

Material Safety Data (MSDS)

1. Information on chemical products and companies

A. Product name

- Brake & Part Cleaner

B. Recommendations for the product and restrictions on use

- Purpose(Use) : Cleaner

- 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

- Flammable gases : category 1
- Flammable liquids: Category 2
- High pressure gas: liquefied gas
- Skin Corrosion/Skin Irritation: Category 2
- Severe eye damage/eye irritation: Category 2
- Specific target organ toxicity (repeated exposure): Category 2
- Inhalation hazard: Category 2

B. Items with warning signs including precautionary measures

○ Picture characters



○ Signal word

- Dangerous

○ Hazardous and dangerous statements

- H220 Extremely flammable gas
- H225 Highly flammable liquids and vapors
- H280 with high pressure gas; may explode when heated
- H305 Swallowing into the airways can be harmful
- H315 irritation to the skin
- H319 Causes serious eye irritation.
- H373 Long-term or repeated exposure can cause damage to the central nervous system in the body

○ Preventive action statement

1) Prevention

- P210 Keep away from heat, spark, flame and high heat - no smoking
- P233 Seal the container tightly.
- P240 Bond or ground the vessel and receiver.
- P241 Use explosion-proof electricity, ventilation, lighting, and equipment.
- P242 Use only spark-free tools.
- P243 Take antistatic measures.
- P260 (Do not inhale (dust, fume, gas, mist, steam, spray)).
- P264 Wash the handling area thoroughly after handling.
- P280 (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.
- P305+P351+P338 Wash carefully with water for a few minutes if it gets on your eyes. Remove contact lenses if possible. Keep washing.

- P314 Seek medical advice if you feel uncomfortable.
- P321 Take the necessary measures.
- P322 Take the necessary steps.
- P331 Don't make me vomit.
- P332+P313 Seek medical advice if skin irritation occurs.
- P337+P313 Seek medical advice if eye irritation persists.
- P362+P364 Remove contaminated clothing and wash again before use.
- 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+P235 Store in a well ventilated place and keep at low temperatures.
- P405 Store in a locked storage area.
- 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

○ NFPA rating (Steps 0 Through 4)

- Health: 2, Fire: 4, Reactivity: 1

3. Name and content of components

Chemical substance name	Tolerant name and tinnitus	CAS number or identification number	content(%)
Propane	Dimethylmethane	74-98-6	15
Isopropyl alcohol	-	67-63-0	15
2-Methylpentane	ISOHEXANE	107-83-5	70

4. Tips for emergency measures

A. When it goes into your eyes

- Get urgent medical attention
- Immediately wash skin and eyes with running water for at least 20 minutes when contacting with substances
- 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

- Get urgent medical attention
- Remove contaminated clothing and shoes and isolate contaminated areas
- Freeze clothes that are frozen on your skin before removing them
- 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
- Wash your skin with soap and water
- In case of contact with liquefied gas, melt the area with lukewarm water
- Contact with gas or liquefied gas can cause burns, serious injury and frostbite
- Wash with plenty of soap and water if it gets on your skin.
- Remove all contaminated clothing from the skin (or hair). Wash/shower your skin with water.
- If you feel uncomfortable, consult a medical institution.
- Seek medical advice if skin irritation occurs.
- Remove contaminated clothing and wash it before using it again.

C. When you inhale it

- If exposed to excess dust or fume, remove it with clean air and take medical measures if you have coughs or other symptoms.
- Transfer to a place with fresh air
- Get emergency medical attention
- If you are not breathing, perform artificial respiration.
- If breathing is difficult, provide oxygen.
- Keep warm and steady
- If you feel uncomfortable, consult a medical institution.
- Don't make me throw up.

D. When you eat it

- Get urgent medical attention
- If you swallowed it, see a medical institution immediately.
- If you feel uncomfortable, consult a medical institution.
- Don't make me throw up.

E. Other doctor's precautions

- Symptoms caused by contact and inhalation may be delayed.
- 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

- 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
- Polar flammability
- 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.
- Steam may cause dizziness or suffocation without awareness
- Cylinders exposed to fire may emit flammable gases
- Irritates or burns skin and eyes on inhalation and contact
- May be toxic in inhalation and skin absorption
- A highly flammable gas
- Highly flammable liquids and vapors
- Includes high pressure gas; may explode when heated

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.
- 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 can be carried hot
- 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.
- Do not spray directly into exposure sources or safety devices as it may freeze in the event of a tank fire.
- In the event of a tank fire, extinguish it at maximum distance or use unmanned fire extinguishing equipment.
- In the event of a tank fire, cool the container with plenty of water even after the extinguishing has been extinguished.
- In the event of a tank fire, withdraw immediately if there is a high-pitched sound from the pressure release device or if the tank discolores.
- In the event of a tank fire, step away from the tank engulfed in flames.
- In the event of a tank fire, use unmanned fire extinguishing equipment in case of a large-scale fire, and if it is not possible, step back and let it burn.

6. How to deal with leakage accidents

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

- Remove all ignition sources as very fine particles can cause fire or explosion.
- Wipe off spills immediately and follow protective equipment precautions
- 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.
- Contact material with frozen liquid can break easily
- Do not touch or walk around exposed objects
- 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.
- If not dangerous, stop leaking
- Steam suppression foam can be used to reduce steam generation.
- Be aware of substances and conditions to avoid
- 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.

B. Measures necessary to protect the environment

- Leakage may cause contamination
- Prevent inflow into waterways, sewers, cellars and enclosed spaces
- Do not allow vapor to spread through sewers, ventilation systems and enclosed spaces

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

7. Handling and storage methods

A. Safety handling tips

- 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
- Work with reference to engineering care and personal protective equipment
- 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
- 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

B. Safe storage method

- 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.
- Be mindful of substances and conditions to avoid
- Keep it sealed.
- Keep away from heat, sparks, flames, and high fever - Non-smoking
- Seal the container tightly.

- 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.

8. Exposure protection and personal protective equipment

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

- **Domestic exposure standards**
 - [Isopropyl alcohol] : TWA - 200ppm STEL - 400ppm
 - [2-Methylpentane] : TWA - 500ppm STEL - 1000ppm Hexane (other isomers), Notice No. 2018-62
- **ACGIH exposure standard**
 - [Isopropyl alcohol] : TWA 200 ppm STEL 400 ppm
- **Biological exposure criteria**
 - **[Isopropyl alcohol] : 40 mg/L of acetone in urine (after the last work of the week), ACGIH original: Acetone in urine 40 mg/L (end of shift at end of workweek)**

B. Appropriate engineering management

- Use process isolation, local exhaust, or other engineering management to adjust air levels below exposure standards.
- If dust, fume, or mist is generated during operation, ventilate the air so that air pollution is kept below the exposure standard.
- Install eyewash and a safety shower for equipment that stores or uses this substance.

C. Personal Protective Equipment

- **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)
- **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).
- **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.
- **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	colorlessness
B. Smell	the smell of oil
C. Smell threshold	No data
D. pH	No data
E. melting point/fishing point	-154 °C
F. Initial boiling point and boiling point range	60 °C
G. a print shop	-32 °C (c.c.)
H. Evaporation rate	No data
I. Flammable (solid, gas)	Not Applicable
J. Upper/lower limit of range of ignition or explosion	7.0 / 1.0 %
K. steam pressure	211 mmHg (at 25 °C)
L. solubility	14 mg/l (at 25 °C, soluble: alcohol, ether, acetone, chloroform, benzene.)
M. steam density	3
N. specific gravity	0.6532
O. N-octanol/water distribution factor	3.21 ((Presumptive))
P. Natural ignition temperature	264 °C

Q. Decomposition temperature	No data
R. Viscosity	0.2767 cP (25 C)
S. molecular weight	86.18

10. Stability and Reactivity

A. Possibility of chemical stability and adverse reactions

- Highly flammable liquids and vapors
- Intense polymerization can cause fires and explosions
- Can form explosive mixtures at or above the flash point
- Containers may explode when heated
- High flammability: easily ignited by heat, spark, flame
- Leakage is at risk of fire/explosion
- Risk of steam explosion in indoor, outdoor, and sewers
- Vapor can form an explosive mixture with air
- Steam can backfire (flash back) to travel to the sources of ignition.
- Irritating and toxic gases can be generated in the event of a fire
- May be toxic in inhalation and skin absorption
- Irritates or burns skin and eyes on inhalation and contact
- Polar flammability
- Includes high pressure gas; may explode when heated
- Forming an explosive mixture with air
- Polar flammability
- Can be ignited by heat, sparks, or flames
- Cylinders exposed to fire may emit flammable gases
- Some substances may be irritating when inhaled at high concentrations
- Steam may cause dizziness or suffocation without awareness

B. Conditions to Avoid

- Keep away from heat, sparks, flames, and high temperatures - No smoking

C. Substances to be avoided

- No data

D. Hazardous substances produced during decomposition

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

11. Information on toxicity

A. Information on likely exposure routes

- [Propane] : nausea, vomiting, irregular heartbeat, headache, drowsiness, dizziness, loss of passivation, emotional change, coordination (function) loss, choking, convulsions, unconsciousness, coma, dyspnea, central nervous system suppression, frostbite

B. Health Hazard Information

○ Acute toxicity

* Oral toxicity

- [Isopropyl alcohol] : LD50 5840 mg/kg Rat (OECD TG 401)

* Percutaneous toxicity

- [Isopropyl alcohol] : LD50 12800 mg/kg Rabbit (OECD TG402)

* Inhalation toxicity

- [Isopropyl alcohol] : Steam LC50 12800 ppm 3 hr Rat (OECE TG 403, GLP)
- [2-Methylpentane] : Steam LC50 > 20 mg/l 4 hr Rat
- [Propane] : Gas LC50 800000 ppm 15 min Rat

○ Corrosive or irritating skin

- [Isopropyl alcohol] : Skin irritability test using rabbits shows mild irritability and non-irritability in humans
- [2-Methylpentane] : Non-polar in rabbits
- [Propane] : No data (EU Directive 67/548). rabbit /irritating (IUCLID)

○ Severe eye damage or irritation

- [Isopropyl alcohol] : Severe eye damage/irritation test using rabbits revealed irritability that does not fully recover within 14 days of OECD TG 405. This stimulus will fully recover within 21 days. causing severe irritation. Maximum mean total score MMTS1day=8-25/110, Maximum mean total score MMTS14day=0-2/110
- [2-Methylpentane] : Non-polar in rabbits
- [Propane] : No data(EU Directive 67/548/EEC). Rabbit/not irritating (IUCLID)
- **Respiratory irritability**
 - No data
- **Skin irritability**
 - [Isopropyl alcohol] : Results of Dermatological Sensitivity Test Using Guinea Pig OECD TG 406, GLP, Non-sensitive
- **Carcinogenicity**
 - * **Ministry of Employment and Labor Notice**
 - No data
 - * **IARC**
 - [Isopropyl alcohol] : 3
 - * **OSHA**
 - No data
 - * **ACGIH**
 - [Isopropyl alcohol] : A4
 - * **NTP**
 - No data
 - * **EU CLP**
 - No data
- **Germ cell mutagenicity**
 - [Isopropyl alcohol] : Genetic mutation test results using mammalian culture cells in vitro OECD TG 476, GLP, return mutation test results using microorganisms in vitro OECD TG 471, and microbial test results using mammalian red blood cells in vivo OECD TG 474, GLP, and negative.
 - [2-Methylpentane] : Microbial return mutation test negative
- **Reproductive toxicity**
 - [Isopropyl alcohol] : There was no formation in the test mice's maxillary test, but there was toxicity such as weight loss, anesthesia, etc., and reproductive toxicity such as decreased pregnancy rate, increased fetal death, etc.
Results of first-generation reproductive toxicity test in rats (OECD TG415, GLP), increased pre-implantation loss, and decreased baby weight on average (NOAEL(P)=853 mg/kg bw/day)
Fetal toxicity test results in rats (OECD TG414, GLP), resulting in a decrease in maternal weight. No deformity occurred (NOAEL = 400 mg/kg bw/day (actual dose received), NOAEL = 400 mg/kg bw/day (actual dose received))
- **Specific target organ toxicity (1 exposure)**
 - [Isopropyl alcohol] : In white mice, decreased activity due to inhalation exposure. When acute poisoning occurs in humans, irritation of the digestive tract, decreased blood pressure, body temperature, central nerve symptoms, and kidney failure appear.
Acute inhalation toxicity test using rats revealed exhaustion, severe motor impairment, decreased excitation, slow or difficulty breathing, decreased neuromuscular elasticity, hypothermia, and reflex loss at OECD TG 403, GLP, 10,000 ppm. Transient concentration-related narcosis related to coma and sedation effects of severe renal boundary
Target organ: Central nerve
- **Specific target organ toxicity (repeated exposure)**
 - [Isopropyl alcohol] : In the 4-month inhalation exposure experiment of the test mice, it was reported that there was an effect on blood vessels, liver, and spleen, and the effect on kidney and anesthesia were recognized
90-day subchronic inhalation toxicity test using rats and mice showed toxicity in the central nervous system including OECD TG 413, GLP, motor dysfunction, astounding reflex defects, and decreased activity. Weight gain, various changes in blood and serum clinical chemistry index are observed, and absolute liver weight is increased.
 - [2-Methylpentane] : - NOAEL 1 mg/ℓ, steam (Rat, male)
- Thirteen weeks of repeated inhalation exposure in experimental animals (male) resulted in kidney failure (observed inflammatory cell infiltration, regenerative tubule, cystic change in hepatic tissue)
 - [Propane] : No data(EU Directive 67/548/EEC). Central nervous system:the effects of the nervous system(TOMES)
- **The harmful effects of aspiration**
 - [Isopropyl alcohol] : Death due to cardiopulmonary arrest is recognized within 24 hours when test mice are administered in vitro, and the kinematic rate is around 1.6 1.6 1.6 mm²/s, which may have respiratory hazards when aspirated

12. Environmental Impact

A. Ecotoxicity

- **Fish**
 - [Isopropyl alcohol] : LC50 9640 mg/ℓ 96 hr Pimephales promelas (OECD Guideline 203)
 - [2-Methylpentane] : LC50 4.656 mg/ℓ 96 hr

- [Propane] : LC50 > 100 mg/ℓ 96 hr Others ((Test specie : Fish TLm))

○ **Crustaceans**

- [Isopropyl alcohol] : LC50 5102 mg/ℓ 24 hr Daphnia magna (OECD TG 202)

- [2-Methylpentane] : LC50 5.424 mg/ℓ 48 hr

- [Propane] : LC50 52.157 mg/ℓ 48 hr

○ **The current**

- [Isopropyl alcohol] : EC50 1800 mg/ℓ 7 day Others (Scenedesmus quadricauda, reliability: 2)

- [2-Methylpentane] : EC50 3.635 mg/ℓ 96 hr

- [Propane] : LC50 32.252 mg/ℓ 96 hr

B. Residue and Decomposition

○ **Residuity**

- [Isopropyl alcohol] : log Kow 0.05

- [2-Methylpentane] : log Kow 3.21 ((Presumptive))

- [Propane] : log Kow 2.36

○ **Decomposibility**

- [Isopropyl alcohol] : BOD5/COD (BOD5/COD ratio \geq 0.5, Biodegradation immediately, EU Method C.5)

C. Biological Concentration

○ **Bioconcentration**

- [2-Methylpentane] : BCF 100 ~ 408

- [Propane] : BCF 13

○ **Biodegradable**

- [Isopropyl alcohol] : (Biodegradation immediately EU Method C.5)

- [Propane] : 65.7 (%) 35 day

D. Soil Mobility

- No data

E. Other harmful effects

- [Isopropyl alcohol] : Dird: 7d-other: Toxicity threshold Scenedesmus quadricauda=1 800 mg/L

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.

- 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

- Material to be measured in the working environment**
 - [Isopropyl alcohol] : Measurement cycle: 6 months
- Exposure criteria setting substances**
 - [Isopropyl alcohol]
 - [2-Methylpentane]
- Substances subject to PSM submission**
 - [Isopropyl alcohol]
 - [2-Methylpentane]
 - [Propane]
- Hazardous substances to be managed**
 - [Isopropyl alcohol]
- Substances subject to special health examination**
 - [Isopropyl alcohol] : Diagnosis cycle: 12 months

B. Regulation under the Chemical Substance Control Act

- Toxic substances**
 - Not applicable
- Chemicals subject to emission investigation**
 - Not applicable
- Accident preparation material**
 - Not applicable
- Restricted substances**
 - Not applicable
- 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

- Residual Organic Pollutants Control Act**
 - Not Applicable
- * **EU classification information**
 - * **Result of definitive classification**
 - [Isopropyl alcohol] : Flam. Liq. 2, STOT SE 3, Eye Irrit. 2
 - [2-Methylpentane] : F; R11 Xn; R65 Xi; R38 R67 N; R51-53
 - [Propane] : F+; R12
 - * **Risk statement**
 - [Isopropyl alcohol] : H225, H336, H319
 - [2-Methylpentane] : R11, R38, R65, R67, R51/53

- [Propane] : R12
- * **Safety statement**
 - [2-Methylpentane] : S2, S9, S16, S29, S33, S61, S62
 - [Propane] : S2, S9, S16
- **About U.S. Management**
 - * **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)**
 - [Isopropyl alcohol] : Applicable
- **Rotterdam Convention Substances**
 - Not Applicable
- **Stockholm Convention Substances**
 - Not Applicable
- **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

- 2021-05-06

C. Number of revisions and the date of final revisions

- 4th / 2023-07-19

D. Other

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