1. Identification

A. Product name : Evacoat Multi-Purpose Epoxy Primer (Base) (White)

B. Recommended Use and Restriction on Use
- ○ General use : Epoxy Primer
- ○ Restriction on use : Restricted to use other than recommended use

C. Manufacturer / Supplier / distributor information
- ○ Company name : NOROO Paint & Coatings Co., Ltd.
- ○ Address : 351, Bakdal-ro, Manan-gu, Anyang-si, Gyeonggi-do, Korea
- ○ Emergency telephone number : +82-31-467-6114

2. Hazard identification

A. GHS Classification
Serious eye damage/irritation Category 1
Flammable liquids Category 3
Acute toxicity (inhalation: gas) Category 4
Carcinogenicity Category 1A
Reproductive toxicity Category 2
Germ cell mutagenicity Category 1B
Chronic aquatic toxicity Category 3
Serious eye damage/irritation Category 2A
Specific target organ toxicity(Single exposure) Category 3
Specific target organ toxicity(Repeated exposure) Category 1
Skin corrosion/irritation Category 2
Aspiration hazard Category 2
Specific target organ toxicity(Single exposure) Category 1
Ozone layer hazard

B. GHS label elements
- ○ Hazard symbols

- ○ Signal words : DANGER
- ○ Hazard statements :

H318 Causes serious eye damage
H226 Flammable liquid and vapour
H332 Harmful if inhaled
H350 May cause cancer
H361 Suspected of damaging fertility or the unborn child
H340 May cause genetic defects
H412 Harmful to aquatic life with long lasting effects
H319 Causes serious eye irritation
H335+H336 May cause respiratory irritation, May cause drowsiness and dizziness.
H372 Prolonged or repeated exposure may cause lung damage to the body (Refer Section SDS 11)
H315 Causes skin irritation
H305 May be harmful if swallowed and enters airways
H370 Causes damage to organs: central nervous system (CNS), gastrointestinal tract(Refer Section SDS 11)
H420 It destroys the upper layer of the ozone layer and is harmful to public health and environment.

- ○ Precautionary statements

- Prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P210 Keep away from heat/sparks/open flames/hot surfaces. ? No smoking.
P242 Use only non-sparking tools. Flammable liquids (chapter 2.6) 1, 2, 3
P261 Do not breathe dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P281 Use personal protective equipment as required.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P273 Avoid release to the environment.
P243 Take precautionary measures against static discharge.
P264 Wash hands thoroughly after handling.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P270 Do not eat, drink or smoke when using this product.

- Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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 victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).
P308+P313 If exposed or concerned: Get medical advice/attention.
P310 Immediately call a POISON CENTER or doctor/physician.
P337+P313 If eye irritation persists: Get medical advice/attention.
P321 Specific treatment
P314 Get medical advice/attention if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.
P307+P311 If exposed: Call a POISON CENTER or doctor/physician.

- Storage

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

- Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulation
P502 Please refer to the information provided by the manufacturer / supplier on recycling and recycling examples.

C. Other hazards which do not result in classification : (NFPA Classification)

NFPA grade / Chemical Name	Health	Flammability	Reactivity
Talc(Asbestos-free)	1	0	0
Quartz (SiO2)	1	0	0
4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	2	1	0
Xylene	NO DATA	NO DATA	NO DATA
Rutile(TiO2)	1	0	0
4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane	NO DATA	NO DATA	NO DATA
n-Butyl alcohol	2	3	0
Solvent naphtha (petroleum), light arom.	1	2	0
Propylene glycol methyl ether	0	3	0
Calcium oxide	3	0	1
Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite	1	1	0
Strontium oxide	3	0	1
Silicon dioxide	1	0	0
Ethylbenzene	2	3	0
Trade secret	NO DATA	NO DATA	NO DATA

3. Composition/information on ingredients

Chemical Name	Trade names and Synonyms	CAS-NO	Content(%)
Talc(Asbestos-free)	Talc(Asbestos-free)	14807-96-6	15~25
Quartz (SiO2)	Quartz (SiO2)	14808-60-7	18~28
4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]	25036-25-3	12~22
Xylene	Xylene	1330-20-7	12~22
Rutile(TiO2)	Rutile(TiO2)	1317-80-2	3~13
4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane	4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane	36484-54-5	1~10
n-Butyl alcohol	n-Butyl alcohol	71-36-3	1~10
Solvent naphtha (petroleum), light arom.	Solvent naphtha (petroleum), light arom.	64742-95-6	1~10
Propylene glycol methyl ether	Propylene glycol methyl ether	107-98-2	1~10
Calcium oxide	Calcium oxide	1305-78-8	1~10
Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite	Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite	68911-87-5	1~10
Strontium oxide	Strontium oxide	1314-11-0	1~10
Silicon dioxide	Silicon dioxide	7631-86-9	1~10
Ethylbenzene	Ethylbenzene	100-41-4	1~10
Trade secret	-	-	1~10

4. First-aid measures

A. Eye Contact : If irritation, pain, swelling, tears or glaring happens, take medical assistant immediately Flush exposed eyes with plenty of water for more than 15minutes.

B. Skin Contact : Wash off with soap and water for more than 15 minutes. And take medical assistant immediately. If symptoms like irritation or pain occurs, take medical assistant immediately. Remove exposed clothing, and wash off exposed area with soap and water.

C. Inhalation : Take a medical assistant immediately. Remove contaminated clothing and shoes, and isolate it. If hard to breathe, administering oxygen Perform the artificial respiration, using the pocket mask with one way valves or other respiratory medical devices. If inhalated or swallowed, do not perform the inhalation phase of breathing If not breathing, perform the artificial respiration. Avoid from exposure, and move into an area with fresh air.

D. Ingestion Contact : It is need to be considered that early removal of some ingested material by gastric lavage must be weighed against potential complications of bleeding or perforation Take proper medical assistant by symtoms. If ingested large quantity, take medical assistant. Do not try to induce vomiting, if occurs, keep head below hips to prevent swallow into lungs. Inducing vomit.

E. Notes to Physician : There is no specific antidote and take an appropriate medical treatment.

5. Fire-fighting measures

A. Suitable (Unsuitable) extinguishing media
○ Suitable extinguishing media : Powder extinguishing agent, gaseous Extinguishing Agent, and regular foam.
○ (Unsuitable) extinguishing media : Water is not appropriate extinguishing agent
○ Case of big fire : Use appropriate protective device depend on the situation. Stay away more than 800m to avoid tank explosion. Spread large amount of the extinguishing agent as a mist form with staying against wind.

B. Specific hazards arising from the chemical
○ Pyrolysate : Carbon dioxide, toxic carbon compounds/Nitrogen compounds/sulfur compounds
○ Fire and Explosion danger : Risk of medium-sized fire.

C. Special protective actions for fire-fighters
○ Personal Precautions, protective equipment : Gas mask or air respirator, heat resistant clothing, heat resistant helmet, heat resistant gloves, heat resistant boots
○ Emergency procedures : Block the area except for the fire-suppression personnel. Cooling containers with water long time after extinguish fire. If there is no risk, moving containers away from fire. Use appropriate extinguishing agents to catch fire.

6. Accidental release measures

A. Personal Precautions, protective equipment and emergency procedures
○ Personal Precautions, protective equipment : Gas mask for organic gases, other appropriate protective device / clothing / gloves.
○ Emergency procedures : Do not contact on the bare skin Do work with the personal protected devices such as gas mask for organic gases other appropriate protective devices / clothing / gloves. Spray water to reduce amount of steam. Take an action to block the leakage if there is no risk.

B. Environmental precautions
○ Atmosphere : Using local ventilation to Minimize the exposure to worker. Do install the local ventilations and full ventilation system
○ Soil : Use absorbent to collect the appropriate container. Trap spilled material at bottom in deep water pockets, excavated holding areas or within sand bag barriers.
○ Under water : Collect spilled material with mechanic devices Use absorbent to collect the appropriate container.

C. Methods and materials for containment and cleaning up
○ Small spill : Move to appropriate container for disposal of spilled material collected. Absorb for use sand or other non-combustible material.
○ Large spill : Notify to central and local government, when emissions are above regulation. Prohibit access of unnecessary people, isolate hazard area to secure.

7. Handling and storage

A. Precautions for safe handling : Use local ventilations and a full ventilation system when handling Seal the container for minimizing the petroleum steam Ground for preventing the static discharge Keep or handle followed by Dangerous goods Safety Management Act

B. Conditions for safe storage, including any incompatibilities : Stored in an isolated place, freezing caution, high temperature body caution. Avoid strong oxidizing agents, acid. Storage temperature: 5 ~ 35 ℃ Avoid direct sunlight while storing outdoor. Because of evaporation and contamination concerns, airtight the container and store in a well-ventilated building.

8. Exposure controls/personal protection

A. Exposure Limits
○ Talc(Asbestos-free)
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Quartz (SiO2)
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Xylene
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Rutile(TiO2)
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ n-Butyl alcohol
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Solvent naphtha (petroleum), light arom.
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Propylene glycol methyl ether
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Calcium oxide
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Strontium oxide
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Silicon dioxide
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Ethylbenzene
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ Trade secret
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

B. Engineering Controls :
▷ Do install the local ventilations and full ventilation system
▷ Using local ventilation to Minimize the exposure to worker.
▷ NO DATA
▷ NO DATA

C. Personal Protective Equipment
○ Respiratory protection : Use the personal protect respirator for organic solvent or higher level of capacity when workers are supposed to be exposed under unsuitable respiratory working condition, or longer period exposure than standard level. Respirators should be authorized by Korea Occupational Safety and Health Agency
○ Eye protection : Let workers do wear the safety glasses in case hazard caused by mist may be expected. Install washing facilities and an emergency washing facilities close to workplace. Use the respirator for organic solvent or higher level.
○ Hand protection : Wear the chemical protective gloves Do the workers wear the impermeable protective gloves made from rubber/PVC due to skin irritation may be supposed by chronicle and long period exposure.
○ Skin protection : Wear appropriate chemical protective clothing. Work after wearing the impermeable protective apron made by rubber/PVC in case hazard caused by exposure or spill, wear the impermeable whole body protective clothing if needed.

9. Physical and chemical properties

A. Appearance : Colored liquid

B. Odor : Solvent odor

C. Odor threshold : NO DATA

D. PH : NO DATA

E. Melting point/Freezing point(℃) : NO DATA

F. Initial Boiling Point/Boiling Ranges(℃) : NO DATA

G. Flash point(℃) : 28

H. Evaporating Rate : NO DATA

I. Flammability(solid, gas)(℃) : NON Flammable

J. Upper/Lower Flammability or explosive limits : NO DATA

K. Vapour pressure : NO DATA

L. Solubility : No Soluble

M. Vapour density : NO DATA

N. Specific gravity : NO DATA

O. Partition coefficient of n-octanol/water : NO DATA

P. Autoignition temperature(℃) : NO DATA

Q. Decomposition temperature(℃) : NO DATA

R. Viscosity : NO DATA

S. Molecular weight : NO DATA

10. Stability and reactivity

A. Chemical stability : NO DATA

B. Possibility of hazardous reactions : Avoid contaminants and friction Do not contact with heat, spark, flame or other flammable sources

C. Conditions to avoid : Oxidation agent, metal and combustable materials

D. Hazardous decomposition products : Thermal decomposition products (carbon etc.,)

11.Toxicological information

A. Information on the likely routes of exposure
- ○ Respiratory tracts : Adverse lung effects, Dyspnoea, Hypothermia, Vomitting
- ○ Oral : Vomitting, Diarrhea, Stomach pain, Irregular heartbeat
- ○ Skin : Irritation, Burn, Adverse nerve effects
- ○ Eye : Irritation, eye damage

B. Delayed and immediate effects and also chronic effects from short and long term exposure
- ○ Talc(Asbestos-free)
  - Acute toxicity
    - Oral : NO DATA
    - Dermal : NO DATA
    - Inhalation : NO DATA
  - Skin corrosion/irritation : 300㎍/3day(human) : weak stimulus
  - Serious eye damage/irritation : NO DATA
  - Respiratory sensitization : NO DATA
  - Skin sensitization : NO DATA
  - Carcinogenicity
    - IARC : Group 2B
    - OSHA : NO DATA
    - ACGIH : A4
    - NTP : NO DATA
    - EU CLP : NO DATA
  - Germ cell mutagenicity : Salmonella species / Negative
  - Reproductive toxicity : Salmonella species / Negative
  - STOT-single exposure : NO DATA
  - STOT-repeated exposure : NO DATA
  - Aspiration hazard : NO DATA
- ○ Quartz (SiO2)
  - Acute toxicity
    - Oral : NO DATA
    - Dermal : NO DATA
    - Inhalation : NO DATA
  - Skin corrosion/irritation : NO DATA
  - Serious eye damage/irritation : NO DATA
  - Respiratory sensitization : NO DATA
  - Skin sensitization : NO DATA
  - Carcinogenicity
    - IARC : Group 1
    - OSHA : NO DATA
    - ACGIH : A2
    - NTP : K
    - EU CLP : NO DATA
  - Germ cell mutagenicity : in vivo Mutagenictest (Bone Marrow Micronucleus test) result Negative, chromosomal abnormalities testresult Negative, Micronucleus testresult Positive
  - Reproductive toxicity : in vivo Mutagenictest (Bone Marrow Micronucleus test) result Negative, chromosomal abnormalities testresult Negative, Micronucleus testresult Positive
  - STOT-single exposure : NO DATA
  - STOT-repeated exposure : NO DATA
  - Aspiration hazard : NO DATA
- ○ 4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
  - Acute toxicity
    - Oral : LD50 > 2000 ㎎/㎏ Rat
    - Dermal : LD50 > 2000 ㎎/㎏ Rabbit
    - Inhalation : LD50 > 2000 ㎎/㎏ Rabbit
  - Skin corrosion/irritation : NO DATA
  - Serious eye damage/irritation : NO DATA
  - Respiratory sensitization : NO DATA
  - Skin sensitization : NO DATA
  - Carcinogenicity

IARC : NO DATA
OSHA : NO DATA
ACGIH : NO DATA
NTP : NO DATA
EU CLP : NO DATA
- Germ cell mutagenicity : NO DATA
- Reproductive toxicity : NO DATA
- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : NO DATA

○ Xylene
- Acute toxicity
Oral : LD50=3550 mg/kg rat
Dermal : LD50 4350 mg/kg Rabbit
Inhalation : LD50 4350 mg/kg Rabbit
- Skin corrosion/irritation : Skin irritation test in rabbits Causes moderate irritation.
- Serious eye damage/irritation : Skin irritation test in rabbits Causes moderate irritation.
- Respiratory sensitization : NO DATA
- Skin sensitization : NO DATA
- Carcinogenicity
IARC : Group 3
OSHA : NO DATA
ACGIH : A4
NTP : NO DATA
EU CLP : NO DATA
- Germ cell mutagenicity : If three people a voice dynamics, somatic cell mutagenicity tests in vivo (micronucleus test, chromosome test) Voice
- Reproductive toxicity : If three people a voice dynamics, somatic cell mutagenicity tests in vivo (micronucleus test, chromosome test) Voice
- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : In the liquid can cause chemical pneumonia if swallowed.

○ Rutile(TiO2)
- Acute toxicity
Oral : LD50 > 24000 mg/kg Rat
Dermal : NO DATA
Inhalation : NO DATA
- Skin corrosion/irritation : NO DATA
- Serious eye damage/irritation : NO DATA
- Respiratory sensitization : NO DATA
- Skin sensitization : NO DATA
- Carcinogenicity
IARC : NO DATA
OSHA : NO DATA
ACGIH : NO DATA
NTP : NO DATA
EU CLP : NO DATA
- Germ cell mutagenicity : NO DATA
- Reproductive toxicity : NO DATA
- STOT-single exposure : NO DATA
- STOT-repeated exposure : This risk may be increased by exposure to a case : Respiratory disorders
- Aspiration hazard : NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane
- Acute toxicity
Oral : NO DATA
Dermal : NO DATA
Inhalation : NO DATA
- Skin corrosion/irritation : NO DATA
- Serious eye damage/irritation : NO DATA
- Respiratory sensitization : NO DATA
- Skin sensitization : NO DATA
- Carcinogenicity
IARC : NO DATA
OSHA : NO DATA
ACGIH : NO DATA
NTP : NO DATA
EU CLP : NO DATA
- Germ cell mutagenicity : NO DATA
- Reproductive toxicity : NO DATA
- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : NO DATA

○ n-Butyl alcohol
- Acute toxicity
Oral : LD50 = 790 mg/kg Rat
Dermal : LD50 = 3402 mg/kg rabbit
Inhalation : LD50 = 3402 mg/kg rabbit
- Skin corrosion/irritation : (in rabbit) skin Irritation test result middle Irritation
- Serious eye damage/irritation : Using the rabbit eye irritation test results - Severe irritation
- Respiratory sensitization : NO DATA
- Skin sensitization : NO DATA

- Carcinogenicity
  IARC : NO DATA
  OSHA : NO DATA
  ACGIH : NO DATA
  NTP : NO DATA
  EU CLP : NO DATA
- Germ cell mutagenicity : Using mammalian erythrocytes Micronucleustest Negative
- Reproductive toxicity : Using mammalian erythrocytes Micronucleustest Negative
- STOT-single exposure : By inhalation in humans and pharyngeal irritation headache appears. Narcotic effects in animal experiments appears or suppress the central nervous system.
- STOT-repeated exposure : NO DATA
- Aspiration hazard : N-3 to 14 carbon atoms in the alcohols individual

○ Solvent naphtha (petroleum), light arom.
- Acute toxicity
  Oral : LD50 = 8400 mg/kg Rat
  Dermal : LD50 > 2000 mg/kg Rabbit
  Inhalation : LD50 > 2000 mg/kg Rabbit
- Skin corrosion/irritation : weakstimulus(rabbit)
- Serious eye damage/irritation : Mild irritant(rabbit)
- Respiratory sensitization : NO DATA
- Skin sensitization : Non-sensitizer (Guinea pig)
- Carcinogenicity
  IARC : NO DATA
  OSHA : NO DATA
  ACGIH : NO DATA
  NTP : NO DATA
  EU CLP : Carc. 1B
- Germ cell mutagenicity : EU CLP: 1B (case containing less than 0.1% of the benzene in a weight ratio of the material not applied to the present classification)
- Reproductive toxicity : EU CLP: 1B (case containing less than 0.1% of the benzene in a weight ratio of the material not applied to the present classification)
- STOT-single exposure : Affecting the central nervous system. Inhalation of high concentrations vapors may cause loss of consciousness.
- STOT-repeated exposure : NO DATA
- Aspiration hazard : Harmful aspiration concerns

○ Propylene glycol methyl ether
- Acute toxicity
  Oral : LD50 > 5000 mg/kg Rat
  Dermal : LD50 = 13000 mg/kg Rabbit
  Inhalation : LD50 = 13000 mg/kg Rabbit
- Skin corrosion/irritation : The test is applied to rabbit skin appears extremely weak Irritation.
- Serious eye damage/irritation : High concentrations of vapor is irritating to represent not strong.
- Respiratory sensitization : NO DATA
- Skin sensitization : Using guinea pig skin sensitization test results - negative
- Carcinogenicity
  IARC : NO DATA
  OSHA : NO DATA
  ACGIH : A4
  NTP : NO DATA
  EU CLP : NO DATA
- Germ cell mutagenicity : Using mouse bone marrow erythrocytes in vivo Micronucleus test - Negative
- Reproductive toxicity : Using mouse bone marrow erythrocytes in vivo Micronucleus test - Negative
- STOT-single exposure : Rats, mice, rabbits, such as the loss of an external stimulus appears reflections.
- STOT-repeated exposure : Rats, rabbits, mice, guinea pigs, monkeys and later only a weak reference to a Category 2 suppresses the central nervous system (really), the liver, the kidneys, the effects appear.
- Aspiration hazard : NO DATA

○ Calcium oxide
- Acute toxicity
  Oral : LD50 = 500 mg/kg Rat
  Dermal : NO DATA
  Inhalation : NO DATA
- Skin corrosion/irritation : non-irritating(rabbit), skin에 대해서 causticity
- Serious eye damage/irritation : Caustic eye on
- Respiratory sensitization : NO DATA
- Skin sensitization : Non-sensitize (human)
- Carcinogenicity
  IARC : NO DATA
  OSHA : NO DATA
  ACGIH : NO DATA
  NTP : NO DATA
  EU CLP : NO DATA
- Germ cell mutagenicity : ames test-Negative, Micronucleustest (Mouse)-Negative
- Reproductive toxicity : ames test-Negative, Micronucleustest (Mouse)-Negative
- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : Aspiration pneumonia have been reported from people

○ Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite
- Acute toxicity
  Oral : LD50 < 5000 mg/kg
  Dermal : NO DATA
  Inhalation : NO DATA
- Skin corrosion/irritation : not undergo a skin stimulus

- Serious eye damage/irritation : Moderately irritating to the eyes tinged
- Respiratory sensitization : NO DATA
- Skin sensitization : Not a skin sensitizer
- Carcinogenicity
  IARC : NO DATA
  OSHA : NO DATA
  ACGIH : NO DATA
  NTP : NO DATA
  EU CLP : NO DATA
- Germ cell mutagenicity : In vitro bacterial test Negativeresult In vivo chromosomal aberration test, micronucleus assayNegativeresult
- Reproductive toxicity : In vitro bacterial test Negativeresult In vivo chromosomal aberration test, micronucleus assayNegativeresult
- STOT-single exposure : Respiratory irritation
- STOT-repeated exposure : 28 days of oral exposure to rats increased kidney weight
- Aspiration hazard : NO DATA

○ Strontium oxide
- Acute toxicity
  Oral : NO DATA
  Dermal : NO DATA
  Inhalation : NO DATA
- Skin corrosion/irritation : NO DATA
- Serious eye damage/irritation : NO DATA
- Respiratory sensitization : NO DATA
- Skin sensitization : NO DATA
- Carcinogenicity
  IARC : NO DATA
  OSHA : NO DATA
  ACGIH : NO DATA
  NTP : NO DATA
  EU CLP : NO DATA
- Germ cell mutagenicity : NO DATA
- Reproductive toxicity : NO DATA
- STOT-single exposure : NO DATA
- STOT-repeated exposure : This risk may be increased by exposure to a case : Respiratory disorders
- Aspiration hazard : NO DATA

○ Silicon dioxide
- Acute toxicity
  Oral : LD50 = 3160 mg/kg Rat
  Dermal : NO DATA
  Inhalation : NO DATA
- Skin corrosion/irritation : NO DATA
- Serious eye damage/irritation : NO DATA
- Respiratory sensitization : NO DATA
- Skin sensitization : Not a skin sensitizer
- Carcinogenicity
  IARC : Group 3
  OSHA : NO DATA
  ACGIH : NO DATA
  NTP : NO DATA
  EU CLP : NO DATA
- Germ cell mutagenicity : NO DATA
- Reproductive toxicity : NO DATA
- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : NO DATA

○ Ethylbenzene
- Acute toxicity
  Oral : LD50 = 3500 mg/kg Rat
  Dermal : LD50 = 15400 mg/kg Rabbit
  Inhalation : Steam LC50 = 4000 ppm 4 hr Rat (Equivalents : 17.4 mg/L)
- Skin corrosion/irritation : skin Irritation test result weak Irritation
- Serious eye damage/irritation : Rabbit eye irritation test results in a slight conjunctival irritation, recoverable damage.
- Respiratory sensitization : NO DATA
- Skin sensitization : NO DATA
- Carcinogenicity
  IARC : Group 2B
  OSHA : NO DATA
  ACGIH : A3
  NTP : NO DATA
  EU CLP : NO DATA
- Germ cell mutagenicity : Micronucleustest Negative (7)
- Reproductive toxicity : Micronucleustest Negative (7)
- STOT-single exposure : It causes central nervous system effects in laboratory animals and airway irritation.
- STOT-repeated exposure : NO DATA
- Aspiration hazard : Hydrocarbons. Swallowing the liquid by aspiration may cause chemical pneumonia. Ties seongryul 0.74 mm2 / s (25 ℃)

○ Trade secret
- Acute toxicity
  Oral : NO DATA

Dermal : NO DATA
Inhalation : NO DATA
- Skin corrosion/irritation : NO DATA
- Serious eye damage/irritation : NO DATA
- Respiratory sensitization : NO DATA
- Skin sensitization : NO DATA
- Carcinogenicity
IARC : NO DATA
OSHA : NO DATA
ACGIH : NO DATA
NTP : NO DATA
EU CLP : NO DATA
- Germ cell mutagenicity : NO DATA
- Reproductive toxicity : NO DATA
- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : NO DATA

12. Ecological information

A. Ecotoxicity
○ Talc(Asbestos-free)
- Fish : LC50 > 100000 ㎎/ℓ 24 hr Brachydanio rerio
- Crustaceans : LC50 = 94983.781 ㎎/ℓ 48 hr
- Algae : LC50 = 48545.539 ㎎/ℓ
○ Quartz (SiO2)
- Fish : NO DATA
- Crustaceans : NO DATA
- Algae : NO DATA
○ 4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
- Fish : NO DATA
- Crustaceans : NO DATA
- Algae : NO DATA
○ Xylene
- Fish : NO DATA
- Crustaceans : NO DATA
- Algae : NO DATA
○ Rutile(TiO2)
- Fish : LC50 = 35.988 ㎎/ℓ 96 hr
- Crustaceans : LC50 = 39.180 ㎎/ℓ 48 hr
- Algae : EC50 = 24.821 ㎎/ℓ 96 hr
○ 4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane
- Fish : NO DATA
- Crustaceans : NO DATA
- Algae : NO DATA
○ n-Butyl alcohol
- Fish : LC50 > 100 ㎎/ℓ 96 hr
- Crustaceans : EC50 = 1983 ㎎/ℓ 48 hr
- Algae : EC50 = 28 ㎎/ℓ 48 hr
○ Solvent naphtha (petroleum), light arom.
- Fish : LC50 = 9.22 ㎎/ℓ 96 hr Oncorhynchus mykiss
- Crustaceans : EC50 = 6.14 ㎎/ℓ 48 hr Daphnia magna
- Algae : EC50 = 19 ㎎/ℓ 72 hr Selenastrum capricornutum
○ Propylene glycol methyl ether
- Fish : NO DATA
- Crustaceans : EC50 > 500 ㎎/ℓ 48 hr
- Algae : NO DATA
○ Calcium oxide
- Fish : LC50 = 1070 ㎎/ℓ 96 hr
- Crustaceans : NO DATA
- Algae : NO DATA
○ Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite
- Fish : LC50 = 500 ㎎/ℓ 96 hr Oncorhynchus mykiss
- Crustaceans : EC50 > 100 ㎎/ℓ 48 hr Daphnia magna
- Algae : NO DATA
○ Strontium oxide
- Fish : LC50 46.692 ㎎/ℓ 96 hr
- Crustaceans : LC50 50.832 ㎎/ℓ 48 hr
- Algae : EC50 32.203 ㎎/ℓ 96 hr
○ Silicon dioxide
- Fish : NO DATA
- Crustaceans : NO DATA
- Algae : NO DATA
○ Ethylbenzene
- Fish : LC50 = 9.09 ㎎/ℓ 96 hr
- Crustaceans : LC50 = 0.4 ㎎/ℓ 96 hr
- Algae : NO DATA
○ Trade secret
- Fish : NO DATA
- Crustaceans : NO DATA
- Algae : NO DATA

B. Persistence and degradability
○ Talc(Asbestos-free)
- Persistence : log Kow = -1.50
- Degradability : NO DATA
○ Quartz (SiO2)
- Persistence : NO DATA
- Degradability : NO DATA
○ 4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
- Persistence : NO DATA
- Degradability : NO DATA
○ Xylene
- Persistence : NO DATA
- Degradability : NO DATA
○ Rutile(TiO2)
- Persistence : NO DATA
- Degradability : NO DATA
○ 4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane
- Persistence : NO DATA
- Degradability : NO DATA
○ n-Butyl alcohol
- Persistence : NO DATA
- Degradability : NO DATA
○ Solvent naphtha (petroleum), light arom.
- Persistence : log Kow = 2.1 ~ 6 (Estimates)
- Degradability : BOD5/COD = 0.43
○ Propylene glycol methyl ether
- Persistence : NO DATA
- Degradability : NO DATA
○ Calcium oxide
- Persistence : NO DATA
- Degradability : NO DATA
○ Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite
- Persistence : NO DATA
- Degradability : NO DATA
○ Strontium oxide
- Persistence : NO DATA
- Degradability : NO DATA
○ Silicon dioxide
- Persistence : log Kow = 0.53
- Degradability : NO DATA
○ Ethylbenzene
- Persistence : NO DATA
- Degradability : NO DATA
○ Trade secret
- Persistence : NO DATA
- Degradability : NO DATA

C. Bioaccumulative potential
○ Talc(Asbestos-free)
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ Quartz (SiO2)
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ 4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ Xylene
- Bioaccumulative potential : NO DATA
- Biodegration : 39 (%)
○ Rutile(TiO2)
- Bioaccumulative potential : BCF = 10.38
- Biodegration : NO DATA
○ 4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ n-Butyl alcohol
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ Solvent naphtha (petroleum), light arom.
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ Propylene glycol methyl ether
- Bioaccumulative potential : BCF = 2
- Biodegration : Biodegradability = 90 (%) 29 day (Aerobic, industrial sewage, Easily decomposed)
○ Calcium oxide
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite

- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA

○ Strontium oxide
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA

○ Silicon dioxide
- Bioaccumulative potential : BCF = 3.162
- Biodegration : NO DATA

○ Ethylbenzene
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA

○ Trade secret
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA

D. Mobility in soil

○ Talc(Asbestos-free)
▷ NO DATA

○ Quartz (SiO2)
▷ NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
▷ NO DATA

○ Xylene
▷ log Kow = 3.12 (measured) (ortho), 3.2 (measured) (meta), 3.15 (measurements) (p) (5)

○ Rutile(TiO2)
▷ NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane
▷ NO DATA

○ n-Butyl alcohol
▷ NO DATA

○ Solvent naphtha (petroleum), light arom.
▷ NO DATA

○ Propylene glycol methyl ether
▷ NO DATA

○ Calcium oxide
▷ NO DATA

○ Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite
▷ NO DATA

○ Strontium oxide
▷ NO DATA

○ Silicon dioxide
▷ NO DATA

○ Ethylbenzene
▷ log Kow = 3.15 (11)

○ Trade secret
▷ NO DATA

E. Other adverse effects

○ Talc(Asbestos-free)
▷ NO DATA

○ Quartz (SiO2)
▷ NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
▷ NO DATA

○ Xylene
▷ NO DATA

○ Rutile(TiO2)
▷ NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane
▷ NO DATA

○ n-Butyl alcohol
▷ NO DATA

○ Solvent naphtha (petroleum), light arom.
▷ NO DATA

○ Propylene glycol methyl ether
▷ NO DATA

○ Calcium oxide
▷ NO DATA

○ Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite
▷ Shellfish NOEC : 7.6 ㎎/ℓ / 21days

○ Strontium oxide
▷ NO DATA

○ Silicon dioxide
▷ NO DATA

○ Ethylbenzene
▷ NO DATA

○ Trade secret
▷ NO DATA

13. Disposal considerations

A. Disposal methods : Disposal material should keep in the airtighted container, and consign according to Waste Mateial Management Act

B. Special precautions for disposal : Discard it followed by appropriate regulations Prohibit the unauthorized disposal and incineration due to adversely affect natural ecosystems

14. Transport information

A. UN number : 1263

B. Proper shipping name : Paint (including paint, lacquer, enamel, colorants, shellac solutions, varnish, polish, liquid filler and liquid lacquer sealer) or related materials (including paint diluent and reductant).

C. Hazard class : 3

D. Packing group : III

E. Marine pollutant : N/A

F. Special precautions for user related to transport or transportation measures
- ○ EmS FIRE SCHEDULE : F-E
- ○ EmS SPILLAGE SCHEDULE : S-E

15. Regulatory information

○ Talc(Asbestos-free)
- Information of EU Classification
  - ▷ Classification : NO DATA
  - ▷ Risk Phrases : NO DATA
  - ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  - ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  - ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  - ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  - ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  - ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Quartz (SiO2)
- Information of EU Classification
  - ▷ Classification : NO DATA
  - ▷ Risk Phrases : NO DATA
  - ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  - ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  - ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  - ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  - ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  - ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane]
- Information of EU Classification
  - ▷ Classification : NO DATA
  - ▷ Risk Phrases : NO DATA
  - ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  - ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  - ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  - ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  - ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  - ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Xylene
- Information of EU Classification
  - ▷ Classification : NO DATA
  - ▷ Risk Phrases : NO DATA
  - ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  - ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  - ▷ CERCLA Section 103 (40CFR302.4) : 45.3599 kg 100 lb
  - ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  - ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  - ▷ EPCRA Section 313 (40CFR372.65) : pertinent
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Rutile(TiO2)

- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ 4,4'-(1-Methylethylidene)bisphenol polymer with (chloromethyl)oxirane and methyloxirane
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : NO DATA
  ▷ CERCLA Section 103 (40CFR302.4) : NO DATA
  ▷ EPCRA Section 302 (40CFR355.30) : NO DATA
  ▷ EPCRA Section 304 (40CFR355.40) : NO DATA
  ▷ EPCRA Section 313 (40CFR372.65) : NO DATA
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ n-Butyl alcohol
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : 2267.995 kg 5000 lb
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : pertinent
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Solvent naphtha (petroleum), light arom.
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Propylene glycol methyl ether
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Calcium oxide
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA

- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with montmorillonite
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Strontium oxide
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Silicon dioxide
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : notapplicable
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : notapplicable
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Ethylbenzene
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : notapplicable
  ▷ CERCLA Section 103 (40CFR302.4) : 453.599 kg 1000 lb
  ▷ EPCRA Section 302 (40CFR355.30) : notapplicable
  ▷ EPCRA Section 304 (40CFR355.40) : notapplicable
  ▷ EPCRA Section 313 (40CFR372.65) : pertinent
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

○ Trade secret
- Information of EU Classification
  ▷ Classification : NO DATA
  ▷ Risk Phrases : NO DATA
  ▷ Safety Phrase : NO DATA
- U.S. Federal regulations
  ▷ OSHA PROCESS SAFETY (29CFR1910.119) : NO DATA
  ▷ CERCLA Section 103 (40CFR302.4) : NO DATA
  ▷ EPCRA Section 302 (40CFR355.30) : NO DATA
  ▷ EPCRA Section 304 (40CFR355.40) : NO DATA
  ▷ EPCRA Section 313 (40CFR372.65) : NO DATA
- Rotterdam Convention listed ingredients : NO DATA
- Stockholm Convention listed ingredients : NO DATA
- Montreal Protocol listed ingredients : NO DATA

16. Other information

A. Reference
This MSDS is based on 'Industrial safety and health' Act paragraph 41 and Proclamation of Ministry of Labor and Employment 2016-19, and considered domestic regulations.
This MSDS is based on KOSHA, NITE, ESIS, NLM, SIDS, IPCS, NCIS.

B. Issue date : 2014-01-23

C. Revision number and Last date revised : 2.(2019-04-04 오후 2:16:18)

D. Other : " WWW.NOROO.CO.KR"