SAFETY DATA SHEET

PPG SSC Co., Ltd.

Date of issue 1/3/2020 (month/day/year)
Version 7.05

Section 1. Chemical product and company identification

A. Product name : SIGMAGUARD 750 (H) BIN GREY
Product code : 00243716

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 : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Fertility) - Category 1B
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), kidneys, liver) - Category 1

This product is classified in accordance with the Industrial Safety and Health Act and the Chemical Control Act.

B. GHS label elements, including precautionary statements

Symbol :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : H225 - Highly flammable liquid and vapor.
H332 - Harmful if inhaled.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H360 - May damage fertility or the unborn child.
H351 - Suspected of causing cancer.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H372 - Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS), kidneys, liver)

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P233 - Keep container tightly closed.
P271 - Use only outdoors or in a well-ventilated area.
P260 - Do not breathe vapor.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash hands thoroughly after handling.
P240 - Ground/bond container and receiving equipment.

Response : P314 - Get medical attention if you feel unwell.
P308 + P313 - IF exposed or concerned: Get medical attention.
P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P302 + P352 + P362 + P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
P332 + P313 - If skin irritation occurs: Get medical 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 attention.

Storage : P405 - Store locked up.
P403 - Store in a well-ventilated place.
P233 - Keep container tightly closed.
P235 - Keep cool.

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

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

Section 3. Composition/information on ingredients

CAS number/other identifiers

CAS number : Not applicable.

Chemical name	Common name	Identifiers	%
Silicic acid, ethyl ester	ETHYL SILICATE POLYMER	CAS: 11099-06-2	20 - <30
Xylene	Xylene	CAS: 1330-20-7	20 - <30
Talc , not containing asbestiform fibres	Talc, non-asbestos form	CAS: 14807-96-6	10 -<20
ethanol	ETHYL ALCOHOL	CAS: 64-17-5	5 - <10
1-methoxy-2-propanol	PROPYLENE GLYCOL MONOMETHYL ETHER	CAS: 107-98-2	5 - <10
Kaolin	ALUMINUM SILICATE	CAS: 1332-58-7	5 - <10
Isopropyl alcohol	ISOPROPYL ALCOHOL	CAS: 67-63-0	1 - <5
ethylbenzene	ETHYLBENZENE	CAS: 100-41-4	1 - <5
tetraethyl silicate	Tetraethyl Silicate	CAS: 78-10-4	1 - <5
Cellulose, ethyl ether	ETHYL CELLULOSE	CAS: 9004-57-3	1 - <5
Methyl alcohol	Methyl alcohol	CAS: 67-56-1	0.1 - <1
trimethyl borate	trimethyl borate	CAS: 121-43-7	0.1 - <1
Sulfuric acid	Sulfuric acid	CAS: 7664-93-9	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.

SUB codes represent substances without registered CAS Numbers.

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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

A. Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

B. Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

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).

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). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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 non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

B. Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

A. Occupational exposure limits

Ingredient name	Exposure limits
Xylene	**Ministry of Employment and Labor (Republic of Korea, 7/2018).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
Talc , not containing asbestiform fibres	**Ministry of Employment and Labor (Republic of Korea, 7/2018).** TWA: 2 mg/m³ 8 hours. Form: fibers
ethanol	**Ministry of Employment and Labor (Republic of Korea, 7/2018).** TWA: 1000 ppm 8 hours.
1-methoxy-2-propanol	**Ministry of Employment and Labor (Republic of Korea, 7/2018).** STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
Kaolin	**Ministry of Employment and Labor (Republic of Korea, 7/2018).** TWA: 2 mg/m³ 8 hours. Form: Respirable fraction
Isopropyl alcohol	**Ministry of Employment and Labor (Republic of Korea, 7/2018).** STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours.
ethylbenzene	**Ministry of Employment and Labor (Republic of Korea, 7/2018).**

Section 8. Exposure controls/personal protection

	STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours.
tetraethyl silicate	**Ministry of Employment and Labor (Republic of Korea, 7/2018).** TWA: 10 ppm 8 hours.
Methyl alcohol	**Ministry of Employment and Labor (Republic of Korea, 7/2018). Absorbed through skin.** STEL: 250 ppm 15 minutes. TWA: 200 ppm 8 hours.
trimethyl borate	**ACGIH TLV (United States).** STEL: 6 mg/m³ TWA: 2 mg/m³
Sulfuric acid	**Ministry of Employment and Labor (Republic of Korea, 7/2018).** TWA: 0.2 mg/m³ 8 hours. Form: Thoracic fraction STEL: 0.6 mg/m³ 15 minutes. Form: Thoracic 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 : 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 : 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.

Section 8. Exposure controls/personal protection

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: butyl rubber, polyvinyl alcohol (PVA), nitrile rubber, Viton®

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

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and chemical properties

A. Appearance

Physical state : Liquid.

Color : Gray.

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: 22°C (71.6°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: 23% (tetraethyl silicate)

K. Vapor pressure : Not available.

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

M. Vapor density : Not available.

N. Relative density : 1.09

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 cm^2/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.

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 : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Skin contact : Causes skin irritation. Defatting to the skin.

Eye contact : Causes serious eye irritation.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

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

Section 11. Toxicological information

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

B. Health hazards

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	5.2 g/kg	-
Kaolin	LD50 Oral	Rat	>5000 mg/kg	-
Isopropyl alcohol	LC50 Inhalation Vapor	Rat	72600 mg/m³	4 hours
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	4.396 g/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
tetraethyl silicate	LC50 Inhalation Dusts and mists	Rat	10 to 16 mg/l	4 hours
	LD50 Dermal	Rabbit	5.878 g/kg	-
	LD50 Oral	Rat	6270 mg/kg	-
Cellulose, ethyl ether	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
Methyl alcohol	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
trimethyl borate	LD50 Dermal	Rabbit	1.98 g/kg	-
	LD50 Oral	Rat	6.14 g/kg	-
Sulfuric acid	LD50 Oral	Rat	2140 mg/kg	-

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

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

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.

Section 11. Toxicological information

Mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

Teratogenicity

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

Specific target organ toxicity (single exposure)

Name	Classification	Route of exposure	Target organs
Xylene	Category 3	Not applicable.	Narcotic effects
Talc , not containing asbestiform fibres	Category 3	Not applicable.	Respiratory tract irritation
1-methoxy-2-propanol	Category 3	Not applicable.	Narcotic effects
Isopropyl alcohol	Category 3	Not applicable.	Narcotic effects
tetraethyl silicate	Category 3	Not applicable.	Respiratory tract irritation
Methyl alcohol	Category 1	Not determined	Not determined
trimethyl borate	Category 1	Not determined	optic nerve

Specific target organ toxicity (repeated exposure)

Name	Classification	Route of exposure	Target organs
Xylene	Category 1	Not determined	central nervous system (CNS), kidneys and liver

Aspiration hazard

Name	Result
Isopropyl alcohol	ASPIRATION HAZARD - Category 2
ethylbenzene	ASPIRATION HAZARD - Category 1

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Additional information

Section 11. Toxicological information

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.

Chemical name	Common name	CAS #	GHS Classification
Silicic acid, ethyl ester	ETHYL SILICATE POLYMER	11099-06-2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Xylene	Xylene	1330-20-7	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), kidneys, liver) - 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
ethanol	ETHYL ALCOHOL	64-17-5	FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 CARCINOGENICITY - Category 2
1-methoxy-2-propanol	PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Kaolin	ALUMINUM SILICATE	1332-58-7	Not classified.
Isopropyl alcohol	ISOPROPYL ALCOHOL	67-63-0	FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 2
ethylbenzene	ETHYLBENZENE	100-41-4	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 2 ASPIRATION HAZARD - Category 1
tetraethyl silicate	Tetraethyl Silicate	78-10-4	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Cellulose, ethyl ether	ETHYL CELLULOSE	9004-57-3	AQUATIC HAZARD (LONG-TERM) - Category 4
Methyl alcohol	Methyl alcohol	67-56-1	FLAMMABLE LIQUIDS - Category 2

Section 11. Toxicological information

trimethyl borate	trimethyl borate	121-43-7	ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 TOXIC TO REPRODUCTION (Fertility) (oral) - Category 1B TOXIC TO REPRODUCTION (Unborn child) (oral) - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (optic nerve) - Category 1
Sulfuric acid	Sulfuric acid	7664-93-9	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3

Section 12. Ecological information

A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 7640 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
1-methoxy-2-propanol	Acute LC50 23300 mg/l	Daphnia	48 hours
	Acute LC50 >4500 mg/l Fresh water	Fish	96 hours
Isopropyl alcohol	Acute EC50 10100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
ethylbenzene	Acute LC50 150 to 200 mg/l Fresh water	Fish	96 hours
Methyl alcohol	Acute LC50 13 mg/l Fresh water	Fish	96 hours

B. Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
ethanol	-	-	Readily
ethylbenzene	-	-	Readily

C. Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Xylene	3.16	7.4 to 18.5	low
ethanol	-0.31	-	low
Isopropyl alcohol	0.05	-	low
ethylbenzene	3.15	79.43	low
Cellulose, ethyl ether	5.5	-	high
Methyl alcohol	-0.77	-	low
trimethyl borate	-1.9	-	low

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. 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	UN1263	UN1263	UN1263
B. UN proper shipping name	PAINT	PAINT	PAINT
C. Transport hazard class(es)	3	3	3
D. Packing group	II	II	II
Environmental hazards	No.	No.	No.
E. Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Section 14. Transport information

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 tranportation

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:
Xylene
Talc , not containing asbestiform fibres
ethanol
1-methoxy-2-propanol
Kaolin
Isopropyl alcohol
ethylbenzene
tetraethyl silicate
Methyl alcohol
trimethyl borate
Sulfuric acid

ISHA Enforcement Regs Annex 11-3 (Exposure standards established for harmful factors) : None of the components are listed.

ISHA Enforcement Regs Annex 11-5 (Harmful factors subject to Work Environment Measurement) : The following components are listed: Xylene, o,m,p-isomers Preparations containing material at weight ratio of 1% or more, Ethylbenzene Preparations containing material at weight ratio of 1% or more, Isopropyl alcohol Preparations containing material at weight ratio of 1% or more, Talc, non-asbestos form/Soap stone less than 1% crystalline silica; (Mineral dust), Silicates less than 1% crystalline silica; (Mineral dust)

ISHA Enforcement Regs Annex 12-2 (Harmful Factors Subject to Special Health Check-up) : The following components are listed: Xylene, Ethylbenzene, Isopropyl alcohol

Section 15. Regulatory information

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control) : The following components are listed: xylene, ethyl benzene, isopropyl alcohol, sulfuric acid

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) : The following components are listed: Xylene including o-,m-,p- isomer, Ethylbenzene, 2-Propanol

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 : **Class:** Class 4 - Flammable Liquid
Item: 4. Class 2 petroleums - Water-insoluble liquid
Threshold: 1000 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 : **1/3/2020**

C. Version : **7.05**

Prepared by : EHS

D. Other

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Carc. 2, H351	Calculation method
Repr. 1B, H360 (Fertility)	Calculation method
Repr. 1B, H360 (Unborn child)	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 1, H372 (central nervous system (CNS), kidneys, liver)	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.