



Akzonobel Industrial Coatings Korea

MATERIAL SAFETY DATA SHEET

Resothane-SPZ#600 PC BLACK

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1. IDENTIFICATION

A. Product name

- Resothane-SPZ#600 PC BLACK [KF000023363]

B. Recommended use and restriction on use

- General use : paint applid on plastic resin
- Restriction on use : Do not use for other purposes

C. Manufacturer / Supplier / Distributor information

o Manufacturer information

- Company name : Akzonobel Industrial Coatings Korea Ltd.
- Address : 60, Bonsan 1-ro 56beon-gil, Jinyeong-eup, Gimhae-si, Gyeongsangnam-do, Korea
- Dept. :
- Telephone number :
- Emergency telephone number : (82) 55-720-0200
- Fax number :
- E-mail address :

o Supplier/Distributor information

- Company name : Akzonobel Industrial Coatings Korea Ltd.
- Address : 11, Byeolmang-ro 459beon-gil, Danwon-gu, Ansan-si, Gyeonggi-do, Korea
- Dept. :
- Telephone number :
- Emergency telephone number : (82) 31-490-4200
- Fax number :
- E-mail address :

2. HAZARD IDENTIFICATION

A. GHS Classification

- Acute toxicity (dermal) : Category3
- Acute toxicity (inhalation: vapor) : Category3
- Chronic aquatic toxicity : Category3
- Carcinogenicity : Category2
- Reproductive toxicity : Category1B
- Serious eye damage/irritation : Category2
- Flammable liquids : Category3
- Specific target organ toxicity(Single exposure) : Category1
- Specific target organ toxicity(Repeated exposure) : Category1
- Skin corrosion/irritation : Category2
- Aspiration hazard : Category2



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B. GHS label elements

○ Hazard symbols



○ Signal words

- Danger

○ Hazard statements

- H226 Flammable liquid and vapour
- H305 May be harmful if swallowed and enters airways
- H311 Toxic in contact with skin
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H331 Toxic if inhaled
- H351 Suspected of causing cancer
- H360 May damage fertility or the unborn child
- H370 Causes damage to organs(Refer Section SDS 11)
- H372 Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- H412 Harmful to aquatic life with long lasting effects

○ Precautionary statements

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. ? No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools. Flammable liquids (chapter 2.6) 1, 2, 3
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.

2) Response

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P307+P311 If exposed: Call a POISON CENTER or doctor/physician.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P311 Call a POISON CENTER or doctor/physician.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P321 Specific treatment
- P322 Specific measures
- P331 Do NOT induce vomiting.
- P332+P313 If skin irritation occurs: Get medical advice/attention.



- P337+P313 If eye irritation persists: Get medical advice/attention.
- P361 Remove/Take off immediately all contaminated clothing.
- P362 Take off contaminated clothing and wash before reuse.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

3) Storage

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

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

o NFPA grade (0 ~ 4 level)

- Health : 2, Flammability : 2, Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Isobutyl acetate	Acetic acid, 2-methylpropyl ester	110-19-0	10 ~ 20
Toluene	Methylbenzene	108-88-3	10 ~ 20
Xylene	Dimethylbenzene	1330-20-7	10 ~ 20
2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	-	56422-54-9	10 ~ 20
Methacrylic acid-methyl methacrylate-2-hydroxyethyl methacrylate-Styrene copolymer	-	52733-65-0	1 ~ 10
2-Butoxyethanol	Ethylene glycol monobutyl ether	111-76-2	1 ~ 10
POLYESTER POLYOL	-	-	1 ~ 10
Talc	Talcum	14807-96-6	1 ~ 10
Silicon dioxide	Precipitated silica	112926-00-8	1 ~ 10
n-Butyl acetate	Acetic acid, butyl ester	123-86-4	1 ~ 10
Carbon black	Acetylene black	1333-86-4	1 ~ 10
Ethyleneglycol monoethyl ether acetate	2-Ethoxyethyl acetate	111-15-9	1 ~ 10
4-Methyl-2-pentanone	Methylisobutyl ketone, MIBK	108-10-1	1 ~ 10
2-Methyl-2-propenoic acid polymer with butyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate	-	25035-89-6	1 ~ 10
Ethanol	Alcohol anhydrous	64-17-5	0 ~ 1
Secret	Secret	-	1 ~ 10

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15minutes and call a doctor/physician.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contact lenses if worn.

B. Skin contact

- Flush skin with plenty of wter for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.
- Get medical attention immediately.



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- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Prevent the spread of the skin.
- Remove contaminated clothing, shoes and isolate.
- Take the doctor's examination.
- Wash thoroughly after handling.
- Wear gloves when washing the patient, and please avoid contact with contaminated clothing.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.
- Take the doctor's examination.

D. Ingestion contact

- About whether I should induce vomiting Take the advice of a doctor.
- Rinse your mouth with water immediately.
- Get medical attention immediately.
- If swallowed, large amounts of water to drink and do not induce vomiting.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Do not access if the tank on fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly.
- The extremely low flash point made by fire-fighters may be less effective at digesting weeks.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Do not direct water at spill or source of leak.



- Avoid skin contact and inhalation.
- Cleanup and disposal under expert supervision is advised.
- Keep unauthorized people away, isolate hazard area and deny entry.

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.
- Dike for later disposal.
- Do not use plastic containers.
- Prevent the influx to waterways, sewers, basements or confined spaces.
- Spilled material should be treated as a potential risk of waste collected.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Avoid direct physical contact.
- Get the manual before use.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.
- Do not inhale the steam prolonged or repeated.
- Avoid contact with heat, sparks, flame or other ignition sources.
- Contaminated work clothing should not be allowed out of the workplace.

B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not apply any physical shock to container.
- Please pay attention to incompatibilities materials and conditions to avoid.
- No open fire.
- By specifying a storage area for carcinogenic substances.
- Collected them in sealed containers.
- Store away from water and sewer.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- o ACGIH TLV
 - [Isobutyl acetate] : TWA, 150 ppm (713 mg/m³)
 - [Toluene] : TWA 20 ppm (75 mg/m³)
 - [Xylene] : TWA 100 ppm (434 mg/m³), STEL, 150 ppm (651 mg/m³)
 - [2-Butoxyethanol] : TWA, 20 ppm (97 mg/m³)
 - [Talc] : TWA 2 mg/m³, Respirable particulate matter (containing no asbestos and <1% crystalline silica)
 - [n-Butyl acetate] : TWA, 150 ppm (713 mg/m³), STEL, 200 ppm (950 mg/m³)
 - [Carbon black] : TWA, 3 mg/m³, Inhalable particulate matter
 - [Ethylene glycol monoethyl ether acetate] : TWA, 5 ppm (27 mg/m³)
 - [4-Methyl-2-pentanone] : TWA, 20 ppm, STEL 75 ppm



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- [Secret] : TWA, 100 ppm (606 mg/m³)
- [Secret] : TWA, 200 ppm (491 mg/m³), STEL, 400 ppm (984 mg/m³)
- [Secret] : TWA, 200 ppm (262 mg/m³)

B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

C. Personal protective equipment

o Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
- Any air-purifying respirator with a full facepiece and an organic vapor canister.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

o Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

o Hand protection

- Wear appropriate chemical resistant glove.

o Skin protection

- Wear appropriate chemical resistant protective clothing.

o Others

- Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Liquid(Viscous liquid)
- Color	black
B. Odor	Not available
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	100 °C
G. Flash point	23 °C ~ 70 °C
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	Not available
M. Vapour density	Not available
N. Specific gravity(Relative density)	1.00~1.04
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	420 °C
Q. Decomposition temperature	Not available
R. Viscosity	56 ~ 62KU
S. Molecular weight	Not available



10. STABILITY AND REACTIVITY

A. Chemical Stability and Reactivity

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Cylinders exposed to fire may vent and release flammable gas.

C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with heat, sparks, flame or other ignition sources.

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- (Respiratory tracts)
 - May be harmful if swallowed and enters airways
- (Oral)
 - Not available
- (Eye:Skin)
 - Causes serious eye irritation
 - Causes skin irritation

B. Delayed and immediate effects and also chronic effects from short and long term exposure

- Acute toxicity
 - * Oral
 - [Isobutyl acetate] : LD50 = 15400 mg/kg Rat
 - [Toluene] : rat LD50=2600 mg/kg
 - [Xylene] : LD50=3550 mg/kg rat
 - [2-Butoxyethanol] : LD50 = 1746 mg/kg Rat
 - [n-Butyl acetate] : LD50 = 14130 mg/kg Rat
 - [Carbon black] : LD50 = 15400 mg/kg Rat
 - [Ethylenglycol monoethyl ether acetate] : LD50 = 2700 mg/kg Rat
 - [4-Methyl-2-pentanone] : LD50 = 2080 mg/kg Rat
 - [Secret] : LD50 = 5180mg/kg Rat
 - [Secret] : LD50 3500 mg/kg Rat
 - [Secret] : LD50 = 4710mg/kg Rat
 - [Ethanol] : LD50 = 6200 mg/kg Rat
 - [Secret] : LD50 > 5000 mg/kg Rat
 - [Secret] : LD50 6200 mg/kg Rat
 - * Dermal
 - [Isobutyl acetate] : LD50 = 17400 mg/kg rabbit
 - [Toluene] : rabbit LD50=12,000 mg/kg
 - [Xylene] : LD50 4350 mg/kg Rabbit
 - [2-Butoxyethanol] : LD50 = 99 mg/kg Rabbit
 - [Silicon dioxide] : LD50 = 5000 mg/kg
 - [n-Butyl acetate] : LD50 = 17600 mg/kg Rabbit



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- [Carbon black] : LD50 = 3000 mg/kg rabbit
- [4-Methyl-2-pentanone] : LD50 = 3000 mg/kg rabbit
- [Secret] : LD50 = 9500 mg/kg Rabbit
- [Secret] : LD50 15440 mg/kg Rabbit
- [Secret] : LD50 = 12870 mg/kg rabbit
- [Secret] : LD50 15800 mg/kg rabbit

*** Inhalation**

- [Isobutyl acetate] : LC50 = 38.0 mg/L/4 hr Rat
- [Toluene] : rat LC50=28.1 mg/L/4hr
- [Xylene] : Steam LC50 6700 ppm 4 hr Rat (Equivalents : 29.09 mg/L)
- [2-Butoxyethanol] : LC50 = 2.2 mg/ℓ 4 hr Rat
- [Silicon dioxide] : Steam LC50 > 2.0 mg/ℓ Rat
- [n-Butyl acetate] : Steam LC50 = 0.74 mg/L/4hr Rat (GLP)
- [Ethylene glycol monoethyl ether acetate] : LC50 = 17.1 mg/ℓ/4hr Rat
- [4-Methyl-2-pentanone] : LC50 = 8.2 mg/ℓ Rat
- [Secret] : Steam LC50 > 0.379 mg/ℓ Rat
- [Secret] : LC50 = 72600 mg/ℓ 4 hr Rat
- [Ethanol] : LC50 = 59.59 mg/L/4hr Rat
- [Secret] : dust LC50 ≥ 0.477 mg/L 4 hr Rat
- [Secret] : LC50 83.9 mg/L/4 hr Rat

○ **Skin corrosion/irritation**

- Causes skin irritation

○ **Serious eye damage/irritation**

- Causes serious eye irritation

○ **Respiratory sensitization**

- Not available

○ **Skin sensitization**

- Not available

○ **Carcinogenicity**

*** IARC**

- [Toluene] : Group 3
- [Xylene] : Group 3
- [2-Butoxyethanol] : Group 3
- [Talc] : Group 2B
- [Silicon dioxide] : Group 3 (Silica, amorphous)
- [Carbon black] : Group 2B
- [4-Methyl-2-pentanone] : Group 2B
- [Ethanol] : Group 1
- [Secret] : Group 3

*** OSHA**

- Not available

*** ACGIH**

- [Toluene] : A4
- [Xylene] : A4
- [2-Butoxyethanol] : A3
- [Talc] : A4
- [Carbon black] : A3
- [4-Methyl-2-pentanone] : A3
- [Ethanol] : A3
- [Secret] : A4

*** NTP**

- Not available

*** EU CLP**



- Not available
- **Germ cell mutagenicity**
 - Not available
- **Reproductive toxicity**
 - May damage fertility or the unborn child
- **STOT-single exposure**
 - Causes damage to organs(Refer Section SDS 11)
- **STOT-repeated exposure**
 - Causes damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- **Aspiration hazard**
 - May be harmful if swallowed and enters airways

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- **Fish**
 - [Isobutyl acetate] : LC50 = 17 mg/l 96 hr
 - [Toluene] : LC50 24 mg/l 96 hr Oncorhynchus mykiss
 - [Xylene] : LC50 3.3 mg/l 96 hr
 - [2-Butoxyethanol] : LC50 = 1250 mg/l 96 hr
 - [Talc] : LC50 > 100000 mg/l 24 hr Brachydanio rerio
 - [n-Butyl acetate] : LC50 = 62 mg/l 96 hr
 - [Ethylene glycol monoethyl ether acetate] : LC50 = 40 mg/l 96 hr
 - [4-Methyl-2-pentanone] : LC50 = 540 mg/l 96 hr
 - [Secret] : LC50 11619 mg/l 96 hr Pimephales promelas
 - [Secret] : LC50 > 100 mg/l 96 hr
 - [Ethanol] : LC50 = 42 mg/l 96 hr Oncorhynchus mykiss
 - [Secret] : LC50 15400 mg/l 96 hr Lepomis macrochirus
- **Crustaceans**
 - [Toluene] : EC50 11.5 mg/l 48 hr Daphnia magna
 - [Xylene] : LC50 190 mg/l 96 hr
 - [2-Butoxyethanol] : LC50 = 5.4 mg/l 96 hr
 - [Talc] : LC50 = 94983.781 mg/l 48 hr
 - [n-Butyl acetate] : LC50 = 32 mg/l 48 hr
 - [Carbon black] : EC50 = 5600 mg/l 24 hr
 - [4-Methyl-2-pentanone] : EC50 = 170 mg/l 48 hr
 - [Secret] : LC50 = 1919 mg/l 48 hr Other (Species : Daphnia)
 - [Secret] : LC50 > 10000 mg/l 48 hr Daphnia magna
 - [Ethanol] : EC50 = 2 mg/l 48 hr Daphnia magna
 - [Secret] : LD50 > 100 mg/l 96 hr Daphnia magna
- **Algae**
 - [Talc] : LC50 = 48545.539 mg/l
 - [Secret] : EC50 9067 mg/l 72 hr Other (ECOSAR)
 - [Secret] : EC50 = 2.2 mg/l 96 hr

B. Persistence and degradability

- **Persistence**
 - [Isobutyl acetate] : log Kow = 1.78
 - [Toluene] : log Kow 2.73
 - [2-Butoxyethanol] : log Kow = 0.83
 - [Talc] : log Kow = -1.50
 - [n-Butyl acetate] : log Kow = 1.78
 - [Ethylene glycol monoethyl ether acetate] : log Kow = 0.59



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- [4-Methyl-2-pentanone] : log Kow = 1.38
- [Secret] : log Kow 0.31 (Estimates)
- [Secret] : log Kow -0.77
- o **Degradability**
 - [Ethanol] : BOD5/COD = 0.57

C. Bioaccumulative potential

- o **Bioaccumulative potential**
 - [Secret] : BCF 1.162
- o **Biodegradation**
 - [Toluene] : 86 (%) 20 day
 - [Xylene] : 39 (%)
 - [2-Butoxyethanol] : Biodegradability = 96 (%)
 - [n-Butyl acetate] : Biodegradability = 98 (%)
 - [Ethyleneglycol monoethyl ether acetate] : Biodegradability = 86.9 (%)
 - [Secret] : (DPGME Rapidly biodegradable.)
 - [Secret] : > 60 (%) 28 day
 - [Ethanol] : Biodegradability = 75 (%) 20 day (Aerobic, Other, Easily decomposed)

D. Mobility in soil

- [Xylene] : log Kow = 3.12 (measured) (ortho), 3.2 (measured) (meta), 3.15 (measurements) (p) (5)
- [Ethanol] : Koc = 1

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.
- High temperature incinerate
- After taking off organic solvents that are supposed to be recycled, incinerate the rest of them at a high degree.

B. Special precautions for disposal

- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

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

C. Hazard class

- 3

D. Packing group

- III



E. Marine pollutant

- Not applicable

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

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
- EmS SPILLAGE SCHEDULE : S-E (Flammable liquids, floating on water)

15. REGULATORY INFORMATION**A. National and/or international regulatory information**○ **POPs Management Law**

- Not applicable

○ **Information of EU Classification*** **Classification**

- [Isobutyl acetate] : F; R11 R66
- [Toluene] : F; R11 Repr.Cat.3; R63 Xn; R48/20-65 Xi; R38 R67
- [Xylene] : R10 Xn; R20/21 Xi; R38
- [2-Butoxyethanol] : Xn; R20/21/22 Xi; R36/38
- [n-Butyl acetate] : R10 R66 R67
- [Ethyleneglycol monoethyl ether acetate] : R10 Repr. Cat. 2; R60-61 Xn; R20/21/22
- [4-Methyl-2-pentanone] : F; R11 Xn; R20 Xi; R36/37 R66
- [Secret] : F; R11 Xi; R36 R67
- [Ethanol] : F; R11
- [Secret] : F; R11 T; R23/24/25-39/23/24/25

* **Risk Phrases**

- [Isobutyl acetate] : R11, R66
- [Toluene] : R11, R38, R48/20, R63, R65, R67
- [Xylene] : R10, R20/21, R38
- [2-Butoxyethanol] : R20/21/22, R36/38
- [n-Butyl acetate] : R10, R66, R67
- [Ethyleneglycol monoethyl ether acetate] : R60, R61, R10, R20/21/22
- [4-Methyl-2-pentanone] : R11, R20, R36/37, R66
- [Secret] : R11, R36, R67
- [Ethanol] : R11
- [Secret] : R11, R23/24/25, R39/23/24/25

* **Safety Phrase**

- [Isobutyl acetate] : S2, S16, S23, S25, S29, S33
- [Toluene] : S2, S36/37, S46, S62
- [Xylene] : S2, S25
- [2-Butoxyethanol] : S2, S36/37, S46
- [n-Butyl acetate] : S2, S25
- [Ethyleneglycol monoethyl ether acetate] : S53, S45
- [4-Methyl-2-pentanone] : S2, S9, S16, S29
- [Secret] : S2, S7, S16, S24/25, S26
- [Ethanol] : S2, S7, S16
- [Secret] : S1/2, S7, S16, S36/37, S45

○ **U.S. Federal regulations*** **OSHA PROCESS SAFETY (29CFR1910.119)**

- Not applicable

* **CERCLA Section 103 (40CFR302.4)**

- [Isobutyl acetate] : 2267.995 kg 5000 lb



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- [Toluene] : 453.599 kg 1000 lb
- [Xylene] : 45.3599 kg 100 lb
- [n-Butyl acetate] : 2267.995 kg 5000 lb
- [4-Methyl-2-pentanone] : 2267.995 kg 5000 lb
- [Secret] : 2267.995 kg 5000 lb
- * **EPCRA Section 302 (40CFR355.30)**
 - Not applicable
- * **EPCRA Section 304 (40CFR355.40)**
 - Not applicable
- * **EPCRA Section 313 (40CFR372.65)**
 - [Toluene] : Applicable
 - [Xylene] : Applicable
 - [4-Methyl-2-pentanone] : Applicable
 - [Secret] : Applicable
- o **Rotterdam Convention listed ingredients**
 - Not applicable
- o **Stockholm Convention listed ingredients**
 - Not applicable
- o **Montreal Protocol listed ingredients**
 - Not applicable

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

- 2013-06-26

C. Revision number and Last date revised

- 3 times, 2015-06-03

D. Other

- This MSDS is prepared according to the Globally Harmonized System (GHS).

