MSDS_Number : No Data

1. Identification

A. Product name : NEW HARDNER PRIMER (HARDENER)
○ Usage category : No Data

B. Recommended Use and Restriction on Use
○ General use : Epoxy hardener
○ 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
Flammable liquids Category 3
Acute toxicity (dermal) Category 4
Acute toxicity (inhalation: vapor) Category 4
Serious eye damage/irritation Category 2A
Specific target organ toxicity(Single exposure) Category 3
Specific target organ toxicity(Repeated exposure) Category 1
Skin sensitization Category 1(1A, 1B)
Skin corrosion/irritation Category 2
Aspiration hazard Category 1
Ozone Layer Hazards

B. GHS label elements
○ Hazard symbols

○ Signal words : DANGER
○ Hazard statements :
H226 Flammable liquid and vapour
H312 Harmful in contact with skin
H332 Harmful if inhaled
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)
H317 May cause an allergic skin reaction
H315 Causes skin irritation
H304 May be fatal if swallowed and enters airways
H420 It destroys the upper layer of the ozone layer and is harmful to public health and environment.
○ Precautionary statements
- Prevention
P210 Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. no smoking
P223 Do not contact with water
P240 Ground container and receiving equipment
P241 Use explosion-proof equipment (electricity, ventilation, lighting, etc.)
P242 Use only non-sparking tools. Flammable liquids (chapter 2.6) 1, 2, 3
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P264 Wash hands and contact areas thoroughly after handling.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
- Response
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P321 Specific treatment
P362+P364 Take off contaminated clothing and wash before reuse.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P337+P313 If eye irritation persists, get medical attention / attention.

P314 Get medical advice/attention if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.

- Storage

P403+P235 Store in a well-ventilated place. Keep cool.
P403+P233 Store in a well-ventilated place. Keep container tightly closed
P405 Save by locking.

- Disposal

P501 Dispose of the contents and containers in accordance with waste-related laws.
P502 Please refer to the information on (recycling/recycling) provided by (manufacturer/supplier).

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

NFPA grade Chemical Name	Health	Flammability	Reactivity
Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine	2	1	0
Xylene	NO DATA	NO DATA	NO DATA
2-Propanol	2	3	0
Ethylbenzene	2	3	0
2,4,6-Tris[(dimethylamino)methyl]phenol	3	1	0
N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine	3	1	1

3. Composition/information on ingredients

Chemical Name	Trade names and Synonyms	CAS-NO	Content(%)
Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine	Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine	68082-29-1	46～56
Xylene	Xylene	1330-20-7	37～47
2-Propanol	2-Propanol	67-63-0	1～10
Ethylbenzene	Ethylbenzene	100-41-4	1～10
2,4,6-Tris[(dimethylamino)methyl]phenol	2,4,6-Tris[(dimethylamino)methyl]phenol	90-72-2	1～10
N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine	N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine	1760-24-3	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. If unconscious, do not induce vomiting. In case of vomiting, keep head down under hip to prevent lung inhalation. 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
○ Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

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

○ 2-Propanol
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

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

○ 2,4,6-Tris[(dimethylamino)methyl]phenol
- ACGIH : NO DATA
- Biological exposure indices : NO DATA

○ N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine
- 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 : 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(℃) : 25

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 : 0.90 ± 0.3

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
- ○ Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine
  - 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
- ○ Xylene
  - Acute toxicity
    - Oral : LD50=3550 mg/kg rat
    - Dermal : LD50 4350 ㎎/㎏ Rabbit
    - Inhalation : LD50 4350 ㎎/㎏ 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.
- ○ 2-Propanol

- Acute toxicity
  Oral : LD50 = 4710mg/kg Rat
  Dermal : LD50 = 12870 mg/kg rabbit
  Inhalation : LD50 = 12870 mg/kg rabbit
- Skin corrosion/irritation : (using rabbit) skin Irritation test result weak Irritation and in people non-irritating
- Serious eye damage/irritation : The rabbit eye irritation test results of weak or too irritating impartial
- Respiratory sensitization : NO DATA
- Skin sensitization : Guinea pig test results negative
- Carcinogenicity
  IARC : Group 3
  OSHA : NO DATA
  ACGIH : A4
  NTP : NO DATA
  EU CLP : NO DATA
- Germ cell mutagenicity : (Using mouse bone marrow cells)Micronucleus test - Negative
- Reproductive toxicity : (Using mouse bone marrow cells)Micronucleus test - Negative
- STOT-single exposure : By inhalation exposure in rats decreased the activity is displayed. Stimulation of the digestive tract in humans during acute intoxication, blood pressure, body temperature, such as depression, central nervous system symptoms, renal failure appears.
- STOT-repeated exposure : In mice it was 4 gaewol inhalation exposure experiment reported that the effect on the blood vessels, liver, spleen, kidneys and may impact on the anesthetic action is recognized
- Aspiration hazard : Test mice when administered within 24 hours of the spectacle of death from cardiopulmonary arrest is recognized, an

○ 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 ℃)

○ 2,4,6-Tris[(dimethylamino)methyl]phenol
- Acute toxicity
  Oral : LD50 = 1200 mg/kg Rat
  Dermal : LD50 = 1280 mg/kg Rat
  Inhalation : LD50 = 1280 mg/kg Rat
- Skin corrosion/irritation : severe stimulus
- Serious eye damage/irritation : 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 : NO DATA
- Reproductive toxicity : NO DATA
- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : NO DATA

○ N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine
- Acute toxicity
  Oral : LD50 = 2400 mg/kg Rat
  Dermal : LD50 = 16000 mg/kg Rabbit
  Inhalation : LD50 = 16000 mg/kg Rabbit
- Skin corrosion/irritation : non-stimulus: 24, 48, 72H erythema score of 1.5 or less after
- Serious eye damage/irritation : Stimulus that: observed average (24 +48 +72 hrs) chemosis 3.0, enanthema 2.5, congestion 1.0, opacity 2.0
- Respiratory sensitization : NO DATA
- Skin sensitization : Sensitive
- Carcinogenicity
  IARC : NO DATA
  OSHA : NO DATA
  ACGIH : NO DATA
  NTP : NO DATA
  EU CLP : NO DATA

- Germ cell mutagenicity : ames test:Negative density >5000 ug/plate HGPRT assay : Negative CHO cells : S9- : 0.1-4.0 mg/ml, S9+ : 2.0-5.0 mg/ml Sister-Chromatid test : Negative, CHO cells : 1.5 to 4.0 mg/ml without S9 activation; 1.0 to 3.5 mg/ml with S9 activation 소핵시험 :음성Mouse(Swiss
- Reproductive toxicity : NOAEL=500 mg/kg bw/day
- STOT-single exposure : NO DATA
- STOT-repeated exposure : Rat: NOEAL 500mg/kg, 0, 25, 125, and 500 mg / kg / day, 28 days exposure period without any effect.
- Aspiration hazard : NO DATA

12. Ecological information

A. Ecotoxicity
○ Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine
- Fish : NO DATA
- Crustaceans : NO DATA
- Algae : NO DATA
○ Xylene
- Fish : NO DATA
- Crustaceans : NO DATA
- Algae : NO DATA
○ 2-Propanol
- Fish : LC50 > 100 ㎎/ℓ 96 hr
- Crustaceans : NO DATA
- Algae : EC50 = 2.2 ㎎/ℓ 96 hr
○ Ethylbenzene
- Fish : LC50 = 9.09 ㎎/ℓ 96 hr
- Crustaceans : LC50 = 0.4 ㎎/ℓ 96 hr
- Algae : NO DATA
○ 2,4,6-Tris[(dimethylamino)methyl]phenol
- Fish : LC50 = 447.821 ㎎/ℓ 96 hr
- Crustaceans : LC50 = 28.198 ㎎/ℓ 48 hr
- Algae : EC50 = 34.812 ㎎/ℓ 96 hr
○ N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine
- Fish : LC50 = 200 ㎎/ℓ 96 hr Lepomis macrochirus
- Crustaceans : EC50 = 90 ㎎/ℓ 48 hr Daphnia magna
- Algae : EC50 = 8.8 ㎎/ℓ 72 hr Selenastrum capricornutum

B. Persistence and degradability
○ Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine
- Persistence : NO DATA
- Degradability : NO DATA
○ Xylene
- Persistence : NO DATA
- Degradability : NO DATA
○ 2-Propanol
- Persistence : NO DATA
- Degradability : NO DATA
○ Ethylbenzene
- Persistence : NO DATA
- Degradability : NO DATA
○ 2,4,6-Tris[(dimethylamino)methyl]phenol
- Persistence : log Kow = 0.77
- Degradability : NO DATA
○ N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine
- Persistence : log Kow = -1.67 (Estimates)
- Degradability : NO DATA

C. Bioaccumulative potential
○ Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ Xylene
- Bioaccumulative potential : NO DATA
- Biodegration : 39 (%)
○ 2-Propanol
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ Ethylbenzene
- Bioaccumulative potential : NO DATA
- Biodegration : NO DATA
○ 2,4,6-Tris[(dimethylamino)methyl]phenol
- Bioaccumulative potential : BCF = 3.162
- Biodegration : NO DATA
○ N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine
- Bioaccumulative potential : NO DATA
- Biodegration : Biodegradability = 39 (%) 28 day

D. Mobility in soil
○ Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine
▷ NO DATA
○ Xylene
▷ log Kow = 3.12 (measured) (ortho), 3.2 (measured) (meta), 3.15 (measurements) (p) (5)
○ 2-Propanol

▷ NO DATA
○ Ethylbenzene
▷ log Kow = 3.15 (11)
○ 2,4,6-Tris[(dimethylamino)methyl]phenol
▷ NO DATA
○ N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine
▷ NO DATA

E. Other adverse effects
○ Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine
▷ NO DATA
○ Xylene
▷ NO DATA
○ 2-Propanol
▷ NO DATA
○ Ethylbenzene
▷ NO DATA
○ 2,4,6-Tris[(dimethylamino)methyl]phenol
▷ NO DATA
○ N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine
▷ 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

○ Fatty acids, (C=18)-unsatd., dimers polymers with tall oil fatty acids and triethylenetetramine
- 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

○ 2-Propanol
- 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) : pertinent
- 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

○ 2,4,6-Tris[(dimethylamino)methyl]phenol
- 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

○ N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine
- 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

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 : 2021-01-13

C. Revision number and Last date revised : 5. 2021-01-13

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