1. Identification

A. Product name : UNITAN
B. Recommended Use and Restriction on Use
1) General use : automotive refinish
2) Restriction on use : Recommendations for purposes other use restrictions.
C. Manufacturer / Supplier / distributor information
1) Company name : NOROO Paint & Coatings Co., Ltd.
2) Address : 351, Bakdal-ro, Manan-gu, Anyang-si, Gyeonggi-do, Korea
3) Emergency telephone number : +82-31-467-6114

2. Hazard identification

A. GHS Classification : Flammable liquids Category 3 ▷Acute toxicity (inhalation: vapor) Category 3 ▷Carcinogenicity Category 1B ▷Chronic aquatic toxicity Category 2 ▷Serious eye damage/irritation Category 2A ▷Specific target organ toxicity(Single exposure) Category 1 ▷Specific target organ toxicity(Single exposure) Category 2 ▷Specific target organ toxicity(Single exposure) Category 3 ▷Specific target organ toxicity(Repeated exposure) Category 1 ▷Skin corrosion/irritation Category 2

B. GHS label elements

1)Hazard symbols :

2)Signal words : DANGER

3)Hazard statements : Flammable liquid and vapour ▷Toxic if inhaled ▷Suspected of causing cancer ▷Toxic to aquatic life with long lasting effects ▷Causes serious eye irritation ▷Causes damage to organs ▷May cause damage to organs ▷May cause respiratory irritation, May cause drowsiness and dizziness. ▷Causes damage to organs through prolonged or repeated exposure ▷Causes skin irritation

4)Precautionary statements

- Prevention : Keep away from heat/sparks/open flames/hot surfaces. No smoking. ▷Keep container tightly closed. ▷Ground/bond container and receiving equipment. ▷Use explosion-proof electrical/ventilating/lighting/equipment. ▷Use only non-sparking tools. Flammable liquids (chapter 2.6) 1, 2, 3 ▷Take precautionary measures against static discharge. ▷Wear protective gloves/protective clothing/eye protection/face protection. ▷Avoid breathing dust/fume/gas/mist/vapours/spray. ▷Use only outdoors or in a well-ventilated area. ▷Obtain special instructions before use. ▷Do not handle until all safety precautions have been read and understood. ▷Use personal protective equipment as required. ▷Avoid release to the environment. ▷Wash hands thoroughly after handling. ▷Do not breathe dust/fume/gas/mist/vapours/spray. ▷Do not eat, drink or smoke when using this product.
- Response : IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. ▷In case of fire: Use Suitable extinguishing media for extinction ▷IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. ▷Immediately call a POISON CENTER or doctor/physician ▷Specific treatment ▷If exposed or concerned: Get medical advice/attention. ▷Collect spillage. ▷IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. ▷If eye irritation persists: Get medical advice/attention. ▷If exposed: Call a POISON CENTER or doctor/physician. ▷If exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. ▷Call a POISON CENTER or doctor/physician if you feel unwell. ▷Get medical advice/attention if you feel unwell. ▷IF ON SKIN: Wash with plenty of soap and water. ▷If skin irritation occurs: Get medical advice/attention. ▷Take off contaminated clothing and wash

before reuse.

- Storage : Store in a well-ventilated place. Keep cool. ▷Store in a well-ventilated place. Keep container tightly closed. ▷Store locked up.
- Disposal :Dispose of contents/container in accordance with local/regional/national/international regulation

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

Chemical Name	NFPA grade		
	Health	Flammability	Reactivity
Titanium dioxide	1	0	0
n-Butyl acetate	2	3	0
Xylene	NO DATA	NO DATA	NO DATA
Solvent naphtha (petroleum), light arom.	1	2	0
Propylene glycol methyl ether acetate	1	2	0
Silicon dioxide	1	0	0
Aluminium hydroxide	1	0	0

3. Composition/information on ingredients

Chemical Name	Trade names and Synonyms	CAS-NO	Content(%)
Titanium dioxide	Titanium dioxide	13463-67-7	21～31
n-Butyl acetate	n-Butyl acetate	123-86-4	18～28
Xylene	Xylene	1330-20-7	10～20
Solvent naphtha (petroleum), light arom.	Solvent naphtha (petroleum), light arom.	64742-95-6	1～10
Propylene glycol methyl ether acetate	Propylene glycol methyl ether acetate	108-65-6	1～10
Silicon dioxide	Silicon dioxide	7631-86-9	1～10
Aluminium hydroxide	Aluminium hydroxide	21645-51-2	1～10

4. First-aid measures

A.Eye Contact : If irritation, pain, swelling, and tears or glaring may occur, immediately take a doctor's treatment Rinse exposed eyes with plenty of water for at least 15minutes.

B.Skin Contact : Immediately wash off with soap and water for at least 15 minutes. If irritation or pain may occur, take a doctor’s examination on exposed area. Discard clothing, and then wash off exposed area with soap and water.

C.Inhalation : Take an emergency medical examination by a doctor Discard contaminated clothing and shoes, and keep personal away. If breathing is difficult, administer oxygen Perform the artificial respiration using the pocket mask installed the one way valves, or other inhaled medical devices. If inhaled or swallowed, do not perform the inhalation phase of breathing If the cessation of breathing may occur, perform the artificial respiration Avoid from source of exposure, and then moved into an area with fresh air

D.Ingestion Contact : It is need to be considered that early removal of some ingested material by cautious gastric lavage must be weighed against potential complications of bleeding or perforation Take an appropriate medical treatment depending on the symptoms. Get a doctor's attention immediately if ingestion of large amounts of materials. Do not induce vomiting, and then if vomiting occurs, keep head below hips to prevent aspiration into lungs. Induce vomiting

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

5.Fire-fighting measures

A.Suitable (Unsuitable) extinguishing media
1)Suitable extinguishing media : Extinguished agent as powder foam or carbon dioxide, and regular foam
2)(Unsuitable) extinguishing media : Water is not an appropriate extinguished agent
3)Case of bic fire : Use an appropriate protect device depend on the fire scenario Evacuate more than 800m if an explosion hazard may occur. Spread a large amount of the extinguished agent as a mist form with staying upwind
B.Specific hazards arising from the chemical
1)Pyrolysate : Carbon dioxide, toxic carbon compounds/Nitrogen compounds/sulfur compounds
2)Fire and Explosion danger : Intermediate levels of fire hazard. Explosive vapor/air mixture can be made at a temperature of 100℃.
C.Special protective actions for fire-fighters
1)Personal Precautions, protective equipment : Respirator or air respirator, heat resistant clothing, heat resistant hat, heat resistant gloves, heat resistant boots
2)Emergency procedures : Keep unauthorized personnel out except the fire-suppression personnel Cool containers with water until well after fire is out. If there is no risk, move to move containers from fire area. Perform a fire fighting using an appropriate extinguished agent.

6.Accidental release measures

A.Personal Precautions, protective equipment and emergency procedures
1)Personal Precautions, protective equipment : Respirator for organic gases other appropriate protective equipment / protection / protective gloves
2)Emergency procedures : Do not contact with the skin Do work with the personal protected devices such as respirator for organic gases other appropriate protective equipment / protection / protective gloves Spread water for reducing the suppression of generated steam Take an action if there is no risk
B.Environmental precautions
1)Atmosphere : Stay upwind and keep out of low areas. Spread water for reducing the suppression of generated steam
2)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.
3)Under water : Collect spilled material with mechanic devices Use absorbent to collect the appropriate container.
C.Methods and materials for containment and cleaning up
1)Small spill : Appropriate container for disposal of spilled material collected. Absorb for use sand or other non-combustible material.
2)Large spill : Notification to central government, local government. When emissions at least of the standard amount Keep unnecessary people away, isolate hazard area and deny entry.

7.Handling and storage

A.Precautions for safe handling : Use local ventilations and a full ventilation system when handling Close 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 note, Hot body care Do not contact to strong oxidizer or acid Keep proper temperature : 5~35℃ Outdoor Storage is to avoid direct sunlight. Because of evaporation and contamination concerns, The vessel is fully enclosed and kept in ventilated indoor

8.Exposure controls/personal protection

A.Exposure Limits
1)Titanium dioxide
1-1.ACGIH : A4
1-2.Biological exposure indices : NO DATA
2)n-Butyl acetate
2-1.ACGIH : NO DATA
2-2.Biological exposure indices : NO DATA
3)Xylene
3-1.ACGIH : A4
3-2.Biological exposure indices : NO DATA

4)Solvent naphtha (petroleum), light arom.
4-1.ACGIH : NO DATA
4-2.Biological exposure indices : NO DATA

5)Propylene glycol methyl ether acetate
5-1.ACGIH : NO DATA
5-2.Biological exposure indices : NO DATA

6)Silicon dioxide
6-1.ACGIH : NO DATA
6-2.Biological exposure indices : NO DATA

7)Aluminium hydroxide
7-1.ACGIH : NO DATA
7-2.Biological exposure indices : NO DATA

B.Engineering Controls : ▷ Spread water for reducing the suppression of generated steam ▷ Stay upwind and keep out of low areas.. ▷ NO DATA. ▷ NO DATA.

C.Personal Protective Equipment
1)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. Wear respirator should be authorized by Korea Occupational Safety and Health Agency
2)Eye protection : Let workers do wear the safety glasses in case hazard caused by mist may be expected. Cleansing Organization (saline) or install washing facilities and an emergency washing facilities in the place close to workplace. Use the protect respirator for organic solvent or higher level of capacity.
3)Hand protection : Wear the chemical protection of gloves Do the workers wear the impermeable protective gloves made from rubber/PVC due to skin irritation may be supposed by chronicle/long period exposure.
4)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, if needed wear the impermeable whole body protective clothing.

9.Physical and chemical properties

A.Appearance : liquid
B.Odor : solvent oder
C.Odor threshold : NO DATA
D.PH : NO DATA
E.Melting point/Freezing point : NO DATA
F.Initial Boiling Point/Boiling Ranges : 112~173
G.Flash point : 31
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 : higher than air
N.Specific gravity : 1.0~1.3
O.Partition coefficient of n-octanol/water : NO DATA
P.Autoignition temperature : 354
Q.Decomposition temperature : NO DATA
R.Viscosity : 67~73ku
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
1)Respiratory tracts : Adverse lung effects, Dyspnoea, Hypothermia, Vomitting
2)Oral : Vomitting, Diarrhea, Stomach pain, Irregular heartbeat
3)Skin : Irritation, Burn, Adverse nerve effects
4)Eye : Irritation, eye damage

B.Delayed and immediate effects and also chronic effects from short and long term exposure
1)Titanium dioxide
1-1. Acute toxicity
a. Oral : LD50 > 10000 ㎎/㎏ Rat
b. Dermal : LD50 > 10000 ㎎/㎏ Rabbit
c. Inhalation : LC50 > 6.82 ㎎/ℓ 4 hr Rat
1-2. Skin corrosion/irritation : (in rabbit) skin Irritation test result weak Irritation or non-irritating
1-3. Serious eye damage/irritation : Using the rabbit eye irritation test results - Mild irritant
1-4. Respiratory sensitization : NO DATA
1-5. Skin sensitization : negative patch test results in people
1-6. Carcinogenicity
6-1. IARC : NO DATA
6-2. OSHA : NO DATA
6-3. ACGIH : NO DATA
6-4. NTP : NO DATA
6-5. EU CLP : NO DATA
1-7. Germ cell mutagenicity : Mouse Micronucleustest Negative, Mouse Chromosomal abnormalitiestest Negative
1-8. Reproductive toxicity : NO DATA
1-9. STOT-single exposure : NO DATA
1-10. STOT-repeated exposure : NO DATA
1-11. Aspiration hazard : NO DATA
2)n-Butyl acetate
2-1. Acute toxicity
a. Oral : LD50 = 14130 ㎎/㎏ Rat
b. Dermal : LD50 = 17600 ㎎/㎏ Rabbit
c. Inhalation : Steam LC50 = 2000 ppm Rat
2-2. Skin corrosion/irritation : Causes a weak stimulus person.
2-3. Serious eye damage/irritation : Non-irritating to rabbit eye irritation
2-4. Respiratory sensitization : NO DATA
2-5. Skin sensitization : Not a skin sensitizer
2-6. Carcinogenicity
6-1. IARC : NO DATA
6-2. OSHA : NO DATA
6-3. ACGIH : NO DATA
6-4. NTP : NO DATA
6-5. EU CLP : NO DATA
2-7. Germ cell mutagenicity : NO DATA
2-8. Reproductive toxicity : Reported that there is no reproductive toxicity.
2-9. STOT-single exposure : Central nervous system disorders who, pulmonary edema, respiratory irritation.
2-10. STOT-repeated exposure : NO DATA
2-11. Aspiration hazard : NO DATA
3)Xylene
3-1. Acute toxicity
a. Oral : NO DATA
b. Dermal : LD50 = 1590㎎/㎏(mouse)
c. Inhalation : LC50 = 10 ~ 20 ㎎/L
3-2. Skin corrosion/irritation : Stimulus-induced severe
3-3. Serious eye damage/irritation : Middle stimulus
3-4. Respiratory sensitization : NO DATA

3-5. Skin sensitization : NO DATA
3-6. Carcinogenicity
6-1. IARC : NO DATA
6-2. OSHA : NO DATA
6-3. ACGIH : NO DATA
6-4. NTP : NO DATA
6-5. EU CLP : NO DATA
3-7. Germ cell mutagenicity : NO DATA
3-8. Reproductive toxicity : NO DATA
3-9. STOT-single exposure : Causes acting anesthetic
3-10. STOT-repeated exposure : Human eye, nose irritation, headache, chest pain, brain disorders, respiratory distress, cyanosis, fever, leukopenia causes, respiratory system, nervous system dysfunction Causes
3-11. Aspiration hazard : NO DATA

4)Solvent naphtha (petroleum), light arom.
4-1. Acute toxicity
a. Oral : LD50 = 8400 mg/kg Rat
b. Dermal : LD50 > 2000 mg/kg Rabbit
c. Inhalation : Mist LC50 = 3400 ppm 4 hr Rat
4-2. Skin corrosion/irritation : weakstimulus(rabbit)
4-3. Serious eye damage/irritation : Mild irritant(rabbit)
4-4. Respiratory sensitization : NO DATA
4-5. Skin sensitization : Non-sensitizer (Guinea pig)
4-6. Carcinogenicity
6-1. IARC : NO DATA
6-2. OSHA : NO DATA
6-3. ACGIH : NO DATA
6-4. NTP : NO DATA
6-5. EU CLP : Carc. 1B
4-7. Germ cell mutagenicity : NO DATA
4-8. Reproductive toxicity : NO DATA
4-9. STOT-single exposure : NO DATA
4-10. STOT-repeated exposure : NO DATA
4-11. Aspiration hazard : Harmful aspiration concerns

5)Propylene glycol methyl ether acetate
5-1. Acute toxicity
a. Oral : LD50 = 8532 mg/kg Rat
b. Dermal : LD50 > 5000 mg/kg Rabbit
c. Inhalation : Steam LC50 = 4345 ppm 6 hr Rat
5-2. Skin corrosion/irritation : rabbit: non-Irritation
5-3. Serious eye damage/irritation : Rabbit: mild irritant
5-4. Respiratory sensitization : NO DATA
5-5. Skin sensitization : Guinea pig / maximization test (GLP): No sensitization
5-6. Carcinogenicity
6-1. IARC : NO DATA
6-2. OSHA : NO DATA
6-3. ACGIH : NO DATA
6-4. NTP : NO DATA
6-5. EU CLP : NO DATA
5-7. Germ cell mutagenicity : In vitro - Salmonella typhimurium/TA98, TA100, TA1535, TA1537 (ames test, GLP): With and without metabolic activation system- Negative, CHL Cells/Chromosomal abnormalitiestest (GLP):With and without metabolic activation system- Negative, rat Hepatocyte/UDStest (GLP): Non-presence of metabolic activity-based- Negative
5-8. Reproductive toxicity : Rat / Oral (0, 100, 300, 1000 mg / kg / day for 44D (M) and 41-45D (F)) (GLP): no toxic effects on the reproductive parameters
5-9. STOT-single exposure : NO DATA
5-10. STOT-repeated exposure : Rat / Oral (0, 100, 300, 1000 mg / kg / day for 44D (M) and 41-55D (F)) (GLP): toxic

effects are not observed.
5-11. Aspiration hazard : NO DATA

6)Silicon dioxide
6-1. Acute toxicity
a. Oral : LD50 = 3160 ㎎/㎏ Rat
b. Dermal : LD50 > 2000 ㎎/㎏ Rabbit
c. Inhalation : dust LC50 > 2.2 ㎎/ℓ 1 hr Rat
6-2. Skin corrosion/irritation : rabbit middle irritant
6-3. Serious eye damage/irritation : NO DATA
6-4. Respiratory sensitization : NO DATA
6-5. Skin sensitization : Not a skin sensitizer
6-6. Carcinogenicity
6-1. IARC : 3
6-2. OSHA : NO DATA
6-3. ACGIH : NO DATA
6-4. NTP : NO DATA
6-5. EU CLP : NO DATA
6-7. Germ cell mutagenicity : NO DATA
6-8. Reproductive toxicity : NO DATA
6-9. STOT-single exposure : NO DATA
6-10. STOT-repeated exposure : Red blood and white blood cells, neutrophils can increase. Mediastinal lymph nodes are swollen lungs increases. Lung weight and collagen content of lungs, such as increased
6-11. Aspiration hazard : NO DATA

7)Aluminium hydroxide
7-1. Acute toxicity
a. Oral : LD50 > 5000 ㎎/㎏ Rat
b. Dermal : NO DATA
c. Inhalation : NO DATA
7-2. Skin corrosion/irritation : Can not see the danger signs
7-3. Serious eye damage/irritation : Can not see the danger signs
7-4. Respiratory sensitization : NO DATA
7-5. Skin sensitization : NO DATA
7-6. Carcinogenicity
6-1. IARC : NO DATA
6-2. OSHA : NO DATA
6-3. ACGIH : NO DATA
6-4. NTP : NO DATA
6-5. EU CLP : NO DATA
7-7. Germ cell mutagenicity : NO DATA
7-8. Reproductive toxicity : NO DATA
7-9. STOT-single exposure : NO DATA
7-10. STOT-repeated exposure : Patients with long-term administration of renal dysfunction and neurological abnormalities of parathyroid hormone leads to degradation.
7-11. Aspiration hazard : NO DATA

12.Ecological information

A.Ecotoxicity
1)Titanium dioxide
1-1. Fish : NO DATA
1-2. Crustaceans : EC50 > 1000 ㎎/ℓ 48 hr
1-3. Algae : NO DATA

2)n-Butyl acetate
2-1. Fish : LC50 = 62 ㎎/ℓ 96 hr
2-2. Crustaceans : LC50 = 32 ㎎/ℓ 48 hr
2-3. Algae : NO DATA

3)Xylene

3-1. Fish : NO DATA
3-2. Crustaceans : NO DATA
3-3. Algae : NO DATA
4)Solvent naphtha (petroleum), light arom.
4-1. Fish : LC50 = 9.22 ㎎/ℓ 96 hr Oncorhynchus mykiss
4-2. Crustaceans : EC50 = 6.14 ㎎/ℓ 48 hr Daphnia magna
4-3. Algae : EC50 = 19 ㎎/ℓ 72 hr Selenastrum capricornutum
5)Propylene glycol methyl ether acetate
5-1. Fish : LC50 ≥ 100 ㎎/ℓ 96 hr Oryzias latipes
5-2. Crustaceans : EC50 = 373 ㎎/ℓ 48 hr Daphnia magna
5-3. Algae : EC50 ≥ 1000 ㎎/ℓ 72 hr Selenastrum capricornutum
6)Silicon dioxide
6-1. Fish : LC50 = 5000 ㎎/ℓ 96 hr
6-2. Crustaceans : LC50 = 7600 ㎎/ℓ 48 hr
6-3. Algae : EC50 = 440 ㎎/ℓ 72 hr
7)Aluminium hydroxide
7-1. Fish : LC50 > 100 ㎎/ℓ 96 hr Other (Salmo trutta)
7-2. Crustaceans : EC50 > 100 ㎎/ℓ 48 hr Daphnia magna
7-3. Algae : EC50 > 100 ㎎/ℓ 72 hr Selenastrum capricornutum

B.Persistence and degradability
1)Titanium dioxide
1-1. Persistence : NO DATA
1-2. Degradability : NO DATA
2)n-Butyl acetate
2-1. Persistence : log Kow = 1.78
2-2. Degradability : NO DATA
3)Xylene
3-1. Persistence : NO DATA
3-2. Degradability : NO DATA
4)Solvent naphtha (petroleum), light arom.
4-1. Persistence : log Kow = 2.1 ~ 6 (Estimates)
4-2. Degradability : BOD5/COD = 0.43
5)Propylene glycol methyl ether acetate
5-1. Persistence : log Kow = 0.43
5-2. Degradability : NO DATA
6)Silicon dioxide
6-1. Persistence : log Kow = 0.53
6-2. Degradability : NO DATA
7)Aluminium hydroxide
7-1. Persistence : NO DATA
7-2. Degradability : NO DATA

C.Bioaccumulative potential
1)Titanium dioxide
1-1. Bioaccumulative potential : NO DATA
1-2. Biodegration : NO DATA
2)n-Butyl acetate
2-1. Bioaccumulative potential : NO DATA
2-2. Biodegration : Biodegradability = 98 (%)
3)Xylene
3-1. Bioaccumulative potential : NO DATA
3-2. Biodegration : NO DATA
4)Solvent naphtha (petroleum), light arom.
4-1. Bioaccumulative potential : NO DATA
4-2. Biodegration : NO DATA
5)Propylene glycol methyl ether acetate
5-1. Bioaccumulative potential : NO DATA

5-2. Biodegration : Biodegradability > 60 (%) 28 day
6)Silicon dioxide
6-1. Bioaccumulative potential : BCF = 3.162
6-2. Biodegration : NO DATA
7)Aluminium hydroxide
7-1. Bioaccumulative potential : BCF = 3.162
7-2. Biodegration : NO DATA

D.Mobility in soil
1) Titanium dioxide
▷ NO DATA
2) n-Butyl acetate
▷ NO DATA
3) Xylene
▷ NO DATA
4) Solvent naphtha (petroleum), light arom.
▷ NO DATA
5) Propylene glycol methyl ether acetate
▷ NO DATA
6) Silicon dioxide
▷ NO DATA
7) Aluminium hydroxide
▷ NO DATA

E.Other adverse effects
1) Titanium dioxide
▷ NO DATA
2) n-Butyl acetate
▷ NO DATA
3) Xylene
▷ NO DATA
4) Solvent naphtha (petroleum), light arom.
▷ NO DATA
5) Propylene glycol methyl ether acetate
▷ NO DATA
6) Silicon dioxide
▷ NO DATA
7) Aluminium hydroxide
▷ NO DATA

13.Disposal considerations

A.Disposal methods : Spilled 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, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
C.Hazard class : 3
D.Packing group : III
E.Marine pollutant : be applicable

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

15. Regulatory information

1)Titanium dioxide
1-1. Information of EU Classification
▷ Classification : NO DATA
▷ Risk Phrases : NO DATA
▷ Safety Phrase : NO DATA
1-2. 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
1-3. Rotterdam Convention listed ingredients : NO DATA
1-4. Stockholm Convention listed ingredients : NO DATA
1-5. Montreal Protocol listed ingredients : NO DATA
2)n-Butyl acetate
2-1. Information of EU Classification
▷ Classification : R10R66R67
▷ Risk Phrases : R: 10-66-67
▷ Safety Phrase : S: (2-)25
2-2. 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) : notapplicable
2-3. Rotterdam Convention listed ingredients : NO DATA
2-4. Stockholm Convention listed ingredients : NO DATA
2-5. Montreal Protocol listed ingredients : NO DATA
3)Xylene
3-1. Information of EU Classification
▷ Classification : R10Xn; R20/21Xi; R38
▷ Risk Phrases : R: 10-20/21-38
▷ Safety Phrase : S: (2-)25
3-2. 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
3-3. Rotterdam Convention listed ingredients : NO DATA
3-4. Stockholm Convention listed ingredients : NO DATA
3-5. Montreal Protocol listed ingredients : NO DATA
4)Solvent naphtha (petroleum), light arom.
4-1. Information of EU Classification
▷ Classification : Carc. Cat. 2; R45Muta. Cat. 2; R46Xn; R65
▷ Risk Phrases : R: 45-46-65
▷ Safety Phrase : S: 53-45
4-2. 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
4-3. Rotterdam Convention listed ingredients : NO DATA
4-4. Stockholm Convention listed ingredients : NO DATA
4-5. Montreal Protocol listed ingredients : NO DATA

5)Propylene glycol methyl ether acetate
5-1. Information of EU Classification
▷ Classification : R10
▷ Risk Phrases : R: 10
▷ Safety Phrase : S: (2-)
5-2. 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
5-3. Rotterdam Convention listed ingredients : NO DATA
5-4. Stockholm Convention listed ingredients : NO DATA
5-5. Montreal Protocol listed ingredients : NO DATA

6)Silicon dioxide
6-1. Information of EU Classification
▷ Classification : NO DATA
▷ Risk Phrases : NO DATA
▷ Safety Phrase : NO DATA
6-2. 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
6-3. Rotterdam Convention listed ingredients : NO DATA
6-4. Stockholm Convention listed ingredients : NO DATA
6-5. Montreal Protocol listed ingredients : NO DATA

7)Aluminium hydroxide
7-1. Information of EU Classification
▷ Classification : NO DATA
▷ Risk Phrases : NO DATA
▷ Safety Phrase : NO DATA
7-2. 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
7-3. Rotterdam Convention listed ingredients : NO DATA
7-4. Stockholm Convention listed ingredients : NO DATA
7-5. Montreal Protocol listed ingredients : NO DATA

16.Other information

A.Reference : Occupational Health and Safety Act

Korea Industrial Safety Corporation Preparation of Material Safety Data Sheet
KOSHA CODE W-05-2007【The guideline for MSDS , 2012.】

B.Issue date : 2000-10-04

C.Revision number and Last date revised : 1.(2013-07-01)

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