

1. Identification

- A. Product name : REMOVER (DO-A-251B)
○ Usage category : Paint remover
- B. Recommended Use and Restriction on Use
○ General use : REMOVER
○ 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
Reproductive toxicity Category 1B
Serious eye damage/irritation Category 1
Serious eye damage/irritation Category 2A
Specific target organ toxicity(Single exposure) Category 1
Specific target organ toxicity(Single exposure) Category 3 (respiratory irritation)
Specific target organ toxicity(Repeated exposure) Category 2
Skin corrosion/irritation Category 2
Ozone Layer Hazards

- B. GHS label elements
○ Hazard symbols



- Signal words : DANGER
- Hazard statements :
- H226 Flammable liquid and vapour
 - H360 May damage fertility or the unborn child
 - H318 Causes serious eye damage
 - H319 Causes serious eye irritation
 - H370 Causes damage to organs: central nervous system (CNS), gastrointestinal tract(Refer Section SDS 11)
 - H335+H336 May cause respiratory irritation, May cause drowsiness and dizziness.
 - H373 Prolonged or repeated exposure may cause damage to the liver, testes, skin, respiratory system, blood and central nervous system of the body (Refer Section SDS 11)
 - H315 Causes skin irritation
 - 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.
 - P201 Obtain special instructions before use.
 - P202 Do not handle until all safety precautions have been read and understood.
 - P264 Wash hands and contact areas thoroughly after handling.
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P271 Use only outdoors or in a well-ventilated area.
 - 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).
 - P308+P313 If exposed or concerned: Get medical advice / attention.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P310 Immediately call a POISON CENTER or doctor/physician.
 - P337+P313 If eye irritation persists, get medical attention / attention.
 - P308+P311 If exposed or concerned: Get medical advice / attention.
 - P321 Specific treatment
 - 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.

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+P364 Take off contaminated clothing and wash before reuse.

- Storage

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Save by locking.

P403+P233 Store in a well-ventilated place. Keep container tightly closed

- 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)

Chemical Name	NFPA grade	Health	Flammability	Reactivity	GHS Classification
Methylene chloride		2	1	0	H315, H319, H335+H336, H370, H373
Methanol		1	3	0	H360, H370
Toluene		2	3	0	H315, H319, H335+H336, H370, H373
Ammonium hydroxide		3	0	0	H315, H318, H319
Cellulose, 2-hydroxypropyl methyl ester		1	1	0	NO DATA
1,2-Ethanediol		2	1	0	H315, H319, H335+H336, H373
Paraffin waxes (petroleum), hydrotreated		1	1	0	H373

3. Composition/information on ingredients

Chemical Name	Trade names and Synonyms	CAS-NO	Content(%)
Methylene chloride	Methylene chloride	75-09-2	72~82
Methanol	Methanol	67-56-1	9~19
Toluene	Toluene	108-88-3	6~16
Ammonium hydroxide	Ammonium hydroxide	1336-21-6	1~10
Cellulose, 2-hydroxypropyl methyl ester	Cellulose, 2-hydroxypropyl methyl ester	9004-65-3	1~10
1,2-Ethanediol	1,2-Ethanediol	107-21-1	1~10
Paraffin waxes (petroleum), hydrotreated	Paraffin waxes (petroleum), hydrotreated	64742-51-4	1~10

4. First-aid measures

A. Eye Contact : Flush exposed eyes with plenty of water for more than 15minutes.

If irritation, pain, swelling, tears or glaring happens, take medical assistant immediately

B. Skin Contact : Remove exposed clothing, and wash off exposed area with soap and water.

If symptoms like irritation or pain occurs, take medical assistant immediately.

Wash off with soap and water for more than 15 minutes. And take medical assistant immediately.

C. Inhalation : Avoid from exposure, and move into an area with fresh air.

If not breathing, perform the artificial respiration.

If inhaled or swallowed, do not perform the inhalation phase of breathing

Perform the artificial respiration, using the pocket mask with one way valves or other respiratory medical devices.

If hard to breathe, administering oxygen

Remove contaminated clothing and shoes, and isolate it.

Take a medical assistant immediately.

D. Ingestion Contact : Inducing vomit.

If unconscious, do not induce vomiting. In case of vomiting, keep head down under hip to prevent lung inhalation.

If ingested large quantity, take medical assistant.

Take proper medical assistant by symptoms.

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

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 : Avoid digestion using direct water.

○ Case of big fire : Spread large amount of the extinguishing agent as a mist form with staying against wind.

Stay away more than 800m to avoid tank explosion.

Use appropriate protective device depend on the situation.

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 : Use appropriate extinguishing agents to catch fire.
If there is no risk, moving containers away from fire.
Cooling containers with water long time after extinguish fire.
Block the area except for the fire-suppression personnel.

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 : Take an action to block the leakage if there is no risk.
Spray water to reduce amount of steam.
Do work with the personal protected devices such as gas mask for organic gases other appropriate protective devices / clothing / gloves.
Do not contact on the bare skin
- B. Environmental precautions
 - Atmosphere : Do install the local ventilations and full ventilation system
Using local ventilation to Minimize the exposure to worker.
 - Soil : Trap spilled material at bottom in deep water pockets, excavated holding areas or within sand bag barriers.
Use absorbent to collect the appropriate container.
 - Under water : Use absorbent to collect the appropriate container.
Collect spilled material with mechanic devices
- C. Methods and materials for containment and cleaning up
 - Small spill : Absorb for use sand or other non-combustible material.
Move to appropriate container for disposal of spilled material collected.
 - Large spill : Prohibit access of unnecessary people, isolate hazard area to secure.
Notify to central and local government, when emissions are above regulation.

7. Handling and storage

- A. Precautions for safe handling : Keep or handle followed by Dangerous goods Safety Management Act
Ground for preventing the static discharge
Seal the container for minimizing the petroleum steam
Use local ventilations and a full ventilation system when handling
- B. Conditions for safe storage, including any incompatibilities : Because of evaporation and contamination concerns, airtight the container and store in a well-ventilated building.
Avoid direct sunlight while storing outdoor.
Storage temperature: 5 ~ 35 °C
Avoid strong oxidizing agents, acid.
Stored in an isolated place, freezing caution, high temperature body caution.

8. Exposure controls/personal protection

- A. Exposure Limits
 - Methylene chloride
 - ACGIH : NO DATA
 - Biological exposure indices : 尿中 Dichloromethane : 0.3 mg/L (工作后)
 - Methanol
 - ACGIH : NO DATA
 - Biological exposure indices : 尿中 : Methanol 15 mg/L (工作后)
 - Toluene
 - ACGIH : NO DATA
 - Biological exposure indices : 血液中 Toluene : 0.02 mg/L(工作前), 尿中 Toluene : 0.03 mg/L(工作后), 尿中(with hydrolysis) o-Cresol : 0.3 mg/g creatinine(工作后)
 - Ammonium hydroxide
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - Cellulose, 2-hydroxypropyl methyl ester
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - 1,2-Ethanediol
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - Paraffin waxes (petroleum), hydrotreated
 - 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 : Respirators should be authorized by Korea Occupational Safety and Health Agency
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.

○ Eye protection : Use the respirator for organic solvent or higher level.

Install washing facilities and an emergency washing facilities close to workplace.

Let workers do wear the safety glasses in case hazard caused by mist may be expected.

○ Hand protection : 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.

Wear the chemical protective gloves

○ Skin protection : 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.

Wear appropriate chemical protective clothing.

9. Physical and chemical properties

A. Appearance : 불투명액상

B. Odor : 유기용제

C. Odor threshold : NO DATA

D. PH : 10~12

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

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

G. Flash point(℃) : 30

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 DATA

M. Vapour density : NO DATA

N. Specific gravity : 1.16 ± 0.3

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

P. Autoignition temperature(℃) : 400

Q. Decomposition temperature(℃) : NO DATA

R. Viscosity : 10~50 POISE

S. Molecular weight : NO DATA

10. Stability and reactivity

A. Chemical stability : NO DATA

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

C. Conditions to avoid : Oxidation agent, metal and combustible 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

○ Methylene chloride

- Acute toxicity

Oral : LD50 = 1600 mg/kg Rat

Dermal : NO DATA

Inhalation : NO DATA

- Skin corrosion/irritation : (using rabbit) skin Irritation test result middle의 stimulus

- Serious eye damage/irritation : Using the rabbit eye irritation test results -Also causes inflammation of the courtyard

- Respiratory sensitization : NO DATA

- Skin sensitization : NO DATA

- Carcinogenicity

IARC : Group 2B

OSHA : Applicable

ACGIH : A3

NTP : R

EU CLP : Carc.2

- Germ cell mutagenicity : Dominant lethaltest Negative, Micronucleustest Negative, Chromosomal abnormalitiestest Negative

- Reproductive toxicity : Dominant lethaltest Negative, Micronucleustest Negative, Chromosomal abnormalitiestest

Negative

- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : NO DATA

○ Methanol

- Acute toxicity
 - Oral : LD50 6200 mg/kg Rat
 - Dermal : LD50 15800 mg/kg rabbit
 - Inhalation : LD50 15800 mg/kg rabbit
- Skin corrosion/irritation : NO DATA
- Serious eye damage/irritation : The severity of eye irritation and is recognized in experiments with rabbits, people with corneal disorder, conjunctival edema may be robbery EHC 196 (1997) PATTY (4th, 1994),
- 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 : Mouse erythrocyte micronucleus test negative
- Reproductive toxicity : Mouse erythrocyte micronucleus test negative
- STOT-single exposure : Long-term exposure to low concentrations of methanol in human noticeable symptoms appear impaired on a wide range of eye chronic toxic effects of methanol blindness caused by exposure appear in the result obtained.
- STOT-repeated exposure : NO DATA
- Aspiration hazard : NO DATA

○ Toluene

- Acute toxicity
 - Oral : rat LD50=2600 mg/kg
 - Dermal : rabbit LD50=12,000 mg/kg
 - Inhalation : rabbit LD50=12,000 mg/kg
- Skin corrosion/irritation : Rabbit skin irritation test using the results of the Causes moderate irritation.
- Serious eye damage/irritation : Eyes irritant test using a rabbit raised for 6 days reversible irritation.
- Respiratory sensitization : NO DATA
- Skin sensitization : Tests with negative results Guinea
- Carcinogenicity
 - IARC : Group 3
 - OSHA : NO DATA
 - ACGIH : A4
 - NTP : NO DATA
 - EU CLP : NO DATA
- Germ cell mutagenicity : Dominant lethal test negative, positive micronucleus test, chromosome aberration test positive
- Reproductive toxicity : Dominant lethal test negative, positive micronucleus test, chromosome aberration test positive
- STOT-single exposure : Causes acts on the central nervous system in humans, fatigue, drowsiness, dizziness, respiratory irritation, agitation, vomiting, central nervous system depression, confusion, gait abnormalities. Eyes, nose, causing irritation of the throat. In experimental animals
- STOT-repeated exposure : Headaches accompanied by people from hearing loss or visual field constriction, or nystagmus, tremor, ataxia, loss of memory, such as chronic central nervous system disorder that appears. Noewichuk is observed. It appears kidney dysfunction such as hematuria or pro
- Aspiration hazard : NO DATA

○ Ammonium hydroxide

- Acute toxicity
 - Oral : LD50 = 350 mg/kg Rat
 - Dermal : NO DATA
 - Inhalation : NO DATA
- Skin corrosion/irritation : NO DATA
- Serious eye damage/irritation : Severe irritation(1mg, 30sec, rabbit), Severe irritation(250ug, rabbit), Severe irritation(44ug, rabbit)
- 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

○ Cellulose, 2-hydroxypropyl methyl ester

- Acute toxicity
 - Oral : LD50 > 10000 mg/kg
 - 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
- 1,2-Ethanediol
 - Acute toxicity
 - Oral : LD50 = 4000 mg/kg Rat
 - Dermal : LD50 = 10600 mg/kg Rabbit
 - Inhalation : LD50 = 10600 mg/kg Rabbit
 - Skin corrosion/irritation : rabbit, guinea pig skin Irritation test result weak Irritation in
 - Serious eye damage/irritation : Rabbit eye irritation test results in a short time to expose the cornea does not involve permanent injury conjunctival irritation.
 - Respiratory sensitization : NO DATA
 - Skin sensitization : Non-sensitize (human)
 - Carcinogenicity
 - IARC : NO DATA
 - OSHA : NO DATA
 - ACGIH : A4
 - NTP : NO DATA
 - EU CLP : NO DATA
 - Germ cell mutagenicity : Rats Dominant lethalttest Negative, Chromosomal abnormalitiestest Negative, Micronucleustest Negative
 - Reproductive toxicity : Continuous breeding of mice tested, teratogenic in rats is not toxic to the test in the mother affects the capacity of fetal animals (malformations, delayed ossification, coccyx Tue) appears.
 - STOT-single exposure : Consciousness in human disorders, convulsions, stupor state is shown, the elements in the blood of nitrogen, creatinine and uric acid increased, proteinuria and hematuria, pulmonary congestion appear.
 - STOT-repeated exposure : Loss of consciousness in man, nystagmus, appears mild headaches and back pain, the irritation. In experimental animals the lungs and heart Appears inflammatory changes.
 - Aspiration hazard : NO DATA
- Paraffin waxes (petroleum), hydrotreated
 - Acute toxicity
 - Oral : LD50 > 3750 mg/kg Rat
 - Dermal : LD50 > 3600 mg/kg Rat
 - Inhalation : LD50 > 3600 mg/kg Rat
 - Skin corrosion/irritation : rabbit/skin: non-irritating 사람/skin: non-irritating
 - Serious eye damage/irritation : Rabbit /eyes: Mild irritant
 - 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 : Daily oral exposure for 90 days in accordance with GLP 1.8, 18.5, 185, 1850mg / kg, the highest in high concentrations mesenteric lymphocytes, liver, and spleen weight is significantly increased. Tissue necrosis in the lymphocytes are observed at all concentrations
 - Aspiration hazard : NO DATA

12. Ecological information

A. Ecotoxicity

- Methylene chloride
 - Fish : LC50 = 5.2 mg/ℓ 72 hr
 - Crustaceans : EC50 = 1682 mg/ℓ 48 hr
 - Algae : NO DATA
- Methanol
 - Fish : LC50 15400 mg/ℓ 96 hr *Lepomis macrochirus*
 - Crustaceans : LD50 > 100 mg/ℓ 96 hr *Daphnia magna*
 - Algae : NO DATA
- Toluene
 - Fish : LC50 24 mg/ℓ 96 hr *Oncorhynchus mykiss*
 - Crustaceans : EC50 11.5 mg/ℓ 48 hr *Daphnia magna*
 - Algae : NO DATA
- Ammonium hydroxide
 - Fish : LC50 = 15 mg/ℓ 96 hr
 - Crustaceans : NO DATA
 - Algae : NO DATA
- Cellulose, 2-hydroxypropyl methyl ester

- Fish : LC50 = 2540000000 mg/ℓ 96 hr
 - Crustaceans : EC50 = 1640000000 mg/ℓ 48 hr
 - Algae : EC50 = 675000000 mg/ℓ 96 hr
 - ☐ 1,2-Ethanediol
 - Fish : LC50 = 8050 mg/ℓ 96 hr Pimephales promelas
 - Crustaceans : LC50 = 41100 mg/ℓ 48 hr Daphnia magna
 - Algae : EC50 = 6500 ~ 13000 mg/ℓ 96 hr Selenastrum capricornutum
 - ☐ Paraffin waxes (petroleum), hydrotreated
 - Fish : LC50 = 0.0000447 mg/ℓ 96 hr
 - Crustaceans : LC50 = 0.0000842 mg/ℓ 48 hr
 - Algae : EC50 = 0.0000842 mg/ℓ 96 hr
- B. Persistence and degradability
- ☐ Methylene chloride
 - Persistence : NO DATA
 - Degradability : NO DATA
 - ☐ Methanol
 - Persistence : log Kow -0.77
 - Degradability : NO DATA
 - ☐ Toluene
 - Persistence : log Kow 2.73
 - Degradability : NO DATA
 - ☐ Ammonium hydroxide
 - Persistence : NO DATA
 - Degradability : NO DATA
 - ☐ Cellulose, 2-hydroxypropyl methyl ester
 - Persistence : log Kow = -5.30
 - Degradability : NO DATA
 - ☐ 1,2-Ethanediol
 - Persistence : log Kow = -1.93
 - Degradability : BOD = 0.78 COD = 1.19 BOD = 5/COD = = 0.66
 - ☐ Paraffin waxes (petroleum), hydrotreated
 - Persistence : log Kow > 6 (>6)
 - Degradability : NO DATA
- C. Bioaccumulative potential
- ☐ Methylene chloride
 - Bioaccumulative potential : BCF = 40
 - Biodegradation : Biodegradability = 13 (%)
 - ☐ Methanol
 - Bioaccumulative potential : NO DATA
 - Biodegradation : NO DATA
 - ☐ Toluene
 - Bioaccumulative potential : NO DATA
 - Biodegradation : 86 (%) 20 day
 - ☐ Ammonium hydroxide
 - Bioaccumulative potential : NO DATA
 - Biodegradation : NO DATA
 - ☐ Cellulose, 2-hydroxypropyl methyl ester
 - Bioaccumulative potential : BCF = 3.162
 - Biodegradation : NO DATA
 - ☐ 1,2-Ethanediol
 - Bioaccumulative potential : BCF = 200
 - Biodegradation : Biodegradability = 89 (%) 20 day
 - ☐ Paraffin waxes (petroleum), hydrotreated
 - Bioaccumulative potential : NO DATA
 - Biodegradation : Biodegradability = 21 (%) 28 day
- D. Mobility in soil
- ☐ Methylene chloride
 - ▷ NO DATA
 - ☐ Methanol
 - ▷ NO DATA
 - ☐ Toluene
 - ▷ NO DATA
 - ☐ Ammonium hydroxide
 - ▷ NO DATA
 - ☐ Cellulose, 2-hydroxypropyl methyl ester
 - ▷ NO DATA
 - ☐ 1,2-Ethanediol
 - ▷ NO DATA
 - ☐ Paraffin waxes (petroleum), hydrotreated
 - ▷ NO DATA
- E. Other adverse effects
- ☐ Methylene chloride
 - ▷ NO DATA
 - ☐ Methanol
 - ▷ NO DATA
 - ☐ Toluene
 - ▷ NO DATA
 - ☐ Ammonium hydroxide
 - ▷ NO DATA

- ☐ Cellulose, 2-hydroxypropyl methyl ester
 - ▷ NO DATA
- ☐ 1,2-Ethenediol
 - ▷ NO DATA
- ☐ Paraffin waxes (petroleum), hydrotreated
 - ▷ NO DATA

13. Disposal considerations

- A. Disposal methods : Disposal material should keep in the airtight container, and consign according to Waste Material Management Act
- B. Special precautions for disposal : Prohibit the unauthorized disposal and incineration due to adversely affect natural ecosystems
Discard it followed by appropriate regulations

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

- ☐ Methylene chloride
 - 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
- ☐ Methanol
 - 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
- ☐ Toluene
 - 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
- ☐ Ammonium hydroxide
 - 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
- Cellulose, 2-hydroxypropyl methyl ester
 - 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
- 1,2-Ethanediol
 - 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
- Paraffin waxes (petroleum), hydrotreated
 - 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

- 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 : 1997-03-11

C. Revision number and Last date revised : 4.(2022-07-25)

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