

Date of issue 8/23/2023 (month/day/year)

Version 1.01

## Section 1. Chemical product and company identification

- A. Product name** : STEELGUARD 951 BASE LIGHTGREY  
**Product code** : 00446947
- 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, Yecheon-ro 217beon-gil, Nam-gu,  
Ulsan, Korea  
Tel: +82-52-210-8222
- Email Address** : Korea.MSDS@PPG.COM
- Emergency telephone number:** : +82-52-210-8222

## Section 2. Hazards identification

- A. Hazard classification** : SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITISATION - Category 1  
CARCINOGENICITY - Category 2  
LONG-TERM (CHRONIC) AQUATIC HAZARD - 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** : H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
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.  
P273 - Avoid release to the environment.  
P261 - Avoid breathing vapour.  
P264 - Wash thoroughly after handling.
- Response** : P391 - Collect spillage.  
P308 + P313 - IF exposed or concerned: Get medical advice or attention.  
P362 + P364 - Take off contaminated clothing and wash it before reuse.  
P302 + P352 - IF ON SKIN: Wash with plenty of water.  
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 - If eye irritation persists: 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** : Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C/140F.

## Section 3. Composition/information on ingredients

### CAS number/other identifiers

**CAS number** : Not applicable.

Chemical name	Common name	Identifiers	%
bisphenol F diglycidyl ether, isomer mixture	bisphenol F diglycidyl ether, isomer mixture	CAS: SUB140549	10 -<20
hexamethylene diacrylate	1,6-Hexanediol diacrylate	CAS: 13048-33-4	5 - <10
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	FORMALDEHYDE OLIGOMERIC REACT. PROD. WITH 1-CHLORO-2,3-EPOXYPROPANE & PHENOL	CAS: 9003-36-5	5 - <10
tris(2-chloro-1-methylethyl) phosphate	TRI(2-PROPYL)PHOSPHATE	CAS: 13674-84-5	5 - <10
titanium dioxide	TITANIUM DIOXIDE	CAS: 13463-67-7	5 - <10
Phenol, styrenated	PHENOLIC RESIN	CAS: 61788-44-1	5 - <10
Phenol, polymer with formaldehyde, glycidyl ether	phenol, polymer with formaldehyde, glycidyl ether	CAS: 28064-14-4	1 - <5
Dodecanedioic acid, polymer with 2,2'-[1,4-butanediylbis(oxymethylene)]bis[oxirane], (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol], nonanedioic acid and 2,2'-oxybis[ethanol]	Dodecanedioic acid, polymer with 2,2'-[1,4-butanediylbis(oxymethylene)]bis[oxirane], (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol], nonanedioic acid and 2,2'-oxybis[ethanol]	CAS: 139651-91-5	1 - <5
carbon	CARBON	CAS: 7440-44-0	1 - <5

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. 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 recognised 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 the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- 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. 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. Firefighting measures

- A. Extinguishing media**
- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- B. Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. 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  
nitrogen oxides  
phosphorus oxides  
halogenated compounds  
metal oxide/oxides  
Formaldehyde.
- 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.

## Section 5. Firefighting measures

**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.

## 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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- B. Environmental precautions** : Avoid dispersal of spilt 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 material for containment and cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. 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. Approach the 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 spilt 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. 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 vapour or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

## Section 7. Handling and storage

- 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 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. 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 unlabelled 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	<b>Ministry of Employment and Labor (Republic of Korea, 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: total dust with less than 1% of free SiO <sub>2</sub>
carbon	<b>ACGIH TLV (United States).</b> TWA: 10 mg/m <sup>3</sup> , (Inhalable)

- 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** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 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** : Chemical splash goggles.
- 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** : polyethylene butyl 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.

## Section 8. Exposure controls/personal protection

- 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

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

### A. Appearance

**Physical state** : Liquid.

**Colour** : Not available.

**B. Odour** : Characteristic.

**C. Odour 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: Not applicable.

**H. Evaporation rate** : Not available.

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

**J. Lower and upper explosive (flammable) limits** : Not available.

**K. Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
carbon	<0.1	<0.013				

**L. Solubility(ies)** :

Media	Result
cold water	Not soluble

**Solubility in water** : Not available.

**M. Vapour density** : Not available.

**N. Relative density** : 1.54

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

**P. Auto-ignition temperature** :

Ingredient name	°C	°F	Method
carbon	<200	<392	

**Q. Decomposition temperature** : Not available.

**Viscosity** : Kinematic (40°C (104°F)): >21 mm<sup>2</sup>/s (>21 cSt)

## Section 9. Physical and chemical properties

- R. **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: oxidising agents, strong alkalis, strong acids.
- D. **Hazardous decomposition products** :  Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides phosphorus oxides halogenated compounds Formaldehyde. metal oxide/oxides

## Section 11. Toxicological information

- A. **Information on 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** : Causes skin irritation. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye irritation.

### Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

### B. Health hazards

#### Acute toxicity

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Bisphenol F diglycidyl ether, isomer mixture	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>2000 mg/kg	-
hexamethylene diacrylate	LD50 Dermal	Rabbit	3.65 g/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol tris(2-chloro-1-methylethyl) phosphate	LD50 Oral	Rat	>10000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>7 mg/l	4 hours
titanium dioxide	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1500 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
Phenol, styrenated	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	3550 mg/kg	-

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

### Irritation/Corrosion

#### 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.

### Sensitisation

Product/ingredient name	Route of exposure	Species	Result
hexamethylene diacrylate	skin	Guinea pig	Sensitising
Phenol, styrenated	skin	Mouse	Sensitising

#### 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)



## Section 11. Toxicological information

Name	Classification	Route of exposure	Target organs
carbon	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Potential chronic health effects

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- 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

Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure. The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. Ingestion may cause nausea, weakness and central nervous system effects. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C/140F. In case of accidental skin 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, rash or blistering occurs after contact.

Chemical name	Identifiers	GHS Classification
Diisphenol F diglycidyl ether, isomer mixture	CAS: SUB140549	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B SKIN SENSITISATION - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
hexamethylene diacrylate	CAS: 13048-33-4	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITISATION - Category 1B SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	CAS: 9003-36-5	SKIN IRRITATION - Category 2 SKIN SENSITISATION - Category 1B LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
tris(2-chloro-1-methylethyl) phosphate	CAS: 13674-84-5	ACUTE TOXICITY (oral) - Category 4

## Section 11. Toxicological information

titanium dioxide Phenol, styrenated	CAS: 13463-67-7 CAS: 61788-44-1	CARCINOGENICITY - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITISATION - Category 1B LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Phenol, polymer with formaldehyde, glycidyl ether Dodecanedioic acid, polymer with 2,2'-[1,4-butanediylbis(oxymethylene)]bis[oxirane], (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol], nonanedioic acid and 2,2'-oxybis[ethanol]	CAS: 28064-14-4 CAS: 139651-91-5	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4 EYE IRRITATION - Category 2A
carbon	CAS: 7440-44-0	SKIN SENSITISATION - Category 1B PYROPHORIC SOLIDS - Category 1 SELF-HEATING SUBSTANCES AND MIXTURES - Category 1 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

## Section 12. Ecological information

### A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
Bisphenol F diglycidyl ether, isomer mixture	EC50 >1.8 mg/l	Algae	72 hours
	EC50 >1000 mg/l LC50 2.54 mg/l NOEC 0.3 mg/l Acute LC50 2.54 mg/l	Daphnia Fish Daphnia Fish	48 hours 96 hours 21 days 96 hours
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Acute LC50 >100 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
titanium dioxide Phenol, styrenated	Acute EC50 3.8 mg/l	Daphnia	48 hours

### B. Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Bisphenol F diglycidyl ether, isomer mixture Phenol, styrenated	-	0 % - Not readily - 28 days	-	-
	OECD 301F	7 % - Not readily - 28 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
Bisphenol F diglycidyl ether, isomer mixture Phenol, styrenated	-	-	Not readily	
	-	-	Not readily	

### C. Bioaccumulative potential

## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Bisphenol F diglycidyl ether, isomer mixture	3.6	-	Low
hexamethylene diacrylate	2.81	-	Low
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	2.7	-	Low
tris(2-chloro-1-methylethyl) phosphate	2.68	7.94	Low

### D. Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : 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 minimised 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. Avoid dispersal of spill 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. hexamethylene diacrylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Bisphenol F diglycidyl ether, isomer mixture, hexamethylene diacrylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Bisphenol F diglycidyl ether, isomer mixture, hexamethylene diacrylate)
C. Transport hazard class(es)	9	9	9
D. Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.

## Section 14. Transport information

<b>E. Marine pollutant substances</b>	Not applicable.	☑(bisphenol F diglycidyl ether, isomer mixture, hexamethylene diacrylate)	Not applicable.
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### 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.

### 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  
carbon

**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

## Section 15. Regulatory information

**ISHA Enforcement Regs** : None of the components are listed.

**Annex 22 (Harmful Factors Subject to Special Health Check-up)**

**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

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

**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.

**Article 20 Toxic Chemicals (K-Reach Article 20)** : Not applicable

**Korea inventory** : All components are listed or exempted.

**CCA Article 39 (Accident Precaution Chemicals)** : None of the components are listed.

### C. Dangerous Materials Safety Management Act : Not applicable.

### 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** : 8/23/2023
- C. Version** : 1.01
- Prepared by** : EHS

## Section 16. Other information

### 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.*