

Date of issue 2/16/2024 (month/day/year)

Version 3

Section 1. Chemical product and company identification

A. **Product name** : PPG AQUACOVER 45 (TINTED) BASE Z
Product code : 000001186906

Other means of identification
00249402; 00253007; 00253009

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

C. **Supplier's or Importer's information** : PPG SSC
(680-090)
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 4
CARCINOGENICITY - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

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 : 

Signal word : Warning

Hazard statements : H227 - Combustible liquid.
H351 - Suspected of causing cancer.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

- 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.
P273 - Avoid release to the environment.
- Response** : P391 - Collect spillage.
P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- Storage** : Not applicable.
- 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. Contains isothiazolinones. May cause allergic reaction.

Section 3. Composition/information on ingredients

CAS number/other identifiers

- CAS number** : Not applicable.

Chemical name	Common name	Identifiers	%
Titanium dioxide	TITANIUM DIOXIDE	CAS: 13463-67-7	10 - <20
Kaolin	ALUMINUM SILICATE	CAS: 1332-58-7	1 - <5
(2-methoxymethylethoxy)propanol	DIPROPYLENE GLYCOL	CAS: 34590-94-8	1 - <5
1-(2-butoxy-1-methylethoxy)propan-2-ol	MONOMETHYL ETHER DIPROPYLENE GLYCOL MONOBUTYL ETHER	CAS: 29911-28-2	1 - <5
Nonylphenol, branched, ethoxylated	Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)-w-hydroxy-, branched	CAS: 68412-54-4	0.1 - <1
tetraamminezinc(2+) carbonate	tetraamminezinc(2+) carbonate	CAS: 38714-47-5	0.1 - <1
nonylphenols	Poly(oxy-1,2-ethanediyl), α-sulfo-ω-(nonylphenoxy)-, branched, ammonium salt	CAS: 68649-55-8	0.1 - <1
ammonia	AMMONIUM HYDROXIDE	CAS: 1336-21-6	0.1 - <1
nonylphenols	sodium salt of polyoxyethylene nonylphenyl (branched) ether phosphates	CAS: 68954-84-7	<0.1
4,5-Dichloro-2-N-octyl-4-isothizaolin-3-one	4,5-Dichloro-2-octyl-2H-isothiazol-3-one	CAS: 64359-81-5	<0.1
3-iodo-2-propynyl butylcarbamate	3-Iodo-2-propynyl butylcarbamate	CAS: 55406-53-6	<0.1
zinc pyrithione	pyrithione zinc	CAS: 13463-41-7	<0.1

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** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- 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.
- E. 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

- A. Extinguishing media**
- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- B. Specific hazards arising from the chemical** : Combustible liquid. 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 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
- C. Special equipment for fire-fighting** : 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** : 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.
- 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. Do not handle until all safety precautions have been read and understood. 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. 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: 5 to 35°C (41 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
Titanium dioxide	Ministry of Employment and Labor (Republic of Korea, 1/2020). TWA: 10 mg/m ³ 8 hours. Form: total dust with less than 1% of free SiO ₂
Kaolin	Ministry of Employment and Labor (Republic of Korea, 1/2020). TWA: 2 mg/m ³ 8 hours. Form: Respirable fraction
(2-methoxymethylethoxy)propanol	Ministry of Employment and Labor (Republic of Korea, 1/2020). [Dipropylene glycol methyl ether] Absorbed through skin. STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
ammonia	Ministry of Employment and Labor (Republic of Korea, 1/2020). [Ammonia] STEL: 35 ppm 15 minutes. TWA: 25 ppm 8 hours.

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

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.

Eye protection : Safety glasses with side shields.

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.

Section 8. Exposure controls/personal protection

- Gloves** : For prolonged or repeated handling, use the following type of gloves:
Recommended: Viton®, butyl rubber, nitrile rubber
- 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.
- 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 : Various

B. Odor : Amine-like.

C. Odor threshold : Not available.

D. pH : 8

E. Melting/freezing point : Not available.

F. Boiling point/boiling range : >37.78°C (>100°F)

G. Flash point : Closed cup: 81°C (177.8°F)

H. Evaporation rate : Not available.

I. Flammability (solid, gas) : Not available.

J. Lower and upper explosive (flammable) limits : Greatest known range: Lower: 0.6% Upper: 20.4% (1-(2-butoxy-1-methylethoxy)propan-2-ol)

K. Vapor pressure :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
water	17.5	2.3				

L. Solubility(ies) :

Media	Result
cold water	Partially soluble

Solubility in water : Not available.


M. Vapor density : Not available.

N. Relative density : 1.18

O. Partition coefficient: n-octanol/water : Not applicable.

P. Auto-ignition temperature :

Section 9. Physical and chemical properties

Ingredient name	°C	°F	Method
 (2-butoxy-1-methylethoxy)propan-2-ol	194	381.2	EU A.15

- Q. **Decomposition temperature** : Not available.
- R. **Viscosity** : Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt)
- Flow time (ISO 2431)** : Not available.
- S. **Molecular weight** : Not applicable.

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 metal oxide/oxides

Section 11. Toxicological information

- A. **Information on the likely routes of exposure** : Not available.

Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Eye contact** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Eye contact** : No specific data.

B. Health hazards

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Kaolin	LC50 Inhalation Dusts and mists	Rat	>5.07 mg/l	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	500 ppm	4 hours
(2-methoxymethylethoxy)propanol	LD50 Dermal	Rabbit	9.5 g/kg	-
	LD50 Oral	Rat	5.23 g/kg	-
	LC50 Inhalation Dusts and mists	Rat	5.4 mg/l	4 hours
1-(2-butoxy-1-methylethoxy)propan-2-ol	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	4.05 g/kg	-
	LD50 Oral	Rat	2.21 g/kg	-
Nonylphenol, branched, ethoxylated ammonia	LD50 Oral	Rat	350 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	0.16 mg/l	4 hours
	LD50 Dermal	Rabbit	3.9 g/kg	-
4,5-Dichloro-2-N-octyl-4-isothiazolin-3-one	LD50 Oral	Rat	567 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	0.67 mg/l	4 hours
	LD50 Dermal	Rabbit	>2 g/kg	-
3-iodo-2-propynyl butylcarbamate	LD50 Oral	Rat	1470 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	0.14 mg/l	4 hours
	LD50 Dermal	Rabbit	>2 g/kg	-
zinc pyrithione	LD50 Oral	Rat	177 mg/kg	-
	LD50 Oral	Rat	177 mg/kg	-
	LD50 Oral	Rat	177 mg/kg	-

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

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
3-iodo-2-propynyl butylcarbamate	Eyes - Severe irritant	Rabbit	-	-	-
	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.

Section 11. Toxicological information

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
Ammonia	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Classification	Route of exposure	Target organs
3-iodo-2-propynyl butylcarbamate	Category 1	-	trachea
zinc pyrithione	Category 1	-	-

Aspiration hazard

Not available.

Potential chronic health effects

- General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

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. Contains isothiazolinones. May cause allergic reaction. Avoid contact with skin and clothing.

Chemical name	Identifiers	GHS Classification
Titanium dioxide	CAS: 13463-67-7	CARCINOGENICITY - Category 2
Kaolin	CAS: 1332-58-7	Not classified.
(2-methoxymethylethoxy)propanol	CAS: 34590-94-8	FLAMMABLE LIQUIDS - Category 4
1-(2-butoxy-1-methylethoxy)propan-2-ol	CAS: 29911-28-2	EYE IRRITATION - Category 2A
Nonylphenol, branched, ethoxylated	CAS: 68412-54-4	SKIN IRRITATION - Category 2
		EYE IRRITATION - Category 2A
		AQUATIC HAZARD (LONG-TERM) - Category 2
tetraamminezinc(2+) carbonate	CAS: 38714-47-5	SKIN IRRITATION - Category 2
		EYE IRRITATION - Category 2A
		SKIN SENSITIZATION - Category 1
		AQUATIC HAZARD (ACUTE) - Category 1

Section 11. Toxicological information

nonylphenols	CAS: 68649-55-8	AQUATIC HAZARD (LONG-TERM) - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION - Category 2 AQUATIC HAZARD (ACUTE) - Category 1
ammonia	CAS: 1336-21-6	AQUATIC HAZARD (LONG-TERM) - Category 1 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 AQUATIC HAZARD (ACUTE) - Category 1
nonylphenols	CAS: 68954-84-7	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION - Category 2 AQUATIC HAZARD (ACUTE) - Category 1
4,5-Dichloro-2-N-octyl-4-isothiazolin-3-one	CAS: 64359-81-5	AQUATIC HAZARD (LONG-TERM) - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (ACUTE) - Category 1
3-iodo-2-propynyl butylcarbamate	CAS: 55406-53-6	AQUATIC HAZARD (LONG-TERM) - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 2 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 AQUATIC HAZARD (ACUTE) - Category 1
zinc pyrithione	CAS: 13463-41-7	AQUATIC HAZARD (LONG-TERM) - Category 1 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1

Section 12. Ecological information

A. Ecotoxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Titanium dioxide (2-methoxymethylethoxy) propanol 1-(2-butoxy-1-methylethoxy) propan-2-ol 4,5-Dichloro-2-N-octyl- 4-isothizaolin-3-one 3-iodo-2-propynyl butylcarbamate zinc pyrithione	Acute LC50 >100 mg/l Fresh water Acute EC50 1919 mg/l	Daphnia - <i>Daphnia magna</i> Daphnia	48 hours 48 hours
	Acute LC50 841 mg/l	Fish	96 hours
	Acute EC50 267.368 µg/l Marine water	Algae - <i>Nitzschia pungens</i>	96 hours
	Acute LC50 0.318 mg/l Marine water	Crustaceans - <i>Artemia sp.</i>	48 hours
	Acute LC50 0.0027 mg/l Fresh water	Fish	96 hours
	Chronic NOEC 19.789 µg/l Marine water	Algae - <i>Nitzschia pungens</i>	96 hours
	Chronic NOEC 0.00056 mg/l Fresh water	Fish	97 days
	Acute EC50 0.186 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 0.067 mg/l Chronic NOEC 0.049 mg/l	Fish Fish	96 hours 96 hours
	Acute EC50 5.513 µg/l Marine water Acute LC50 0.0082 mg/l Chronic NOEC 1.889 µg/l Marine water Chronic NOEC 0.0027 mg/l	Algae - <i>Nitzschia pungens</i> Daphnia Algae - <i>Nitzschia pungens</i> Daphnia	96 hours 48 hours 96 hours 21 days

B. Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
(2-butoxy-1-methylethoxy) propan-2-ol 3-iodo-2-propynyl butylcarbamate zinc pyrithione	OECD 302B	96 % - Readily - 28 days	-	-
	-	25 % - Inherent - 28 days	-	-
	-	39 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
(2-butoxy-1-methylethoxy)	-	-	Readily
propan-2-ol	-	-	Inherent
3-iodo-2-propynyl butylcarbamate zinc pyrithione	-	50%; < 28 day(s)	Not readily

C. Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
(2-methoxymethylethoxy) propanol	0.004	-	Low
1-(2-butoxy-1-methylethoxy) propan-2-ol	1.523	-	Low
Nonylphenol, branched, ethoxylated	5.39	-	High
zinc pyrithione	0.9	0.9	Low

D. Mobility in soil

Section 12. Ecological information

Soil/water partition coefficient (K_{oc}) : 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	UN3082	UN3082	UN3082
B. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol, branched, ethoxylated)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol, branched, ethoxylated)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol, branched, ethoxylated)
C. Transport hazard class(es)	9	9	9
D. Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.
E. Marine pollutant substances	Not applicable.	(Nonylphenol, branched, ethoxylated)	Not applicable.

Additional information

- UN** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Section 14. Transport information

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

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

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:

Titanium dioxide

Kaolin

(2-methoxymethylethoxy)propanol

ammonia

ISHA Enforcement Regs Annex 19 (Exposure standards established for harmful factors) : None of the components are listed.

ISHA Enforcement Regs Annex 21 (Harmful factors subject to Work Environment Measurement) : The following components are listed: titanium dioxide, silicates

ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check-up) : None of the components are listed.

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) : The following components are listed: titanium dioxide

B. Regulation according to Chemicals Control Act

Article 11 (TRI) : None of the components are listed.

Section 15. Regulatory information

- 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)** : The following components are listed: nonylphenol ethoxylates, nonylphenols
- Article 20 Toxic Chemicals (K-Reach Article 20)** : Not applicable
- Korea inventory** : At least one component is not listed.
- Article 39 (Accident Precaution Chemicals)** : The following components are listed: nonylphenol ethoxylates, nonylphenols
- C. Dangerous Materials Safety Management Act** : **Class:** Class 4 - Flammable Liquid
Item: 5. Class 3 petroleums - Water soluble liquid
Threshold: 4000 L
Danger category: III
Signal word: Contact with sources of ignition prohibited
- D. Wastes regulation** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- E. Regulation according to other foreign laws**
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. References** : 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.
- B. Date of issue/Date of revision** : 2/16/2024
- C. Version** : 3
Prepared by : EHS
- D. Other**
 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.