

Date of issue 9/8/2021 (month/day/year)

Version 8.01

Section 1. Chemical product and company identification

A. **Product name** : SIGMAGUARD CSF 575 TG BASE WHITE
Product code : 00219163

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:** : +82-52-210-8222

Section 2. Hazards identification

A. **Hazard classification** : SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
CARCINOGENICITY - Category 1A
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 : Danger

Hazard statements : H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H341 - Suspected of causing genetic defects.
H350 - May cause cancer.
H411 - Toxic to aquatic life with long lasting effects.

Section 2. Hazards identification

Precautionary statements

- Prevention** : P201 - Obtain special instructions before use.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P273 - Avoid release to the environment.
 P261 - Avoid breathing vapor.
 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** : None known.

Section 3. Composition/information on ingredients

CAS number/other identifiers

- CAS number** : Not applicable.

| Chemical name | Common name | Identifiers | % |
|---|---|------------------|----------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | EPOXY RESIN | CAS: 25068-38-6 | 40 - <50 |
| Kaolin | ALUMINUM SILICATE | CAS: 1332-58-7 | 10 - <20 |
| 2,3-epoxypropyl neodecanoate | GLYCIDYL NEODECANOATE | CAS: 26761-45-5 | 10 - <20 |
| titanium dioxide | TITANIUM DIOXIDE | CAS: 13463-67-7 | 5 - <10 |
| Talc, not containing asbestiform fibers | Talc, non-asbestos form | CAS: 14807-96-6 | 1 - <5 |
| 12-hydroxyoctadecanoic acid, reaction products with | 12-hydroxyoctadecanoic acid, reaction products with | CAS: 220926-97-6 | 1 - <5 |
| 1,3-benzenedimethanamine and hexamethylenediamine | 1,3-benzenedimethanamine and hexamethylenediamine | | |
| crystalline silica, respirable powder (<10 microns) | QUARTZ (<10 microns) | CAS: 14808-60-7 | 0.1 - <1 |
| crystalline silica, respirable powder (>10 microns) | QUARTZ (>10 microns) | CAS: 14808-60-7 | 0.1 - <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** : 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 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
halogenated compounds
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.

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. 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. 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 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). 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 vapor 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.
- 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 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 |
|---|--|
| Kaolin | Ministry of Employment and Labor (Republic of Korea, 1/2020). TWA: 2 mg/m ³ 8 hours. Form: Respirable fraction |
| 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 |
| Talc, not containing asbestiform fibers | Ministry of Employment and Labor (Republic of Korea, 1/2020). TWA: 2 mg/m ³ 8 hours. Form: fibers |
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | ACGIH TLV (United States). TWA: 10 mg/m ³ Form: Inhalable particle TWA: 3 mg/m ³ , (inhalable dust) Form: Respirable particle |
| crystalline silica, respirable powder (<10 microns) | Ministry of Employment and Labor (Republic of Korea, 1/2020). TWA: 0.05 mg/m ³ 8 hours. Form: Respirable fraction |
| crystalline silica, respirable powder (>10 microns) | Ministry of Employment and Labor (Republic of Korea, 1/2020). TWA: 0.05 mg/m ³ 8 hours. Form: Respirable fraction |

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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, vapor 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.

Section 8. Exposure controls/personal protection

- 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** : 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.
- 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.

Color : White.

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: Not applicable.

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 |
| 3-epoxypropyl neodecanoate | 0.11 | 0.015 | | | | |

L. Solubility : Insoluble in the following materials: cold water.

Solubility in water : Not available.

M. Vapor density : Not available.

N. Relative density : 1.4

Section 9. Physical and chemical properties

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

P. Auto-ignition temperature

| Ingredient name | °C | °F | Method |
|----------------------------|-----|-------|--------|
| 3-epoxypropyl neodecanoate | 276 | 528.8 | |

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 nitrogen oxides halogenated compounds 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 : 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

Section 11. Toxicological information

B. Health hazards

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---------------------------------|---------|-------------|----------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | LD50 Dermal | Rabbit | >2 g/kg | - |
| Kaolin | LD50 Oral | Rat | >2 g/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | >5.07 mg/l | 4 hours |
| 2,3-epoxypropyl neodecanoate | LD50 Oral | Rat | >5000 mg/kg | - |
| | LD50 Dermal | Rat | 3800 mg/kg | - |
| titanium dioxide | LD50 Oral | Rat | 9.6 g/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | >6.82 mg/l | 4 hours |
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | 3.56 mg/l | 4 hours |
| | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | >2000 mg/kg | - |

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

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|--------------------------|---------|-------|-----------------|-------------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | Skin - Moderate irritant | Rabbit | - | - | - |
| | Eyes - Moderate irritant | Rabbit | - | - | - |
| | Eyes - Mild irritant | Rabbit | - | 100 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 UI | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 2 mg | - |

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

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|---------|-------------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | skin | Mouse | Sensitizing |

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.

Section 11. Toxicological information

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 |
|---|----------------|-------------------|------------------------------|
| Talc, not containing asbestiform fibers | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Name | Classification | Route of exposure | Target organs |
|---|----------------|-------------------|---------------|
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | Category 2 | inhalation | lungs |

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** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : Suspected of causing genetic defects.
- Reproductive toxicity** : No known significant effects or critical hazards.

Additional information

Sanding and grinding dusts may be harmful if inhaled.

| Chemical name | Identifiers | GHS Classification |
|---|-----------------|---|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | CAS: 25068-38-6 | SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2 |
| Kaolin | CAS: 1332-58-7 | Not classified. |
| 2,3-epoxypropyl neodecanoate | CAS: 26761-45-5 | SKIN SENSITIZATION - Category 1 GERM CELL MUTAGENICITY - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2 |
| titanium dioxide | CAS: 13463-67-7 | CARCINOGENICITY - Category 2 |
| Talc, not containing asbestiform fibers | CAS: 14807-96-6 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE |

Section 11. Toxicological information

| | | |
|--|------------------|---|
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | CAS: 220926-97-6 | EXPOSURE) (Respiratory tract irritation) - Category 3 ACUTE TOXICITY (inhalation) - Category 4 |
| crystalline silica, respirable powder (<10 microns) | CAS: 14808-60-7 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 CARCINOGENICITY - Category 1A |
| crystalline silica, respirable powder (>10 microns) | CAS: 14808-60-7 | CARCINOGENICITY - Category 1A |

Section 12. Ecological information

A. Ecotoxicity

| Product/ingredient name | Result | Species | Exposure |
|---|--------------------------------------|--|----------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | Chronic NOEC 0.3 mg/l | Daphnia | 21 days |
| 2,3-epoxypropyl neodecanoate | Acute EC50 3.5 mg/l | Algae | 96 hours |
| titanium dioxide 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | Acute EC50 4.8 mg/l | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 9.6 mg/l | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute LC50 >100 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute EC50 >100 mg/l | Algae - Pseudokirchneriella subcapitata (microalgae) | 72 hours |
| | Acute EC50 >100 mg/l | Daphnia - Daphnia magna (Water flea) | 48 hours |
| | Acute LC50 >100 mg/l | Fish - Oncorhynchus mykiss (rainbow trout) | 96 hours |
| | Chronic NOEC 100 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| Chronic NOEC ≥50 mg/l | Daphnia - Daphnia magna (Water flea) | 21 days | |

B. Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|---|-----------------------------|------|----------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | OECD 301F | 5 % - 28 days | - | - |
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | OECD 301D Ready Biodegradability - Closed Bottle Test | 9 % - Not readily - 29 days | - | - |

Section 12. Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | - | - | Not readily |
| 2,3-epoxypropyl neodecanoate | - | - | Not readily |

C. Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|-----|-----------|
| Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin | 2.64 to 3.78 | 31 | low |
| 2,3-epoxypropyl neodecanoate | 4.4 | - | high |
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | >6 | - | high |

D. Mobility in soil

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

Section 14. Transport information

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. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, 2,3-epoxypropyl neodecanoate) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, 2,3-epoxypropyl neodecanoate) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, 2,3-epoxypropyl neodecanoate) |
| 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. | (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin, 2,3-epoxypropyl neodecanoate) | 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.

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.

Section 15. Regulatory information

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:

☑ Kaolin

titanium dioxide

Talc, not containing asbestiform fibers

12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine

crystalline silica, respirable powder (<10 microns)

crystalline silica, respirable powder (>10 microns)

ISHA Enforcement Regs : None of the components are listed.

Annex 19 (Exposure standards established for harmful factors)

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

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

CCA Article 11 (TRI) : The following components are listed: 4,4'-(1-Methylethylidene) bisphenol polymer with (chloromethyl)oxirane

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

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

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

CCA 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.

Section 15. Regulatory information

- 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](#) : 9/8/2021
- C. [Version](#) : 8.01
[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.