

Material Safety Data (MSDS)

1. Information on chemical products and companies

A. Product name

- [IS-4464] Belt Dressing & Conditioner

B. Recommendations for the product and restrictions on use

- Purpose(Use) : For belt slip prevention

- Restrictions on use : No data

C. Provider Information

- Company name : Ilshin Chemical Co., Ltd

- Address : 2, Sincheoksandan 1-ro, Deoksan-eup, Jincheon-gun, Chungcheongbuk-do (Sincheok-ri 851)

- Emergency phone number : TEL: 043)536-0161, FAX: 043)536-0162

2. Hazards and risks

A. Classification of hazards and risks

- Carcinogenicity: Category 1A

- Severe eye damage/eye irritation: Category 2

- Flammable gases : category 1
- Flammable liquids: Category 2

- High pressure gas: liquefied gas

- Specific target organ toxicity (one exposure): Category 3 (anesthesia)

- Specific target organ toxicity (exposure once): Category 3 (respiratory irritation)

- Skin Corrosion/Skin Irritation: Category 2

- Inhalation hazard: Category 1

B. Items with warning signs including precautionary measures

O Picture characters









O Signal word

- Dangerous

O Hazardous and dangerous statements

- H220 Extremely flammable gas
- H225 Highly flammable liquids and vapors
- H280 with high pressure gas; may explode when heated
- H304 May be fatal if swallowed and enters airways.
- H315 irritation to the skin
- H319 Causes serious eye irritation.
- H332 Harmful when inhaled
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.

O Preventive action statement

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, spark, flame and high heat no smoking
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- $\hbox{- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.}\\$
- P242 Use non-sparking tools.
- P243 Take action to prevent static discharges.
- P261 (dust, fume, gas, mist, vapours, spray) Avoid breathing.
- P264 Wash the handling area thoroughly after handling.



- P271 Use only outdoors or in a well-ventilated area.
- P273 Do not discharge into environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

2) Correspondence

- P301+P310 If swallowed, consult a medical institution (doctor) immediately.
- P302+P352 Wash with plenty of soap and water if it gets on your skin.
- P303+P361+P353 On Skin (or Hair): Take off all contaminated clothing immediately. Wash your skin with water.
- P304+P340 When inhaled, move to a place with fresh air and rest in an easy-to-breathe position.
- P305+P351+P338 Wash carefully with water for a few minutes if it gets on your eyes. Remove contact lenses if possible. Keep washing.
- P308+P313 If you are exposed or concerned about exposure, seek medical measures and advice.
- P312 If you feel uncomfortable, consult a medical institution.
- P321 Take the necessary measures.
- P331 Don't make me vomit.
- P332+P313 Seek medical advice if skin irritation occurs.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362+P364 Remove contaminated clothing and wash again before use.
- P370+P378 Use fire extinguishing agents to extinguish fire in case of fire.
- P377 Leaking gas In the event of a fire, Do not attempt to extinguish the fire unless the leak can be safely prevented.
- P381 Remove all ignition sources if possible to dispose of safely.

3) Storage

- P403 Store in a well ventilated place.
- 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.
- P410+P403 Avoid direct sunlight and store in a well ventilated place.

4) Disposal

- P501 Refer to "13.Disposal Precautions" in MSDS and dispose of contents and containers.

C. Other hazards and risks that are not included in the classification criteria for hazards and risks

O NFPA rating (Steps 0 Through 4)

- Health: 1, Fire: 4, Reactivity: 0

3. Name and content of components

Chemical substance name	Tolerant name and tinnitus	CAS number or identification number	content(%)
Butane	-	106-97-8	35 ~ 45
Heptane	n-Heptane	142-82-5	35 ~ 45
Polyisobutylene	PIB	9003-27-4	20 ~ 25

4. Tips for emergency measures

A. When it goes into your eyes

- Wash carefully with water for a few minutes if it gets on your eyes. Remove contact lenses if possible. Keep washing up.
- Seek medical advice if eye irritation persists.

B. When it comes into contact with the skin

- Remove all contaminated clothing from the skin (or hair). Wash/shower your skin with water.
- Seek medical advice if skin irritation occurs.
- Get urgent medical attention
- Remove contaminated clothing and shoes and isolate contaminated areas
- Prevent the spread of contamination in case of minor skin contact
- In case of burns, immediately cool the area with cold water for as long as possible, and do not remove clothing that sticks to the skin
- Prevent skin spread.

C. When you inhale it

- Seek medical advice if you are exposed or concerned about exposure.
- Don't make me throw up.
- If exposed to excess dust or fume, remove it with clean air and take medical measures if you have coughs or other symptoms.



D. When you eat it

- If you swallowed it, see a medical institution immediately.
- Don't make me throw up.
- When eating or inhaling substances, do not breathe through mouth-to-mouth method and use appropriate respiratory equipment

E. Other doctor's precautions

- Contact the medical staff in case of exposure and take special emergency measures such as follow-up.
- Ensure that medical personnel are aware of the substance and take protective measures.

5. How to cope with an explosion or fire

A. Appropriate (and inappropriate) digestive medicine

- Use alcohol foam, carbon dioxide or water spray to extinguish fire related to this substance
- Use dry sand or soil to extinguish suffocation

B. Specific hazards arising from chemicals

- Highly flammable gas
- Highly flammable liquids and vapors
- Includes high pressure gas; may explode when heated
- Intense polymerization can cause fires and explosions
- Steam can be transferred to the ignition source to ignite
- May produce irritating and highly toxic gases by pyrolysis or combustion during burning
- Can form explosive mixtures at or above the flash point
- Containers may explode when heated
- High flammability: easily ignited by heat, spark, flame
- Forming an explosive mixture with air
- Leakage is at risk of fire/explosion
- Risk of steam explosion in indoor, outdoor, and sewers
- Can be ignited by heat, sparks, or flames
- Vapor can form an explosive mixture with air
- -Steam can backfire (flash back) to travel to the sources of ignition.
- Cylinders exposed to fire may emit flammable gases
- Non-flammable, the substance itself does not burn, but may decompose when heated, resulting in corrosive/toxic fume
- Be careful as some leave flammable residue after evaporation.

C. Protective equipment and preventive measures to be worn in the event of a fire suppression

- In the event of a leaking gas fire, do not attempt to extinguish the fire unless the leak can be safely prevented.
- If it is possible to dispose of it safely, remove all ignition sources.
- Rescuers should wear appropriate protective equipment.
- Keep a safe distance away from the area.
- Note that liquefied vapors are heavier than air, so they diffuse along the ground.
- Be careful that broken cylinders may fly up.
- If the leak is not stopped, do not extinguish the leaking gas fire.
- If it is not dangerous, remove the container from the fire area.
- Most of them are lighter than water, so be careful.
- Since most vapors are heavier than air, they can diffuse along the ground and accumulate in lowlands or enclosed spaces
- Be careful as it may be transported hot.
- Please note that it may be melted and transported.
- Dig a ditch for the disposal of fire extinguishing water and trap it so that the material does not scatter.

6. How to deal with leakage accidents

A. Measures and protective equipment necessary to protect the human body

- Do not inhale (dust, fume, gas, mist, vapor, spray)
- Do not attempt to extinguish the fire if leakage cannot be prevented safely in the event of a leaky gas fire.
- Remove all ignition sources as very fine particles can cause fire or explosion.
- Wipe off spills immediately and follow protective equipment precautions
- Isolate the contaminated area
- Do not enter persons who do not need to enter or are not equipped with protective equipment.



- If possible, turn the leak container so that it is released as a gas rather than a liquid.
- Isolate the contaminated area until the gas is completely diffused and diluted.
- Do not pour directly into the source of leakage
- Remove all ignition sources
- Use water spray to reduce steam or disperse vapor to prevent water from coming into contact with leaks
- Be sure to ground all equipment when handling materials.
- Let the material disperse
- Ventilate the contaminated area
- If not dangerous, stop leaking
- Be careful as some leave a combustible residue after evaporation.
- Do not touch broken containers or leaks without wearing appropriate protective clothing
- Steam suppression foam can be used to reduce steam generation.
- Cover with plastic sheet to prevent diffusion
- Prevent the formation of dust formation
- Be aware of substances and conditions to avoid

B. Measures necessary to protect the environment

- Do not discharge into the environment.
- Prevent inflow into waterways, sewers, cellars and enclosed spaces
- Prevent leakage from entering sewage systems and water systems.
- If there is a large amount of leakage, report it to 119, the Ministry of Environment, the Regional Environmental Management Agency, or the city or province (Environmental Guidance Division).

C. Purification or removal method

- Build levees and collect water for digestion.
- Absorb spills with inert substances (e.g. dry sand or soil) and place them in chemical waste containers.
- Absorb the liquid and rinse the contaminated area with detergent and water.
- Use a clean explosion proof tool to collect the absorbed material
- In the event of a large leak, make a ditch away from the liquid leak
- Place the leak in a clean, dry container with a clean shovel, close loosely, and remove the container from the leak area
- Cover with plastic sheet to prevent diffusion and keep dry in case of powder leakage
- In the event of a small leak, absorb sand and non-combustible materials and place in a container

7. Handling and storage methods

A. Safety handling tips

- Do not handle until all safety precautions have been read and understood.
- Use explosion proof electricity, ventilation, lighting, and equipment
- Use only tools that do not produce sparks
- Take antistatic measures
- Do not inhale (dust, fume, gas, mist, vapor, spray)
- Wash the area thoroughly after handling.
- Handle only outdoors or in well ventilated areas
- Do not apply, cut, or weld, solder, join, pierce, grind or expose to heat, flame, flame, static or other sources of ignition.
- Follow all MSDS, label precautions as product residue (vapors, liquids, solids) may remain after the container is emptied.
- Use with care when handling/storing.
- Carefully open the cap before opening.
- Avoid prolonged or continuous skin contact.
- Be sure to ground all equipment when handling substances
- Pay attention to substances and conditions to be avoided
- Watch out for high temperatures
- Be careful of the heat
- Measure and ventilate the oxygen concentration in the air during work because there is a risk of oxygen deficiency when working in a closed space in a low-lying area

B. Safe storage method

- Keep away from heat, sparks, flames, and high fever Non-smoking
- Store the container tightly sealed in a well-ventilated area.



- Store in a well ventilated place and keep at low temperature.
- Avoid direct sunlight and store in a well-ventilated place.
- Drain the empty drum completely, block it properly and immediately return it to the drum regulator or position it properly.
- Do not expose the container to heat, as it may increase the pressure if exposed to heat.

8. Exposure protection and personal protective equipment

A. Exposure standards of chemical substances, biological exposure standards, etc

O Domestic exposure standards

- [Butane] : TWA - 800ppm

- [Heptane]: TWA - 400ppm STEL - 500ppm

- [Polyisobutylene] : No data

O ACGIH exposure standard

- [Butane] : TWA 1000 ppm

- [Heptane]: TWA 400 ppm, STEL 500 ppm

- [Polyisobutylene] : No data

O Biological exposure criteria

- [Butane] : No data- [Heptane] : No data- [Polyisobutylene] : No data

B. Appropriate engineering management

- For workplaces where gas, steam, mist, fume, or dust is emitted, the employer shall take necessary measures, such as installing facilities to suppress the emission of gas or to seal the emission source of gas, etc. or installing local exhaust or full ventilation.

C. Personal Protective Equipment

O Respiratory protection

- Wear a gas mask certified by the Korea Occupational Safety and Health Agency if there is a possibility of direct exposure or exposure to the substance.
- Respiratory protection is classified from minimum to maximum concentration.
- Consider the warning characteristics before use.
- Gas mask (directly small, for organic compounds)
- Air-filtered respirators (purification containers and front type for organic compounds)
- Unknown concentration or other imminent danger to life or health: air ventilation mask (complex air line mask), air respirator (front type)

O Eye protection

- If you are concerned about direct contact or exposure to the substance, wear safety glasses certified by the Korea Occupational Safety and Health Agency.
- Workshop in close proximity Install eye washing and emergency washing facilities (shower type).

O Hand protection

- If you are concerned about direct contact or exposure to the substance, wear chemical resistant gloves certified by the Korea Occupational Safety and Health Agency.

O Physical protection

- If you are concerned about direct contact or exposure to the substance, wear chemical resistant protective clothing certified by the Korea Occupational Safety and Health Agency.

9. Physical and chemical properties A. Appearance - an icon of nature Liquid - Colors colorless B. Smell Solvent smell C. Smell threshold No data D. pH No data E. melting point/fishing point No data F. Initial boiling point and boiling point range No data G. a print shop -60 ℃ H. Evaporation rate No data I. Flammable (solid, gas) No data J. Upper/lower limit of range of ignition or explosion No data K. steam pressure No data



L. solubility	No data
M. steam density	No data
N. specific gravity	$0.8 \sim 1.0 \ (-20 ^{\circ}\text{C}) \ (\text{water=1})$
O. N-octanol/water distribution factor	No data
P. Natural ignition temperature	No data
Q. Decomposition temperature	No data
R. Viscosity	0.8~ 1.0 Ku
S. molecular weight	No data

10. Stability and Reactivity

A. Possibility of chemical stability and adverse reactions

- Stable for recommended storage and handling.
- No adverse polymerization reaction.
- Containers may explode when heated
- Some can ride but do not ignite easily
- Non-flammable, the substance itself does not burn, but may decompose when heated, resulting in corrosive/toxic fume
- Irritating and toxic gases can be generated in the event of a fire

B. Conditions to Avoid

- Avoid non-mixing substances and conditions.
- Avoid contact with heat, flame, flame or other sources of ignition.

C. Substances to be avoided

- Combustible substance, Reducing substance

D. Hazardous substances produced during decomposition

- Irritating and highly toxic gases can be generated by pyrolysis or combustion during burning
- Corrosive/Toxic fume

11. Information on toxicity

A. Information on likely exposure routes

- O (respiratory)
 - Swallowing into the airways can be harmful
- O (Original)
 - No data
- O (Eyes and Skin)
 - Severe irritation to the eyes
 - Irritation to the skin

B. Health Hazard Information

O Acute toxicity

- * Oral toxicity
 - [Butane] : No data
 - [Heptane] : LD50 > 5000 mg/kg Rat (Similar substance CAS No. 540-84-10ECD TG 401, GLP, male and female, no deaths)
 - [Polyisobutylene] : LD50 > 34600 mg/kg Rat

* Percutaneous toxicity

- [Butane] : No data
- [Heptane] : LD50 > 2000 mg/kg Rabbit (Similar substance CAS No. 540-84-1, OECD TG 402, GLP, male and female, no deaths)
- [Polyisobutylene] : LD50 > 10250 mg/kg Rabbit

* Inhalation toxicity

- [Butane] : LC50 277374 ppm 4 hr Rat
- [Heptane] : Vapour LC50> 29.29 \mbox{mg}/ℓ 4 hr Rat (OECD TG 403, male and female, no deaths)
- [Polyisobutylene] : Vapour LC50> 0.85 $\,\mathrm{mg}/\ell\,\,\,$ Rat

O Corrosive or irritating skin

- [Butane] : No data
- [Heptane]: As a result of the skin corrosion/irritation test using rabbits, there is irritation that does not recover within 72 hours. pepper. Erythema index = 1, edema index = 0, OECD TG 404, analogue CAS No. 540-84-1
- [Polyisobutylene] : Causes skin irritation



O Severe eye damage or irritation

- [Butane] : No data
- [Heptane]: As a result of severe eye damage/irritation test using rabbits, there is irritation that is completely recovered within 48 hours. non-irritating. Conjunctival index = 0.67, corneal index = 0, iris index = 0, conjunctival edema index = 0, OECD TG 405, GLP, analogue CAS No. 540-84-1
- [Polyisobutylene] : Causes eye irritation

O Respiratory irritability

- No data

O Skin irritability

- [Butane] : No data
- [Heptane]: Skin sensitization test results using guinea pigs, non-sensitization, OECD TG 406, similar substances: SBP 100/140
- [Polyisobutylene] : No data

O Carcinogenicity

* Occupational Safety and Health Act

No data

* Ministry of Employment and Labor Notice

- [Butane]: 1A
- [Heptane] : No data
- [Polyisobutylene] : No data

* IARC

- No data

* OSHA

- No data

* ACGIH

- No data

* NTP

- No data

* EU CLP

- No data

O Germ cell mutagenicity

- [Butane] : No data
- [Heptane]: Results of reverse mutation test using in vitro microorganisms OECD TG 471, negative regardless of presence or absence of metabolic activation system

Results of chromosomal aberration test using mammalian cultured cells in vitro OECD TG 473, negative

In vitro mitotic recombination test result OECD TG 481, negative regardless of the presence or absence of metabolic activation system

- [Polyisobutylene] : No data

O Reproductive toxicity

- [Butane] : No data
- [Heptane]: Results of inhalation 2nd generation reproductive toxicity test using male/female rats OECD TG 416, GLP, significant reduction in food consumption during breastfeeding.

Reduced food consumption during gestation.

Hyaline volume kidney disease in males Hyaline droplet nephropathy and tubular basophilia tubular basophilia.

Increased number of dead pups in high concentration group.

NOAELreproductive toxicity=31,680mg/m³ air nominal, NOAELother: F1, F2,

female/male=10,560 mg/m³ air nominal, LOAELother: F1, F2, female/male=31,680 mg/m³ air nominal Analogue: commercial hexane Inhalation fetal developmental toxicity test results for rats OECD TG 414, GLP, maternal weight loss.

No other effects NOAEC maternal toxicity = ca. 2,000 ppm, NOAEC Developmental Toxicity > $7\,000$ ppm Analogue: Cyclohexane

- [Polyisobutylene] : No data

O Specific target organ toxicity (1 exposure)

- [Butane] : No data
- [Heptane]: Specific target organ toxicity Single exposure: Inhalation exposure test using rats or mice showed anesthetic action and airway irritation.

Causes central nervous system depression or mucosal irritation in humans.

- [Polyisobutylene] : No data

O Specific target organ toxicity (repeated exposure)

- [Butane] : No data
- [Heptane]: Results of subchronic inhalation repeated toxicity test using rats, no effect

NOAE Lneurotoxicity=12,470 mg/m³ air nominal, NOAEC whole body=12,470 mg/m³ air nominal

Results of 26-week sub-chronic inhalation repeated toxicity test using male/female rats OECD TG 413,

Acute central nervous system depression acute CNS depression NOAEL systemic toxicity=12,350 mg/m³ air analytical, LOAEL=1,650 mg/m³ air analytical

Not applicable for classification due to high concentration test results



- [Polyisobutylene] : No data

O The harmful effects of aspiration

- [Butane] : No data
- [Heptane] : Hydrocarbon, kinematic viscosity 0.61 mm2/s 20 °C
- [Polyisobutylene] : No data

12. Environmental Impact

A. Ecotoxicity

O Fish

- [Butane] : LC50 27.98 mg/ℓ 96 hr Other (Similar substance CAS no.74-28-5)
- [Heptane] : No data
- [Polyisobutylene] : No data

O Crustaceans

- [Butane] : LC50 69.43 mg/ ℓ 48 hr Other (Daphnia sp., Similar substance CAS no.74-28-5)
- [Heptane] : EC50 1.5 mg/ℓ 48 hr Daphnia magna
- [Polyisobutylene] : No data

O Algae

- [Butane] : EC50 16.47 mg/ℓ 96 hr Other (Green algea, Similar substance CAS no.74-84-0)
- [Heptane] : No data
- [Polyisobutylene] : No data

B. Residue and Decomposition

O Residuity

- [Butane] : No data
- [Heptane] : log Kow 4.5
- [Polyisobutylene] : log Kow 17.14

O Decomposibility

- No data

C. Biological Concentration

O Bioconcentrality

- No data

O Biodegradable

- [Butane] : 65.7 (%) 35 day ((Aerobic, microbial, highly degradable))
- [Heptane]: 70 01 10 day (O2 consumption)
- [Polyisobutylene] : No data

D. Soil Mobility

- [Butane] : No data
- [Heptane] : calculated
- [Polyisobutylene] : No data

E. Other harmful effects

- [Butane] : No data
- [Heptane] : Fish: 28d-NOELROncorhynchus mykiss=1.284 mg/L growth rate QSAR

Crustacean: 21d-NOECDaphnia magna=0.17 mg/L OECD TG 211, GLP

Algae: 72h-NOELRSelenastrum capricornutum=0.97 mg/L biomass QSAR

- [Polyisobutylene] : No data

13. Precautions for disposal

A. Disposal method

- If two or more types of designated wastes are mixed and it is difficult to separate and dispose of them, the reduction and stabilization can be performed by incineration or similar methods.
- \mbox{Oil} and water separation shall be performed in advance by the method of separating oil and water.
- To be incinerated.
- Burn at high temperature.
- After recovering substances to be recycled such as organic solvents, incinerate the residues at high temperature.
- Drain all remaining gas in the spray container and drain according to the procedure.



B. Precautions for disposal

- A business operator (business waste discharger) that discharges business waste shall dispose of the waste generated from the business site by itself, or delegate it to a waste disposal business operator, a person who regenerates the waste of others, or a person who installs and operates a waste disposal facility.
- Compliance with the Waste Management Act.

14. Information Required for Transport

A. United Nations number (UN No.)

- UN 1950

B. UN proper shipping name

- AEROSOLS

C. Risk rating in transportation

- 2.1

D. Container rating

- No data

E. Marine pollutants

- Not Applicable

F. Special safety measures that users need or need to know about transportation or means of transportation

- In accordance with the Dangerous Goods Safety Control Act for local transportation.
- Packaging and transportation to DOT and other regulations.
- Types of emergency measures in case of fire: F-E (non-water-reactive flammable liquids)
- Types of emergency measures in case of spillage: S-E (floating on water)

15. Legal regulatory status

A. Regulation under the Occupational Safety and Health Act

- O Material to be measured in the working environment
 - [Heptane] : Measurement cycle: 6 months
- O Exposure criteria setting substances
 - [Bhutan]
 - [Heptane]
- O Substances subject to PSM submission
 - [Bhutan]
 - [Heptane]
- \bigcirc Hazardous substances to be managed
 - [Heptane]
- \bigcirc Substances subject to special health examination
 - [Heptane] : Diagnosis cycle: 12 months

B. Regulation under the Chemical Substance Control Act

- O Toxic substances
 - Not applicable
- O Chemicals subject to emission investigation
 - Not applicable
- O Accident preparation material
 - Not applicable
- O Restricted substances
 - Not applicable
- O Permitted substance
 - Not applicable

C. Regulation under the Dangerous Goods Safety Management Act

- Dangerous goods: Category 4 oil (Designated quantity: 200 liters (non-water-soluble liquid)



D. Regulation under the Waste Management Act

- This product falls under the designated waste (waste paint and waste locker) according to the Enforcement Decree of the Waste Management Act (Attachment 1) among wastes generated at the workplace.

E. Other regulations under domestic and foreign laws

O Residual Organic Pollutants Control Act

- Not Applicable

O EU classification information

* Result of definitive classification

- [Butane] : Flam. Gas 1Press. GasCarc. 1AMuta. 1B
- [Heptane]: Flam. Liq. 2Asp. Tox. 1STOT SE 3Skin Irrit. 2Aquatic Acute 1Aquatic Chronic 1
- [Polyisobutylene] : Not Applicable

* Risk statement

- [Butane] : R45, R46, R12
- [Heptane]: R11, R38, R50/53, R65, R67
- [Polyisobutylene] : Not Applicable

* safety phrase

- [Butane]: S53, S45
- [Heptane]: S2, S9, S16, S29, S33, S60, S61, S62
- [Polyisobutylene] : Not Applicable

O US management information

* OSHA Regulation (29CFR1910.119)

- Not Applicable

* CERCLA 103 Regulation (40CFR302.4)

- Not Applicable

* EPCRA 302 Regulation (40CFR355.30)

- Not Applicable

* EPCRA 304 Regulation (40CFR355.40)

- Not Applicable

* EPCRA 313 Regulations (40CFR372.65)

- Not Applicable

O Rotterdam Convention Substances

- Not Applicable

O Stockholm Convention Substances

- Not Applicable

O Montreal Protocol Substances

- Not Applicable

16. Other Notes

A. Source of data

- This MSDS is referred to in Article 110 of the Occupational Safety and Health Act (the provision of material safety and health data) and Notice No. 2023-9 of the Ministry of Employment and Labor (classification and labeling of chemicals, and Based on the criteria for material safety and health data), it is prepared in consideration of the current status of related regulatory laws and regulations in Korea.
- This MSDS was prepared based on KOSHA, NITE, ESIS, NLM, SIDS, IPCS, NCIS, etc.

B. Date of initial preparation

- 2017-09-06

C. Number of revisions and the date of final revisions

- 6th/2023-07-24

D. Other

- This information was prepared based on the DB currently available to protect worker health, environment, and safety.