


Date of issue 1/15/2020 (month/day/year)


Version 3

Section 1. Chemical product and company identification

- A. Product name** : SIGMALINE 523 HARDENER OXIDE YELLOW
Product code : 00351397
- 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. Paint. Painting-related materials.
Uses advised against : Product is not intended, labelled or packaged for consumer use.
- C. Supplier'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** :  CORROSIVE TO METALS - Category 1
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

 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 :

-  H290 - May be corrosive to metals.
H332 - Harmful if inhaled.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.

Section 2. Hazards identification

Precautionary statements

- Prevention** : P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P234 - Keep only in original container.
P271 - Use only outdoors or in a well-ventilated area.
P261 - Avoid breathing vapor.
P264 - Wash hands thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
- Response** : P390 - Absorb spillage to prevent material damage.
P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.
P302 + P352 + P362 + P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
P333 + P313 - If skin irritation or rash occurs: Get medical attention.
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 physician.
- Storage** : P405 - Store locked up.
P233 - Keep container tightly closed.
P406 - Store in a corrosion resistant container with a resistant inner liner.
- 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	%
Epoxy Amine Resin	EPOXY AMINE RESIN	CAS: SUB130425	20 - <30
Talc , not containing asbestiform fibres	Talc, non-asbestos form	CAS: 14807-96-6	20 - <30
m-phenylenebis(methylamine)	1,3-Benzenedimethanamine	CAS: 1477-55-0	10 - <20
benzyl alcohol	BENZYL ALCOHOL	CAS: 100-51-6	5 - <10
salicylic acid	Salicylic acid	CAS: 69-72-7	1 - <5
2,4,6-tris(dimethylaminomethyl)phenol	2;4;6 TRIS (DIMETHYLAMINOMETHYL) PHENOL	CAS: 90-72-2	1 - <5
Phenol, methylstyrenated	Phenol, methylstyrenated	CAS: 68512-30-1	1 - <5
iron hydroxide oxide yellow	IRON HYDROXIDE OXIDE	CAS: 51274-00-1	1 - <5
Formalin	Formalin	CAS: 50-00-0	<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 3. Composition/information on ingredients


SUB codes represent substances without registered CAS Numbers.

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.
- 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.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon oxides
nitrogen 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.

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. Do not breathe 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).
- 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. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Absorb spillage to prevent material damage. 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). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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 in a corrosion resistant container with a resistant inner liner. Store locked up. Keep away from metals. 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
Calc , not containing asbestiform fibres	Ministry of Employment and Labor (Republic of Korea, 7/2018). TWA: 2 mg/m ³ 8 hours. Form: fibers
m-phenylenebis(methylamine)	Ministry of Employment and Labor (Republic of Korea, 7/2018). Absorbed through skin. CEIL: 0.1 mg/m ³
iron hydroxide oxide yellow	Ministry of Employment and Labor (Republic of Korea, 7/2018). TWA: 5 mg/m ³ , (as Fe) 8 hours. Form: Fume
Formalin	TWA: 5 mg/m ³ , (as Fe) 8 hours. Ministry of Employment and Labor (Republic of Korea, 7/2018). TWA: 0.3 ppm 8 hours.

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 : 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.

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 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 : nitrile neoprene

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

- A. Appearance**
- Physical state** : Liquid.
 - Color** : Yellow.
- B. Odor** : Aromatic.
- C. Odor threshold** : Not available.
- D. pH** : Not available.
- E. Melting/freezing point** : Not available.
- F. Boiling point/boiling range** : >37.78°C (>100°F)
- G. Flash point** : Closed cup: 96°C (204.8°F)
- H. Evaporation rate** : Not available.
- I. Flammability (solid, gas)** : Not available.
- J. Lower and upper explosive (flammable) limits** : Greatest known range: Lower: 1.3% Upper: 13% (benzyl alcohol)
- K. Vapor pressure** : Not available.
- L. Solubility** : Insoluble in the following materials: cold water.
- M. Vapor density** : Not available.
- N. Relative density** : 1.44
- O. Partition coefficient: n-octanol/water** : Not available.
- P. Auto-ignition temperature** : Not available.
- Q. Decomposition temperature** : Not available.
- R. Viscosity** : Kinematic (40°C (104°F)): >0.21 cm²/s (>21 cSt)
- 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.

Section 10. Stability and reactivity

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 metal oxide/oxides

Section 11. Toxicological information

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

Potential acute health effects

- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye damage.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Ingestion** : Adverse symptoms may include the following:
stomach pains
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

B. Health hazards

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
m-phenylenebis(methylamine)	LC50 Inhalation Gas. LD50 Dermal	Rat Rat - Male, Female	700 ppm >3100 mg/kg	1 hours -
benzyl alcohol	LD50 Oral LC50 Inhalation Dusts and mists	Rat Rat	930 mg/kg >4178 mg/m ³	- 4 hours
salicylic acid	LD50 Dermal LD50 Oral	Rabbit Rat	2000 mg/kg 1.23 g/kg	- -
2,4,6-tris(dimethylaminomethyl)phenol	LD50 Oral LD50 Dermal	Rat Rabbit	0.891 g/kg 1.28 g/kg	- -
Phenol, methylstyrenated	LD50 Dermal LD50 Oral	Rat Rabbit	1280 mg/kg 1200 mg/kg	- -
iron hydroxide oxide yellow	LD50 Dermal LC50 Inhalation Dusts and mists	Rabbit Rat	>2000 mg/kg >5.05 mg/l	- 4 hours
Formalin	LD50 Oral LC50 Inhalation Gas.	Rat Rat	>10 g/kg 250 ppm	- 4 hours

Section 11. Toxicological information

	LD50 Dermal LD50 Oral	Rabbit Rat	270 mg/kg 100 mg/kg	- -
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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
m-phenylenebis(methylamine)	Skin - Severe irritant	Rat	-	4 hours	4 hours
2,4,6-tris(dimethylaminomethyl)phenol	Skin - Visible necrosis	Rabbit	-	4 hours	7 days

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
m-phenylenebis(methylamine)	skin	Mouse	Sensitizing
2,4,6-tris(dimethylaminomethyl)phenol	skin	Guinea pig	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.

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 fibres	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Section 11. Toxicological information

Name	Result
benzyl alcohol	ASPIRATION HAZARD - Category 2

Potential chronic health effects

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Additional information

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. Emits toxic fumes when heated.

Chemical name	Common name	CAS #	GHS Classification
Epoxy Amine Resin	EPOXY AMINE RESIN	SUB130425	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SKIN SENSITIZATION - Category 1
Talc , not containing asbestiform fibres	Talc, non-asbestos form	14807-96-6	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
m-phenylenebis (methylamine)	1,3-Benzenedimethanamine	1477-55-0	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 1
benzyl alcohol	BENZYL ALCOHOL	100-51-6	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4
salicylic acid	Salicylic acid	69-72-7	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 ASPIRATION HAZARD - Category 2 ACUTE TOXICITY (oral) - Category 4
2,4,6-tris (dimethylaminomethyl) phenol	2;4;6 TRIS (DIMETHYLAMINOMETHYL) PHENOL	90-72-2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 TOXIC TO REPRODUCTION (Unborn child) - Category 2 CORROSIVE TO METALS - Category 1
			ACUTE TOXICITY (oral) - Category 4

Section 11. Toxicological information

Phenol, methylstyrenated	Phenol, methylstyrenated	68512-30-1	ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3
iron hydroxide oxide yellow Formalin	IRON HYDROXIDE OXIDE Formalin	51274-00-1 50-00-0	Not classified. ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1

Section 12. Ecological information**A. Ecotoxicity**

Product/ingredient name	Result	Species	Exposure
salicylic acid	Acute EC50 1147.57 mg/l Fresh water	Daphnia - Daphnia longispina - Neonate	48 hours
	Chronic NOEC 5.6 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
2,4,6-tris (dimethylaminomethyl) phenol	Acute LC50 175 mg/l	Fish	96 hours
iron hydroxide oxide yellow Formalin	Acute LC50 >100000 mg/l Acute EC50 3.48 mg/l Fresh water	Fish Algae - Desmodesmus subspicatus	96 hours 72 hours

B. Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
benzyl alcohol	-	-	Readily

C. Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
m-phenylenebis (methylamine)	0.18	2.69	low
benzyl alcohol	1.1	-	low
salicylic acid	2.26	-	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. 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	UN3066	UN3066	UN3066
B. UN proper shipping name	PAINT	PAINT	PAINT
C. Transport hazard class(es)	8	8	8
D. Packing group	II	II	II
Environmental hazards	No.	No.	No.
E. Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

UN : None identified.

IMDG : None identified.

IATA : None identified.

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.

Section 15. Regulatory information

A. Regulation according to ISHA

ISHA article 37 (Harmful substances prohibited from manufacture) : None of the components are listed.

ISHA article 38 (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:

Talc, not containing asbestiform fibres
 m-phenylenebis(methylamine)
 iron hydroxide oxide yellow
 Formalin

ISHA Enforcement Regs Annex 11-3 (Exposure standards established for harmful factors) : The following components are listed: Formaldehyde

ISHA Enforcement Regs Annex 11-5 (Harmful factors subject to Work Environment Measurement) : The following components are listed: Talc, non-asbestos form/Soap stone less than 1% crystalline silica; (Mineral dust), Iron oxide (Dust and fume), as Fe; Preparations containing material at weight ratio more than 1%

ISHA Enforcement Regs Annex 12-2 (Harmful Factors Subject to Special Health Check-up) : The following components are listed: Iron oxide as Fe; (dust and fume)

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

B. Regulation according to Chemicals Control Act

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

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

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

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

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](#) : 1/15/2020
- C. [Version](#) : 3
[Prepared by](#) : EHS
- D. [Other](#)

[Procedure used to derive the classification](#)

Classification	Justification
<input checked="" type="checkbox"/> Met. Corr. 1, H290	Calculation method
Acute Tox. 4, H332	Calculation method
Skin Corr. 1, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H335	Calculation method

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.