28.7 mg/kg	-
Dimethyl carbonate	LC50 Inhalation Vapor	Rat	140000 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	2.5 g/kg	-
	LD50 Oral	Rat	12.9 g/kg	-
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	LD50 Dermal	Rabbit	3.48 g/kg	-
	LD50 Oral	Rat	8400 mg/kg	-
Ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m <sup>3</sup>	4 hours

## Section 11. Toxicological information

Methyl alcohol	LD50 Dermal LD50 Oral LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rat Rat Rabbit Rat	17100 mg/kg 7 g/kg 64000 ppm 15800 mg/kg 5600 mg/kg	- - 4 hours - -
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**Conclusion/Summary** : There are no data available on the mixture itself.

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
zinc pyrithione	Eyes - Cornea opacity	Rabbit	4	24 hours	24 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

**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.

### Teratogenicity

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

### Specific target organ toxicity (single exposure)

Name	Classification	Route of exposure	Target organs
Xylene propylene glycol methyl ether Iron oxide	Category 3 Category 3 Category 3	- - -	Narcotic effects Narcotic effects Respiratory tract irritation
Talc , not containing asbestos fibers	Category 3	-	Respiratory tract irritation
Ethanol Methyl alcohol	Category 3 Category 1	- -	Narcotic effects -

### Specific target organ toxicity (repeated exposure)

## Section 11. Toxicological information

Name	Classification	Route of exposure	Target organs
Xylene	Category 1	-	central nervous system (CNS), kidneys, liver
zinc pyrithione	Category 1	-	nervous system
Iron oxide	Category 1	-	-
Ethanol	Category 2	-	-

### Aspiration hazard

Name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	ASPIRATION HAZARD - Category 1

### 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.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : May cause genetic defects.

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

### Additional 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.

Chemical name	Identifiers	GHS Classification
Xylene	CAS: 1330-20-7 EC: 215-535-7	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
ethylbenzene	CAS: 100-41-4 EC: 202-849-4	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 2 ASPIRATION HAZARD - Category 1
propylene glycol methyl ether	CAS: 107-98-2 EC: 203-539-1	AQUATIC HAZARD (LONG-TERM) - Category 3 FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
zinc pyrithione	CAS: 13463-41-7 EC: 236-671-3	ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY

## Section 11. Toxicological information

Iron oxide	CAS: 1309-37-1  EC: 215-168-2	(REPEATED EXPOSURE) - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Talc , not containing asbestiform fibres	CAS: 14807-96-6  EC: 238-877-9	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
4-Bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile	CAS: 122454-29-9	ACUTE TOXICITY (oral) - Category 2  ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
Dimethyl carbonate	CAS: 616-38-6	FLAMMABLE LIQUIDS - Category 2
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	EC: 210-478-4  CAS: 64742-95-6  EC: 265-199-0	TOXIC TO REPRODUCTION - Category 2 FLAMMABLE LIQUIDS - Category 3  SKIN IRRITATION - Category 2 GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1B ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2
Ethanol	CAS: 64-17-5  EC: 200-578-6	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Methyl alcohol	CAS: 67-56-1  EC: 200-659-6	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3

## Section 12. Ecological information

### A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethylbenzene	Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water	Daphnia	48 hours
propylene glycol methyl ether	Acute LC50 23300 mg/l	Daphnia - <i>Ceriodaphnia dubia</i>	-
zinc pyrithione	Acute LC50 >4500 mg/l Fresh water Acute EC50 5.513 µg/l Marine water Acute LC50 0.0082 mg/l Chronic NOEC 1.889 µg/l Marine water	Daphnia  Fish  Algae - <i>Nitzschia pungens</i>  Daphnia  Algae - <i>Nitzschia pungens</i>	48 hours  96 hours  96 hours  48 hours  96 hours

## Section 12. Ecological information

Iron oxide 4-Bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile	Chronic NOEC 0.0027 mg/l Acute EC50 >100 mg/l Acute EC50 0.012 mg/l  Acute LC50 0.0015 mg/l Acute LC50 0.0013 mg/l Acute NOEC 0.00073 mg/l Chronic NOEC 0.0002 mg/l Chronic NOEC 0.00017 mg/l Acute LC50 >100 mg/l Acute LC50 8.2 mg/l  Acute EC50 7640 mg/l Fresh water Acute LC50 13 mg/l Fresh water	Daphnia Daphnia Algae  Daphnia Fish Algae Daphnia Fish Fish  Daphnia - <i>Daphnia magna</i> Fish	21 days 48 hours 72 hours  48 hours 96 hours 72 hours 21 days 33 days 96 hours 96 hours  48 hours 96 hours
Dimethyl carbonate SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC Ethanol Methyl alcohol			

### B. Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene zinc pyrithione	- -	79 % - Readily - 10 days 39 % - 28 days	- -	- -

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene ethylbenzene zinc pyrithione Ethanol	- - - -	- - 50%; < 28 day(s) -	Readily Readily Not readily Readily

### C. Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Xylene	3.12	7.4 to 18.5	Low
ethylbenzene	3.6	79.43	Low
propylene glycol methyl ether	<1	-	Low
zinc pyrithione	0.9	0.9 [OECD 305 E]	Low
Dimethyl carbonate	0.354	-	Low
Ethanol	-0.35	-	Low
Methyl alcohol	-0.77	-	Low

### D. Mobility in soil

Soil/Water partition coefficient : Not available.

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

## Section 13. Disposal considerations

### A. 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.

### B. Disposal precautions

: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	UN	IMDG	IATA
A. UN number	UN1992	UN1992	UN1992
B. UN proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S. (xylene, pyrithione zinc)	FLAMMABLE LIQUID, TOXIC, N.O.S. (xylene, pyrithione zinc)	FLAMMABLE LIQUID, TOXIC, N.O.S. (xylene, pyrithione zinc)
C. Transport hazard class(es)	3 (6.1)	3 (6.1)	3 (6.1)
D. Packing group	III	III	III
E. Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
F. Marine pollutant substances	Not applicable.	(pyrithione zinc)	Not applicable.

### Additional information

UN : None identified.

IMDG : The marine pollutant mark is not required when transported in sizes of  $\leq 5$  L or  $\leq 5$  kg.

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

### F. Special precaution which a user to be aware of or needs to comply with in connection with transport or transportation

**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 to IMO instruments** : Not applicable.

## Section 15. Regulatory information

### A. Regulation according to ISHA

ISHA article 117 : None of the components are listed.  
 (Harmful substances prohibited from manufacture)

ISHA article 118 : None of the components are listed.  
 (Harmful substances requiring permission)

Article 2 of Youth Protection Act on Substances Hazardous to Youth : It is not allowed to sell to persons under the age of 19.

### Exposure Limits of Chemical Substances and Physical Factors

The following components have an OEL:

Xylene  
 ethylbenzene  
 propylene glycol methyl ether  
 Iron oxide  
 Talc , not containing asbestos fibers  
 Ethanol  
 Methyl alcohol

ISHA Enforcement Regs : The following components are listed: methanol  
 Annex 19 (Exposure standards established for harmful factors)

ISHA Enforcement Regs : The following components are listed: xylene, ethyl benzene, iron oxide, talc / soapstone  
 Annex 11-5 (Harmful factors subject to Work Environment Measurement)

ISHA Enforcement Regs : The following components are listed: Xylene, Ethyl benzene, Iron oxide (dust, fume)  
 Annex 22 (Harmful Factors Subject to Special Health Check-up)

Standard of Industrial Safety and Health : The following components are listed: xylene, ethyl benzene, zinc and its compounds, iron and its compounds  
 Annex 12 (Hazardous substances subject to control)

### B. Regulation according to Chemicals Control Act

Article 11 (TRI) : The following components are listed: Barium and its compounds, Xylene including o-,m-,p- isomer, Ethylbenzene, Zinc and its compounds

Article 18 Prohibited (K-Reach Article 27) : None of the components are listed.

Article 19 Subject to authorization (K-Reach Article 25) : None of the components are listed.

Article 20 Restricted (K-Reach Article 27) : None of the components are listed.

## Section 15. Regulatory information

Article 20 Toxic Chemicals (K-Reach Article 20)	: Toxic
Korea inventory	: All components are listed or exempted.
Article 39 (Accident Precaution Chemicals)	: None of the components are listed.
C. <u>Dangerous Materials Safety Management Act</u>	: <b>Class:</b> Class 4 - Flammable Liquid <b>Item:</b> 4. Class 2 petroleums - Water-insoluble liquid <b>Threshold:</b> 1000 L <b>Danger category:</b> III <b>Signal word:</b> Contact with sources of ignition prohibited
D. <u>Wastes regulation</u>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
E. <u>Regulation according to other foreign laws</u>	
Safety, health and environmental regulations specific for the product	: No known specific national and/or regional regulations applicable to this product (including its ingredients).

## Section 16. Other information

A. <u>References</u>	: Korean Ministry of Environment; Chemical Control Act Korean Ministry of Labor; Industrial Safety and Health Act NIER Notice Registry of Toxic Effects of Chemical Substances (RTECS) U.S. Environmental Protection Agency, AQUIRE (Aquatic toxicity Information Retrieval) ECOTOX Database System.
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Prepared by	: EHS

► Indicates information that has changed from previously issued version.

### 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.*