

1. Identification

- A. Product name : PROTECH PT-3000 HIGH BUILD A
 - Usage category : No Data
- B. Recommended Use and Restriction on Use
 - General use : Polyaspartic Coating
 - 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
 - Acute toxicity (oral) Category 4
 - Acute toxicity (inhalation: vapor) Category 1
 - Carcinogenicity Category 1B
 - Germ cell mutagenicity Category 1B
 - Chronic aquatic toxicity Category 3
 - Skin sensitization Category 1
 - Acute toxicity (dermal) Category 5

B. GHS label elements

- Hazard symbols



- Signal words : DANGER
- Hazard statements :
 - H302 Harmful if swallowed
 - H330 Fatal if inhaled
 - H350 May cause cancer
 - H340 May cause genetic defects
 - H412 Harmful to aquatic life with long lasting effects
 - H317 May cause an allergic skin reaction
 - H313 May be harmful in contact with skin.
- Precautionary statements
 - Prevention
 - P264 Wash hands and contact areas thoroughly after handling.
 - P270 Do not eat, drink or smoke when using this product.
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 - P271 Use only outdoors or in a well-ventilated area.
 - P284 (In case of poor ventilation) Wear respiratory protection.
 - P201 Obtain special instructions before use.
 - P202 Do not handle until all safety precautions have been read and understood.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P273 Avoid release to the environment.
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P272 Contaminated work clothing should not be allowed out of the workplace.
 - Response
 - P301+P312 If swallowed: If you feel unwell, get medical help.
 - P330 Rinse mouth.
 - P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P310 Immediately call a POISON CENTER or doctor/physician.
 - P320 Specific treatment
 - P308+P313 If exposed or concerned: Get medical advice / attention.
 - P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 - P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 - P321 Specific treatment
 - P362+P364 Take off contaminated clothing and wash before reuse.
 - P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 - Storage
 - 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.

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

Chemical Name	NFPA-grade	Health	Flammability	Reactivity

Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)	NO DATA	NO DATA	NO DATA
1,4-Butanediol	1	1	0
2-Butenedioic acid (E)-, diethyl ester	1	1	0
4,4-Dimethyl-1,3-oxazolidine	2	2	0
Distillates (petroleum), hydrotreated light	1	2	0
Solvent naphtha (petroleum), light arom.	1	2	0

3. Composition/information on ingredients

Chemical Name	Trade names and Synonyms	CAS-NO	Content(%)
Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)	Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)	136210-30-5	89
1,4-Butanediol	1,4-Butanediol	110-63-4	2
2-Butenedioic acid (E)-, diethyl ester	2-Butenedioic acid (E)-, diethyl ester	623-91-6	2
4,4-Dimethyl-1,3-oxazolidine	4,4-Dimethyl-1,3-oxazolidine	51200-87-4	2
Distillates (petroleum), hydrotreated light	Distillates (petroleum), hydrotreated light	64742-47-8	1
Solvent naphtha (petroleum), light arom.	Solvent naphtha (petroleum), light arom.	64742-95-6	4

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
Do not rub your eyes.
If you wear a contact lenses, remove them first.
- 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.
If symptoms like redness or irritation occurs, take medical assistant immediately.
Wash carefully after handling.
Wear gloves while washing the patient and avoid contact with exposed clothes.
- 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
Flush mouth with water immediately.
- 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.
 Avoid use waterjet as fire extinguishing agent.
 Avoid extinguishing fire with halogenting agent.
 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
 Irritating and highly toxic gases may produced during the combustion by pyrolysis or combustion itself.
 Fire and Explosion danger : Risk of medium-sized fire.
 Aqueous (Exclude water-soluble one) products does not have risk of fire or explosion hazard by itself.
 Vapor may be released to the ignition source and ignited.
 May form explosive mixture at or above ignition point
 Container may explode when heating
 Leakages may fire / explosion hazard and could be easily ignited by heat, sparks or flames.
 Vapors may explode indoors, outdoors, and in drains
- 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.
 Protect others from access and prohibit access to dangerous areas.
 Tell the fire department, location of the fire and the hazardous features.

Use an unmanned fire extinguishing device, in case of large-sized fire. If not, leave it to burn.
Avoid inhalation of the substance or combustion products.
Do not approach if the tank is on 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 : 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
Wash carefully after handling.
Avoid contact with prohibited materials in mixture.
Do not handle until read and understood all safety precautions.
Do not inhale vapor for long-term or repeatedly.
Avoid contact with heat, sparks, flames or other sources of ignition.
Do not take contaminated clothings away from the work area.
Storing with combustibile substances such as stained clothes or paper may cause fire by spontaneous ignition. Thus do not stack it, and keep it in a non-flammable container with cap filled with water and dispose it.
- 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.
Storage temperature: 5 ~ 15 °C
Storage temperature: 15 ~ 25 °C
Storage temperature: 25 ~ 35 °C
Store in a cool, dry, well-ventilated area.
Check periodically for leaks
Store in accordance with all current law and regulations.
Store in original container only.
Prevent static electricity and do not store near heat sources.
Collect in an airtight container to dispose.
Store away from waterworks and sewers.

8. Exposure controls/personal protection

- A. Exposure Limits
- Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - 1,4-Butanediol
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - 2-Butenedioic acid (E)-, diethyl ester
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - 4,4-Dimethyl-1,3-oxazolidine
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - Distillates (petroleum), hydrotreated light
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - Solvent naphtha (petroleum), light arom.
 - 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.
Consider warning properties before use.
Respiratory protection may be needed, while frequent use or heavy exposure.
Respiratory protection is ranked in order from minimum to maximum
If there is possibility of direct contact or exposure to these substances should wear a authorized dust-proof mask or respirator for organic compounds
- 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.
If there is possibility of direct contact or exposure to these substances should wear authorized safty glasses or mask.
- 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
Wear appropriate protective gloves
If there is possibility of direct contact or exposure to these substances should wear authorized safety gloves for chemicals.
- 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.
Wear cleanroom garment or appropriate protective clothing to prevent contamination
If there is a possibility of direct contact or exposure to the substance Wear protective clothing for chemical substances

9. Physical and chemical properties

- A. Appearance : light yellow liquid
- B. Odor : Specific Order
- C. Odor threshold : NO DATA
- D. PH : NO DATA
- E. Melting point/Freezing point(°C) : NO DATA
- F. Initial Boiling Point/Boiling Ranges(°C) : NO DATA
- G. Flash point(°C) : 97.2
- H. Evaporating Rate : NO DATA
- I. Flammability(solid, gas)(°C) : 97.2
- 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 : 1.03 ± 0.3
- O. Partition coefficient of n-octanol/water : NO DATA
- P. Autoignition temperature(°C) : NO DATA
- Q. Decomposition temperature(°C) : NO DATA
- R. Viscosity : 500 ± 200 CPS
- 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 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
 - Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)
 - 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
 - 1,4-Butanediol
 - Acute toxicity
 - Oral : LD50 = 1500 mg/kg Rat
 - Dermal : LD50 > 5000 mg/kg Rat
 - Inhalation : LD50 > 5000 mg/kg Rat
 - Skin corrosion/irritation : rabbit middle irritant
 - Serious eye damage/irritation : Light irritation rabbit
 - Respiratory sensitization : NO DATA
 - Skin sensitization : Guinea pig / no response
 - Carcinogenicity
 - IARC : NO DATA
 - OSHA : NO DATA
 - ACGIH : NO DATA
 - NTP : NO DATA
 - EU CLP : NO DATA
 - Germ cell mutagenicity : in vitro/Negative, in vivo/Negative
 - Reproductive toxicity : in vitro/Negative, in vivo/Negative
 - STOT-single exposure : NO DATA
 - STOT-repeated exposure : Rat / No major symptoms
 - Aspiration hazard : NO DATA
 - 2-Butenedioic acid (E)-, diethyl ester
 - Acute toxicity
 - Oral : LD50 1367 mg/kg Rat (female, 1500-2000 mg/kg (male))
 - Dermal : LD50 3560 mg/kg rabbit
 - Inhalation : LD50 3560 mg/kg 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 : Repeated toxicity NOEL ≤ 11mg/kg/day
 - Aspiration hazard : NO DATA
 - 4,4-Dimethyl-1,3-oxazolidine
 - Acute toxicity
 - Oral : LD50 950 mg/kg Rat
 - Dermal : LD50 1400 mg/kg rabbit
 - Inhalation : LD50 1400 mg/kg 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 : Mutagenicity Studies: 양성
 - Reproductive toxicity : Mutagenicity Studies: 양성
 - STOT-single exposure : NO DATA
 - STOT-repeated exposure : NO DATA

- Aspiration hazard : NO DATA
- Distillates (petroleum), hydrotreated light
 - Acute toxicity
 - Oral : LD50 > 15000 mg/kg Rat
 - Dermal : LD50 > 2000 mg/kg Rabbit
 - Inhalation : LD50 > 2000 mg/kg Rabbit
 - Skin corrosion/irritation : non-irritating(rabbit)
 - Serious eye damage/irritation : Non-irritating(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 : NO DATA
 - Germ cell mutagenicity : in vitro, in vivo Mutagenic testresult Negative
 - Reproductive toxicity : in vitro, in vivo Mutagenic testresult Negative
 - STOT-single exposure : NO DATA
 - STOT-repeated exposure : NO DATA
 - Aspiration hazard : If swallowed, aspiration into the lungs with liquid may cause chemical pneumonitis.
- 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

12. Ecological information

A. Ecotoxicity

- Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)
 - Fish : NO DATA
 - Crustaceans : NO DATA
 - Algae : NO DATA
- 1,4-Butanediol
 - Fish : LC50 > 1240 mg/l 96 hr Cyprinus carpio
 - Crustaceans : EC50 > 1000 mg/l 48 hr Daphnia magna
 - Algae : EC50 > 1000 mg/l 48 hr Selenastrum capricornutum
- 2-Butenedioic acid (E)-, diethyl ester
 - Fish : LC50 4.5 mg/l 96 hr
 - Crustaceans : EC50 11 mg/l 24 hr
 - Algae : EC50 1.1 mg/l 72 hr
- 4,4-Dimethyl-1,3-oxazolidine
 - Fish : LC50 59 mg/l 96 hr Lepomis cyanellus
 - Crustaceans : EC50 45 mg/l 48 hr Daphnia magna
 - Algae : NO DATA
- Distillates (petroleum), hydrotreated light
 - Fish : LC50 = 2.4 mg/l 96 hr Oncorhynchus mykiss
 - Crustaceans : NO DATA
 - Algae : NO DATA
- Solvent naphtha (petroleum), light arom.
 - Fish : LC50 = 9.22 mg/l 96 hr Oncorhynchus mykiss
 - Crustaceans : EC50 = 6.14 mg/l 48 hr Daphnia magna
 - Algae : EC50 = 19 mg/l 72 hr Selenastrum capricornutum

B. Persistence and degradability

- Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)
 - Persistence : NO DATA
 - Degradability : NO DATA
- 1,4-Butanediol
 - Persistence : log Kow = -0.83
 - Degradability : NO DATA
- 2-Butenedioic acid (E)-, diethyl ester
 - Persistence : log Kow 2.12

- Degradability : NO DATA
 - 4,4-Dimethyl-1,3-oxazolidine
 - Persistence : log Kow -0.08 (Estimates)
 - Degradability : NO DATA
 - Distillates (petroleum), hydrotreated light
 - Persistence : log Kow = 3.3 ~ 6 (Estimates)
 - Degradability : NO DATA
 - Solvent naphtha (petroleum), light arom.
 - Persistence : log Kow = 2.1 ~ 6 (Estimates)
 - Degradability : BOD5/COD = 0.43
- C. Bioaccumulative potential
- Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)
 - Bioaccumulative potential : NO DATA
 - Biodegradation : NO DATA
 - 1,4-Butanediol
 - Bioaccumulative potential : BCF = 0.4
 - Biodegradation : Biodegradability = 96 (%) 14 day
 - 2-Butenedioic acid (E)-, diethyl ester
 - Bioaccumulative potential : NO DATA
 - Biodegradation : 92 ~ 95 (%) 28 day
 - 4,4-Dimethyl-1,3-oxazolidine
 - Bioaccumulative potential : BCF 3.16 (Estimates)
 - Biodegradation : NO DATA
 - Distillates (petroleum), hydrotreated light
 - Bioaccumulative potential : BCF = 130 ~ 159 (Jordanela floridiae(Fish, fresh water), 1mg/l)
 - Biodegradation : Biodegradability = 4 (%) 28 day (Aerobic, Activated Sludge, Domestic wastewater, Does not decompose easily)
 - Solvent naphtha (petroleum), light arom.
 - Bioaccumulative potential : NO DATA
 - Biodegradation : NO DATA
- D. Mobility in soil
- Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)
 - ▷ NO DATA
 - 1,4-Butanediol
 - ▷ NO DATA
 - 2-Butenedioic acid (E)-, diethyl ester
 - ▷ NO DATA
 - 4,4-Dimethyl-1,3-oxazolidine
 - ▷ Koc 9.432 (Estimates)
 - Distillates (petroleum), hydrotreated light
 - ▷ NO DATA
 - Solvent naphtha (petroleum), light arom.
 - ▷ NO DATA
- E. Other adverse effects
- Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)
 - ▷ NO DATA
 - 1,4-Butanediol
 - ▷ NO DATA
 - 2-Butenedioic acid (E)-, diethyl ester
 - ▷ NO DATA
 - 4,4-Dimethyl-1,3-oxazolidine
 - ▷ NO DATA
 - Distillates (petroleum), hydrotreated light
 - ▷ NO DATA
 - Solvent naphtha (petroleum), light arom.
 - ▷ NO DATA

13. Disposal considerations

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

Pre-treat with oil-water separation method when it is available.

Recycle the recycleable materials, such as organic solvents, and then incinerate the residue at high temperature.

To prevent environmental pollution, dispose it to a licensed waste disposal company.

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 : Non regulated

B. Proper shipping name : N/A

C. Hazard class : Non dangerous goods

D. Packing group : N/A

E. Marine pollutant : N/A

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

- EmS FIRE SCHEDULE : N/A
- EmS SPILLAGE SCHEDULE : N/A

15. Regulatory information

- Tetraethyl N,N'-(methylenedi-4,1-cyclohexanediyl)bis(aspartate)
 - 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
- 1,4-Butanediol
 - 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
- 2-Butenedioic acid (E)-, diethyl 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) : 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
- 4,4-Dimethyl-1,3-oxazolidine
 - 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
- Distillates (petroleum), hydrotreated light
 - 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
- 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

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 : 2021-01-13

C. Revision number and Last date revised : 1. 2021-01-13

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