

1. Identification

- A. Product name : HIQ PRIMER-SURFACER HARDENER PSH-513
 Usage category : No Data
- B. Recommended Use and Restriction on Use
 General use : automotive refinish
 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 2
 Acute Toxicity (Inhalation: dust / mist) Category 2
 Carcinogenicity Category 2
 Serious eye damage/irritation Category 2A
 Specific target organ toxicity(Single exposure) Category 3
 Specific target organ toxicity(Repeated exposure) Category 2
 Skin sensitization Category 1(1A, 1B)
 Skin corrosion/irritation Category 2
 Respiratory sensitization Category 1(1A, 1B)
 Aspiration hazard Category 1

- B. GHS label elements
 Hazard symbols



- Signal words : DANGER
- Hazard statements :
- H225 Highly flammable liquid and vapour
 - H330 Fatal if inhaled
 - H351 Suspected of causing cancer
 - H319 Causes serious eye irritation
 - 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)
 - H317 May cause an allergic skin reaction
 - H315 Causes skin irritation
 - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 - H304 May be fatal if swallowed and enters airways
- 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.
 - 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.
 - P264 Wash hands and contact areas thoroughly after handling.
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 - 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).
 - 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.
 - 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.
 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.
 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.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P342+P311 If respiratory symptoms occur, get medical 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 Store 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	GHS Classification
n-Butyl acetate		2	3	0	H225, H335+H336
Toluene		2	3	0	H225, H304, H315, H319, H373
Trade secret		NO DATA	NO DATA	NO DATA	NO DATA
2,4-Diisocyanato-1-methylbenzene homopolymer		1	NO DATA	0	NO DATA
Diphenyl methane diisocyanate		3	1	1	H315, H317, H319, H330, H334, H373
4-Methylbenzenesulfonyl isocyanate		2	1	2	H334, H335+H336
Toluene diisocyanate		4	1	1	H315, H317, H319, H334

3. Composition/information on ingredients

Chemical Name	Trade names and Synonyms	CAS-NO	Content(%)
n-Butyl acetate	n-Butyl acetate	123-86-4	36~46
Toluene	Toluene	108-88-3	29~39
Trade secret	-	-	10~20
2,4-Diisocyanato-1-methylbenzene homopolymer	2,4-Diisocyanato-1-methylbenzene homopolymer	26006-20-2	8~18
Diphenyl methane diisocyanate	Diphenyl methane diisocyanate	101-68-8	2~12
4-Methylbenzenesulfonyl isocyanate	4-Methylbenzenesulfonyl isocyanate	4083-64-1	0.1~4
Toluene diisocyanate	Toluene diisocyanate	26471-62-5	0.1~4

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 inhaled 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 °C 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
- n-Butyl acetate
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - Toluene
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - Trade secret
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - 2,4-Diisocyanato-1-methylbenzene homopolymer
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - Diphenyl methane diisocyanate
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - 4-Methylbenzenesulfonyl isocyanate
 - ACGIH : NO DATA
 - Biological exposure indices : NO DATA
 - Toluene diisocyanate
 - 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

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- A. Appearance : yellow liquid
 - B. Odor : solvent odor
 - C. Odor threshold : NO DATA
 - D. PH : NO DATA
 - E. Melting point/Freezing point(°C) : NO DATA
 - F. Initial Boiling Point/Boiling Ranges(°C) : 108.9~129
 - G. Flash point(°C) : 18.6
 - H. Evaporating Rate : NO DATA
 - I. Flammability(solid, gas)(°C) : NON Flammable
 - J. Upper/Lower Flammability or explosive limits : NO DATA
 - K. Vapour pressure : NO DATA
 - L. Solubility : NO DATA
 - M. Vapour density : heavier than air
 - N. Specific gravity : 0.8~1.0
 - O. Partition coefficient of n-octanol/water : NO DATA
 - P. Autoignition temperature(°C) : 407
 - Q. Decomposition temperature(°C) : NO DATA
 - R. Viscosity : NO DATA
 - S. Molecular weight : NO DATA
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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 combustible materials
 - D. Hazardous decomposition products : Thermal decomposition products (carbon etc..)
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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
 - n-Butyl acetate
 - Acute toxicity
 - Oral : LD50 = 14130 mg/kg Rat
 - Dermal : LD50 = 17600 mg/kg Rabbit
 - Inhalation : LD50 = 17600 mg/kg Rabbit
 - Skin corrosion/irritation : Causes a weak stimulus person.
 - Serious eye damage/irritation : Non-irritating to rabbit eye irritation
 - Respiratory sensitization : NO DATA
 - Skin sensitization : Not a skin sensitizer
 - Carcinogenicity
 - IARC : NO DATA
 - OSHA : NO DATA
 - ACGIH : NO DATA
 - NTP : NO DATA
 - EU CLP : NO DATA
 - Germ cell mutagenicity : NO DATA
 - Reproductive toxicity : NO DATA
 - STOT-single exposure : Central nervous system disorders who, pulmonary edema, respiratory irritation.
 - 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
- Trade secret
- Acute toxicity
 - Oral : NO DATA
 - Dermal : NO DATA
 - Inhalation : NO DATA
- Skin corrosion/irritation : NO DATA
- Serious eye damage/irritation : NO DATA
- Respiratory sensitization : NO DATA
- Skin sensitization : NO DATA
- Carcinogenicity
 - IARC : NO DATA
 - OSHA : NO DATA
 - ACGIH : NO DATA
 - NTP : NO DATA
 - EU CLP : NO DATA
- Germ cell mutagenicity : NO DATA
- Reproductive toxicity : NO DATA
- STOT-single exposure : NO DATA
- STOT-repeated exposure : NO DATA
- Aspiration hazard : NO DATA
- 2,4-Diisocyanato-1-methylbenzene homopolymer
- 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
- Diphenyl methane diisocyanate
- Acute toxicity
 - Oral : LD50 31600 mg/kg Rat
 - Dermal : NO DATA
 - Inhalation : LC50 = 1 ~ 5 mg/L
- Skin corrosion/irritation : Irritation is that in rabbit skin
- Serious eye damage/irritation : Show rabbit eye irritation
- Respiratory sensitization : Classified respiratory sensitizer.
- Skin sensitization : It causes skin sensitization in the mouse.
- Carcinogenicity
 - IARC : Group 3
 - OSHA : NO DATA
 - ACGIH : NO DATA
 - NTP : NO DATA
 - EU CLP : Carc. 2
- Germ cell mutagenicity : Using the mouse erythrocyte micronucleus test results voice
- Reproductive toxicity : Using the mouse erythrocyte micronucleus test results voice
- STOT-single exposure : tating to human airway
- STOT-repeated exposure : Alveolar bronchioles and alveoli affect the growth and moderate interstitial fibrosis of the lung ventilator. Byal saengyi increased during occupational exposure to human respiratory depression and lung disease
- Aspiration hazard : NO DATA
- 4-Methylbenzenesulfonyl isocyanate
- Acute toxicity
 - Oral : LD50 = 2234 mg/kg Rat
 - Dermal : NO DATA
 - Inhalation : NO DATA

- Skin corrosion/irritation : Rabbit test both STANDARD Draic: 500 uL/24H; middle (middle irritant)
- Serious eye damage/irritation : Draic rabbit test both STANDARD: 100 uL; reaction: Moderate (stimulation of)
- Respiratory sensitization : NO DATA
- Skin sensitization : H334 (allergy and asthma symptoms, and may cause breathing difficulty)
- 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 : H335 (May cause respiratory irritation)
- STOT-repeated exposure : NO DATA
- Aspiration hazard : R20, R23, R26
- Toluene diisocyanate
 - Acute toxicity
 - Oral : LD50 4130 mg/kg Rat
 - Dermal : LD50 > 10 mg/kg Rabbit
 - Inhalation : LD50 > 10 mg/kg Rabbit
 - Skin corrosion/irritation : rabbit / Reported serious skin stimulus
 - Serious eye damage/irritation : Notice of the Ministry of Environment in accordance with TCCA Toxic Serious eye damage / eye irritation is classified as a Category 2
 - Respiratory sensitization : test result for Pulmonary edema, hemorrhage
 - Skin sensitization : Irritable(Guinea Pig)
 - Carcinogenicity
 - IARC : Group 2B
 - OSHA : NO DATA
 - ACGIH : NO DATA
 - NTP : R
 - EU CLP : NO DATA
 - Germ cell mutagenicity : Mouse micronucleus test : negative
 - Reproductive toxicity : Mouse micronucleus test : negative
 - STOT-single exposure : Report on the respiratory system, central nervous system disorder
 - STOT-repeated exposure : NO DATA
 - Aspiration hazard : NO DATA

12. Ecological information

A. Ecotoxicity

- n-Butyl acetate
 - Fish : LC50 = 62 mg/ℓ 96 hr
 - Crustaceans : LC50 = 32 mg/ℓ 48 hr
 - 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
- Trade secret
 - Fish : NO DATA
 - Crustaceans : NO DATA
 - Algae : NO DATA
- 2,4-Diisocyanato-1-methylbenzene homopolymer
 - Fish : NO DATA
 - Crustaceans : NO DATA
 - Algae : NO DATA
- Diphenyl methane diisocyanate
 - Fish : NO DATA
 - Crustaceans : NO DATA
 - Algae : NO DATA
- 4-Methylbenzenesulfonyl isocyanate
 - Fish : LC50 = 133 mg/ℓ 14 day
 - Crustaceans : NO DATA
 - Algae : NO DATA
- Toluene diisocyanate
 - Fish : LC50 133 mg/ℓ 96 hr *Oncorhynchus mykiss*
 - Crustaceans : EC50 12.5 mg/ℓ 48 hr *Daphnia magna*
 - Algae : EC50 3230 mg/ℓ 96 hr *Skeletonema costatum*

B. Persistence and degradability

- n-Butyl acetate
 - Persistence : log Kow = 1.78
 - Degradability : NO DATA
- Toluene
 - Persistence : log Kow 2.73
 - Degradability : NO DATA
- Trade secret
 - Persistence : NO DATA
 - Degradability : NO DATA
- 2,4-Diisocyanato-1-methylbenzene homopolymer
 - Persistence : NO DATA
 - Degradability : NO DATA

- Diphenyl methane diisocyanate
 - Persistence : NO DATA
 - Degradability : NO DATA
 - 4-Methylbenzenesulfonyl isocyanate
 - Persistence : log Kow = 2.34 (Estimates)
 - Degradability : NO DATA
 - Toluene diisocyanate
 - Persistence : log Kow 3.74 (Estimates)
 - Degradability : NO DATA
- C. Bioaccumulative potential
- n-Butyl acetate
 - Bioaccumulative potential : NO DATA
 - Biodegradation : Biodegradability = 98 (%)
 - Toluene
 - Bioaccumulative potential : NO DATA
 - Biodegradation : 86 (%) 20 day
 - Trade secret
 - Bioaccumulative potential : NO DATA
 - Biodegradation : NO DATA
 - 2,4-Diisocyanato-1-methylbenzene homopolymer
 - Bioaccumulative potential : NO DATA
 - Biodegradation : NO DATA
 - Diphenyl methane diisocyanate
 - Bioaccumulative potential : NO DATA
 - Biodegradation : NO DATA
 - 4-Methylbenzenesulfonyl isocyanate
 - Bioaccumulative potential : BCF = 12.7
 - Biodegradation : NO DATA
 - Toluene diisocyanate
 - Bioaccumulative potential : BCF < 5 (25°C, Cyprinus carpio(Fish, fresh water), 0.3mg/l)
 - Biodegradation : 0 (%) 28 day (Aerobic, Activated Sludge)
- D. Mobility in soil
- n-Butyl acetate
 - ▷ NO DATA
 - Toluene
 - ▷ NO DATA
 - Trade secret
 - ▷ NO DATA
 - 2,4-Diisocyanato-1-methylbenzene homopolymer
 - ▷ NO DATA
 - Diphenyl methane diisocyanate
 - ▷ NO DATA
 - 4-Methylbenzenesulfonyl isocyanate
 - ▷ NO DATA
 - Toluene diisocyanate
 - ▷ NO DATA
- E. Other adverse effects
- n-Butyl acetate
 - ▷ NO DATA
 - Toluene
 - ▷ NO DATA
 - Trade secret
 - ▷ NO DATA
 - 2,4-Diisocyanato-1-methylbenzene homopolymer
 - ▷ NO DATA
 - Diphenyl methane diisocyanate
 - ▷ NO DATA
 - 4-Methylbenzenesulfonyl isocyanate
 - ▷ NO DATA
 - Toluene diisocyanate
 - ▷ Shellfish: NOEC(Daphnia magna) 0.5 mg/L/21d

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
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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 : II
- 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

- n-Butyl acetate
 - 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) : notapplicable
 - 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
- Trade secret
 - Information of EU Classification
 - ▷ Classification : NO DATA
 - ▷ Risk Phrases : NO DATA
 - ▷ Safety Phrase : NO DATA
 - U.S. Federal regulations
 - ▷ OSHA PROCESS SAFETY (29CFR1910.119) : NO DATA
 - ▷ CERCLA Section 103 (40CFR302.4) : NO DATA
 - ▷ EPCRA Section 302 (40CFR355.30) : NO DATA
 - ▷ EPCRA Section 304 (40CFR355.40) : NO DATA
 - ▷ EPCRA Section 313 (40CFR372.65) : NO DATA
 - Rotterdam Convention listed ingredients : NO DATA
 - Stockholm Convention listed ingredients : NO DATA
 - Montreal Protocol listed ingredients : NO DATA
- 2,4-Diisocyanato-1-methylbenzene homopolymer
 - 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
- Diphenyl methane diisocyanate
 - 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
- 4-Methylbenzenesulfonyl isocyanate
 - 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
- Toluene diisocyanate
 - 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) : 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 : 1999-03-11

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