SAFETY DATA SHEET

According to OSHA Hazcom Standard 29 CFR 1910.1200

QP130-GREY

1. IDENTIFICATION

A. Product name

- QP130-GREY

B. Recommended use and restriction on use

- General use : HEAT RESISTANT PRIMER
- Restriction on use : Do not use except for purpose

C. Manufacturer / Supplier / Distributor information

○ **Manufacturer information**

- Company name : KCC Corporation
- Address : 30, Bangeojinsunhwando-ro, Dong-gu, Ulsan
- Emergency telephone number : 82-52-280-1717

○ **Supplier/Distributer information**

- Company name : KCC Corporation
- Address : 30, Bangeojinsunhwando-ro, Dong-gu, Ulsan
- Emergency telephone number : 82-52-280-1717

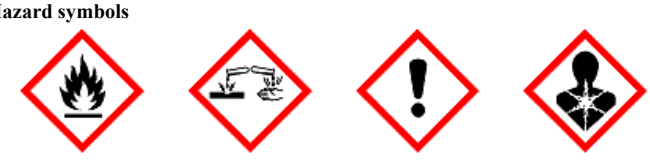
2. HAZARD IDENTIFICATION

A. GHS Classification

- Flammable liquids : Category3
- Acute toxicity (oral) : Category5
- Acute toxicity (dermal) : Category5
- Acute toxicity (inhalation: vapor) : Category4
- Skin corrosion/irritation : Category2
- Serious eye damage/irritation : Category1
- Germ cell mutagenicity : Category1B
- Carcinogenicity : Category1B
- Specific target organ toxicity(Single exposure) : Category3(Narcotic effects)
- Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)
- Specific target organ toxicity(Repeated exposure) : Category1
- Aspiration hazard : Category1
- Acute aquatic toxicity : Category2
- Chronic aquatic toxicity : Category3

B. GHS label elements

○ **Hazard symbols**



○ **Signal words**

- Danger

○ **Hazard statements**

- H226 Flammable liquid and vapour
- H303 May harmful if swallowed.
- H304 May be fatal if swallowed and enters airways

- H313 May be harmful if contact with skin.
- H315 Causes skin irritation
- H318 Causes serious eye damage
- H332 Harmful if inhaled
- H335 May cause respiratory irritation.
- H336 May cause drowsiness and dizziness.
- H340 May cause genetic defects
- H350 May cause cancer
- H372 Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- H401 Toxic to aquatic organisms.
- H412 Harmful to aquatic life with long lasting effects

○ **Precautionary statements**

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use non-sparking tools.
- P243 Take action to prevent static discharges.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

2) Response

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+P312 IF ON SKIN: Call a POISON CENTER/doctor if you feel unwell.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P321 Specific treatment
- P331 Do NOT induce vomiting.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash before reuse.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

3) Storage

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

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification

- Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Xylene	Xylol ; Methyltoluene	1330-20-7	19 ~ 26
Talc(Containing no asbestos fibers)	Not available	14807-96-6	13 ~ 20
Naphtha (petroleum), hydrodesulfurized heavy	Aliphatic hydrocarbon ; Oils, naphtha, hydrodesulfurized heavy ; Hydrodesulfurized heavy naphtha (petroleum) ;	64742-82-1	13 ~ 20
Titanium dioxide	Titanium oxide (Tio2) ; Titanium peroxide (Tio2) ; Dioxotitanium ; Pigment white 6	13463-67-7	4 ~ 11
Isobutanol	Isobutyl alcohol ; 2-Methyl-1-propanol ; Isopropylcarbinol ; 2-Methylpropan-1-ol ; 1-Hydroxymethylpropane ; 2-Methyl propanol ; 2-Methylpropyl alcohol ; 1-Isobutanol	78-83-1	1 ~ 8
Ethylbenzene	Benzene, ethyl- ; Ethyl benzene ; Ethylbenzol ; Phenylethane ;	100-41-4	1 ~ 8
Mica-group minerals	Silicate, Mica	12001-26-2	1 ~ 8
Trizinc bis(orthophosphate)	Zinc phosphate ; Tribasic zinc phosphate ; Phosphoric acid, zinc salt (2:3) ; TRIZINC BIS (ORTHOPHOSPHATE) ; ZINC ORTHOPHOSPHATE ; PHOSPHORIC ACID, ZINC SALT ; Tribasic zinc phosphate ; Trizinc diphosphate ; Zinc acid phosphate ;	7779-90-0	1 ~ 6
Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite	Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite ; QUATERNARY AMMONIUM COMPOUNDS,BIS(HYDROGENATED TALLOW ALKYL)DIMETHYL, SALTS WITH BENTONITE ; BIS(HYDROGENATED TALLOW ALKYL)DIMETHYL AMMONIUM SALTS WITH BENTONITE ; Bis(hydrogenated tallow alkyl)dimethylammonium bentonite ; Dimethyl dihydrogenated tallow ammonium chloride reaction product with bentonite ; Dimethyl dihydrogenated tallow ammonium chloride, reaction product with bentonite ; Dimethylbis(hydrogenated tallow)ammonium bentonite ; Quanternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite ;	68953-58-2	1 ~ 6
Carbon black	Inorganic,carbon black ; Acetylene Black ; Channel black	1333-86-4	0.1~1

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Remove contact lenses if worn.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contaminated clothing, shoes and isolate.
- Wash thoroughly after handling.
- Wear gloves when washing the patient, and please avoid contact with contaminated clothing.

C. Inhalation contact

- Take specific treatment if needed.
- When exposed to large amounts of steam and mist, move to fresh air.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.
- If swallowed, large amounts of water to drink and do not induce vomiting.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Avoid use of water jet for extinguishing
- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

B. Specific hazards arising from the chemical

- Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- Causes serious eye damage
- Causes skin irritation
- Flammable liquid and vapour
- Harmful if inhaled

C. Special protective actions for firefighters

- Avoid inhalation of materials or combustion by-products.
- Cool containers with water until well after fire is out.
- Do not approach the tank surrounded by fire until it is extinguished.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Keep unauthorized personnel out.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Move container to safe area from the leak area.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.

B. Environmental precautions

- If large amounts have been spilled, inform the relevant authorities.
- Prevent runoff and contact with waterways, drains or sewers.

C. Methods and materials for containment and cleaning up

- Appropriate container for disposal of spilled material collected.
- Dike for later disposal.
- Disposal of waste shall be in compliance with the Wastes Control Act
- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Avoid contact with incompatible materials.
- Avoid direct physical contact.
- Comply with all applicable laws and regulations for handling
- Dealing only with a well-ventilated place.
- Do not handle until all safety precautions have been read and understood.

B. Conditions for safe storage, including any incompatibilities

- Avoid direct sunlight.
- Check regularly for leaks.
- Do not apply any physical shock to container.

- Do not apply direct heat.
- Do not use damaged containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

○ **ACGIH TLV**

- [Xylene] : TWA 20 ppm
- [Talc(Containing no asbestos fibers)] : TWA 2 mg/m3, Respirable particulate matter (containing no asbestos and <1% crystalline silica)
- [Titanium dioxide] : TWA 0.2 mg/m3 (Nanoscale particles), 2.5 mg/m3 (Finescale particles)
- [Isobutanol] : TWA, 50 ppm (152 mg/m3)
- [Ethylbenzene] : TWA, 20 ppm (87 mg/m3)
- [Mica-group minerals] : TWA 0.1 mg/m3 Respirable aerosol
- [Carbon black] : TWA, 3 mg/m3, Inhalable particulate matter

○ **OSHA PEL**

- [Xylene] : 100 ppm, 435 mg/m3
- [Titanium dioxide] : 15 mg/m3 (Total dust)
- [Isobutanol] : 100 ppm, 300 mg/m3
- [Ethylbenzene] : 100 ppm, 435 mg/m3
- [Mica-group minerals] : 20 mppcf
- [Carbon black] : 3.5 mg/m3

B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment

○ **Respiratory protection**

- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- Any chemical cartridge respirator with a full facepiece and organic vaporcartridge(s).
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Consider warning properties before use.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Respiratory protection is ranked in order from minimum to maximum.
- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

○ **Eye protection**

- Provide an emergency eye wash station and quick drench shower in the immediate work area.
- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

○ **Hand protection**

- Wear appropriate chemical resistant glove.

○ **Skin protection**

- Wear appropriate chemical resistant protective clothing.

○ **Others**

- Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Liquid
- Color	GRAY
B. Odor	Solvent odor
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	23℃
H. Evaporation rate	Not available

I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	Not available
M. Vapour density	>1
N. Specific gravity(Relative density)	1.2~1.4
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	408℃
Q. Decomposition temperature	Not available
R. Viscosity	50~70KU
S. Molecular weight	Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Cylinders exposed to fire may vent and release flammable gas.

C. Conditions to avoid

- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with incompatible materials and condition.
- Avoid contact with heat, sparks, flame or other ignition sources.

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

○ **Respiratory tracts**

- May be fatal if swallowed and enters airways
- May cause respiratory irritation.

○ **Oral**

- May harmful if swallowed.

○ **Eye·Skin**

- Causes serious eye damage
- Causes skin irritation

B. Delayed and immediate effects and also chronic effects from short and long term exposure

○ **Acute toxicity**

*** Oral**

- Product (ATEmix) : 2000mg/kg < ATEmix <= 5000mg/kg
- [Xylene] : LD50=3523 mg/kg Rat (EU Method B1) (ECHA)
- [Talc(Containing no asbestos fibers)] : LD50 >5000 ㎎/㎏ Rat (OECD TG 423, GLP)(ECHA)
- [Naphtha (petroleum), hydrodesulfurized heavy] : LD50 > 5000 ㎎/㎏ Rat (ECHA)
- [Titanium dioxide] : LD50 >5000 ㎎/㎏ Mouse (OECD TG 420) (OECD SIDS)
- [Isobutanol] : LD50 3350 ㎎/㎏ Rat (OECD Guideline 401, EPA OTS 798.1175, GLP)(ECHA)
- [Ethylbenzene] : LD50 3500 ㎎/㎏ Rat (ECHA, HSDB)
- [Trizinc bis(orthophosphate)] : LD50 > 5000 ㎎/㎏ Rat (OECD 401)(ECHA)
- [Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite] : LD50 > 5000 ㎎/㎏ Rat (SIDS)
- [Carbon black] : LD50 >8000 ㎎/㎏ Rat (OECD TG 401) (ECHA)

*** Dermal**

- Product (ATEmix) : 2000mg/kg < ATEmix <= 5000mg/kg
- [Xylene] : LD50 ≥1,700mg/kg Rabbit (NIER)

- [Talc(Containing no asbestos fibers)] : LD50 >2000 ㎎/㎏ Rat (OECD TG 402, GLP)(ECHA)
- [Naphtha (petroleum), hydrodesulfurized heavy] : LD50 >3160 ㎎/㎏ Rabbit (IUCLID)
- [Isobutanol] : LD50 >2000 ㎎/㎏ Rabbit (LD50= 2460mg/kg bw, No death, OECD Guideline 402, EPA OTS 798.1100, GLP)
- [Ethylbenzene] : LD50 15400 ㎎/㎏ Rabbit (ECHA, ChemIDPlus)
- [Carbon black] : LD50 >3000 ㎎/㎏ Rabbit (NITE), LD50 >2000 mg/kg Rabbit (ECHA)

*** Inhalation**

- Product (ATEmix) : 10.0mg/L < ATEmix <= 20.0mg/L
- [Xylene] : Vapor LC50 = 10 ~ 20 mg/L/4hr (NIER)
- [Talc(Containing no asbestos fibers)] : Dust LC50 >2.1 ㎎/ℓ 4 hr Rat No death (OECD TG 403, GLP)(ECHA)
- [Naphtha (petroleum), hydrodesulfurized heavy] : Vapor LC50 > 7.63 mg/L/4hr No death, Not classified (ECHA)
- [Titanium dioxide] : Aerosol LC50 5.09 mg/L 4h Rat No death, Not classified (ECHA)
- [Isobutanol] : Vapor LC50 24.6 ㎎/ℓ Rat (ECHA)
- [Ethylbenzene] : Vapor LC50 17.8 mg/L 4 hr Rat (conversion value of 4000 ppm) (ECHA, HSDB)
- [Trizinc bis(orthophosphate)] : LC50 >5.7 mg/L No death (Read-across: 1314-13-2)(OECD 403)(ECHA)
- [Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite] : LC50 > 12.6 ㎎/ℓ 4 hr Rat (GLP, IUCLID)
- [Carbon black] : Dust LC0 4.6 ㎎/㎥ 4 hr Rat No death Not classified (OECD TG 403) (ECHA)

○ **Skin corrosion/irritation**

- Causes skin irritation

○ **Serious eye damage/irritation**

- Causes serious eye damage

○ **Respiratory sensitization**

- Not available

○ **Skin sensitization**

- Not available

○ **Carcinogenicity**

*** IARC**

- [Xylene] : Group 3
- [Talc(Containing no asbestos fibers)] : Group 3
- [Titanium dioxide] : Group 2B
  ※ IARC (International Agency for Research on Cancer) has classified TiO2 as a substance which may be possibly carcinogenic to humans. However, studies on TiO2 conducted by the IARC state that when TiO2 is mixed in substance such as paints and coatings, the level of exposure is not severe. An increase in cancer was found only when ultrafine TiO2 particles of less than 100nm were used in a Study on Long-term Inhalation of TiO2 by Animals, issued by the National Institute for Occupational Safety & Health (NIOSH). Therefore, it is difficult to conclude that this product, which contains TiO2 with a particle size of 280~360nm, can be carcinogenic enough to cause cancer.

- [Ethylbenzene] : Group 2B
- [Carbon black] : Group 2B

*** OSHA**

- Not available

*** ACGIH**

- [Xylene] : A4
- [Talc(Containing no asbestos fibers)] : A4 (Talc(containing no asbestos fibers))
- [Titanium dioxide] : A3
- [Ethylbenzene] : A3
- [Carbon black] : A3

*** NTP**

- Not available

*** EU CLP**

- [Naphtha (petroleum), hydrodesulfurized heavy] : Carc. 1B (Note P)

○ **Germ cell mutagenicity**

- May cause genetic defects

○ **Reproductive toxicity**

- Not available

○ **STOT-single exposure**

- May cause drowsiness and dizziness.
- May cause respiratory irritation.

○ **STOT-repeated exposure**

- Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)

○ **Aspiration hazard**

- May be fatal if swallowed and enters airways

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

○ **Fish**

- [Xylene] : LC50=3.3mg/L 96 hr (NITE)
- [Titanium dioxide] : LC50 >100 ㎎/L 96 hr Carassius auratus, Oncorhynchus mykiss (ECHA)
- [Isobutanol] : LC50 1000 ㎎/ℓ 96 hr LC50 1430 ㎎/ℓ 96 hr Pimephales promelas (ECHA)
- [Ethylbenzene] : LC50 5.1㎎/ℓ 96hr Menidia menidia (GLP) (ECHA)
- [Trizinc bis(orthophosphate)] : LC50 0.112 ㎎/ℓ 96 hr (Read-across CAS No. 7646-85-7)(ECHA)
- [Carbon black] : LC50 >1000 mg/L, NOEC >1000 mg/L 96 hr Leuciscus idus (ECHA)

○ **Crustaceans**

- [Xylene] : LC50 3.6 ㎎/ℓ 24 hr (OECD TG202) (ECHA)
- [Naphtha (petroleum), hydrodesulfurized heavy] : LC50 4.3 ㎎/ℓ 96 hr other(Crangon crangon) (IUCLID)
- [Titanium dioxide] : EC50 >100 ㎎/L 48 hr Daphnia magna, OECD TG 202 (ECHA)
- [Isobutanol] : EC50 1250 ㎎/ℓ 24 hr Daphnia magna (NITE: EHC65, 1987) EC50 1100 ㎎/ℓ 48 hr Daphnia magna (ECHA)
- [Ethylbenzene] : EC50 1.8 ~ 2.4mg/L 48hr Daphnia magna (ECHA)
- [Trizinc bis(orthophosphate)] : LC50 0.416 ㎎/ℓ 48 hr Ceriodaphnia dubia (Read-across:7646-85-7)(ECHA)
- [Carbon black] : LC50 >100 mg/L, NOEL 100 mg/L 48 hr Daphnia magna (OECD TG 202, GLP) (ECHA)

○ **Algae**

- [Xylene] : ErC50 4.06 ㎎/ℓ 73 hr (OECD TG201, GLP) (ECHA)
- [Titanium dioxide] : ErL50 > 100 ㎎/ℓ 72 hr Pseudokirchneriella subcapitata, growth rate, static, (72h-EyL50 >100 mg/L static, OECD TG 201) (ECHA)
- [Isobutanol] : EC50 593 ㎎/ℓ 72 hr Selenastrum capricornutum (ECHA)
- [Ethylbenzene] : EC50 3.6 ㎎/ℓ 96hr, NOEC 3.4mg/L 96 h Raphidocelis subcapitata (EPA 1985, GLP) (ECHA)
- [Trizinc bis(orthophosphate)] : ErC50 0.136 mg Zn/L, NOEC 0.024 mg Zn/L(72h, P. subcapitata)(ECHA)
- [Carbon black] : EC50 >10000 mg/L, NOEC >=10000 mg/L 72 hr Desmodesmus subspicatus (OECD TG 201, GLP) (ECHA)

B. Persistence and degradability

○ **Persistence**

- [Xylene] : log Kow=3.16 (NITE)
- [Naphtha (petroleum), hydrodesulfurized heavy] : 6 log Kow ~ 2.1 log Kow (Estimate) (IUCLID)
- [Isobutanol] : log Kow 0.8 (ISCS) log Kow 10 (ECHA)
- [Ethylbenzene] : log Kow 3.6 (20℃) (ECHA) log Kow 3.15 (HSDB)

○ **Degradability**

- Not available

C. Bioaccumulative potential

○ **Bioaccumulative potential**

- [Xylene] : BCF25.9 (ECHA)
- [Ethylbenzene] : BCF 1 (ECHA)
- [Trizinc bis(orthophosphate)] : BCF=2.92(muscle)~69.48(kidney)(56d, C. fusca)(NIER)

○ **Biodegradation**

- [Xylene] : 90 % 28 day (OECD TG301F, GLP)(ECHA)
- [Isobutanol] : 70%~80% 28day (ECHA)
- [Ethylbenzene] : 70 ~ 80% 28day Readily biodegradable (ISO 14593 CO2 headspace test, GLP) (ECHA)
- [Carbon black] : 6 % 28 d (OECD TG 301 B, GLP) (ECHA)

D. Mobility in soil

- [Xylene] : log Kow = 3.12 (measured) (ortho), 3.2 (measured) (meta), 3.15 (measurements) (p) (5)
- [Isobutanol] : log Kow = 0.8 (1)

E. Other adverse effects

- [Xylene] : Fish NOEC 56d>1.3mg/L Daphnia magna (US EPA 600/4-91-003) NOEC=1.17 mg/L(ECHA)

- [Isobutanol] : Crustaceans(Daphnia magna); NOEC(21d) 20mg/L Algae(Pseudokirchnerella subcapitata); NOEC(72h)>53mg/L (OECD Guideline 201, Alga, Growth Inhibition Test,GLP) (ECHA)
- [Ethylbenzene] : Crustacean(Water Flea); NOEC(7d, reproduction) 0.96mg/L, Algae(Selenastrum capricornutum); NOEC(96h) 3.4mg/L (EPA 1985, GLP) (ECHA)

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- It shall be treated by incineration
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them

B. Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act

- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG CODE/IATA DGR)

- 1263

B. Proper shipping name

- PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)

C. Hazard Class

- 3

D. IMDG CODE/IATA DGR Packing group

- III

E. Marine pollutant

- Not applicable

F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-E (Flammable liquids, floating on water)

15. REGULATORY INFORMATION

A. National and/or international regulatory information

○ **POPs Management Law**

- [Xylene] : Not applicable
- [Talc(Containing no asbestos fibers)] : Not applicable
- [Naphtha (petroleum), hydrodesulfurized heavy] : Not applicable
- [Titanium dioxide] : Not applicable
- [Isobutanol] : Not applicable
- [Ethylbenzene] : Not applicable
- [Mica-group minerals] : Not applicable
- [Trizinc bis(orthophosphate)] : Not applicable
- [Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite] : Not applicable
- [Carbon black] : Not applicable

○ **Information of EU Classification**

*** Classification**

- [Xylene] : H226,H312,H315,H332
- [Naphtha (petroleum), hydrodesulfurized heavy] : H304,H340,H350,H372
- [Isobutanol] : H226,H315,H318,H335,H336

- [Ethylbenzene] : H225,H304,H332,H373
- [Trizinc bis(orthophosphate)] : H400,H410

○ **U.S. Federal regulations**

*** OSHA PROCESS SAFETY (29CFR1910.119)**

- Not applicable

*** CERCLA Section 103 (40CFR302.4)**

- [Xylene] : 45.3599 kg 100 lb
- [Isobutanol] : 2267.995 kg 5000 lb
- [Ethylbenzene] : 453.599 kg 1000 lb
- [Talc(Containing no asbestos fibers)] : Not applicable
- [Naphtha (petroleum), hydrodesulfurized heavy] : Not applicable
- [Titanium dioxide] : Not applicable
- [Mica-group minerals] : Not applicable
- [Trizinc bis(orthophosphate)] : Not applicable
- [Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite] : Not applicable
- [Carbon black] : Not applicable

*** EPCRA Section 302 (40CFR355.30)**

- Not applicable

*** EPCRA Section 304 (40CFR355.40)**

- Not applicable

*** EPCRA Section 313 (40CFR372.65)**

- [Xylene] : Applicable
- [Ethylbenzene] : Applicable
- [Talc(Containing no asbestos fibers)] : Not applicable
- [Naphtha (petroleum), hydrodesulfurized heavy] : Not applicable
- [Titanium dioxide] : Not applicable
- [Isobutanol] : Not applicable
- [Mica-group minerals] : Not applicable
- [Trizinc bis(orthophosphate)] : Not applicable
- [Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite] : Not applicable
- [Carbon black] : Not applicable

○ **Rotterdam Convention listed ingredients**

- Not applicable

○ **Stockholm Convention listed ingredients**

- Not applicable

○ **Montreal Protocol listed ingredients**

- Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.

- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2018-06-05

C. Revision number and Last date revised

- 5 times, 2022-10-20

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).