



# Low Aromatic White Spirit

## 1. identification

A. Product Name : Low Aromatic White Spirit

B. Recommended use of the chemical and restrictions on use :

- o Recommended use : Solvents
- o Restrictions on use : Used for only recommended uses.

C. Manufacturer/Supplier

1) Supplier/Distributor information

GODO CHEMICAL Corporation			
#1017, 10F Suseo Hyundai Ventureville 10 Bamgogae-ro 1-gil Gangnam-gu Seoul 06349 Korea			
Telephone	(82)2 417 2555~6	Fax	82(2) 417 2557

## 2. hazard identification

A. Hazard Category :

1) Physico-chemical Hazards

- Flammable liquids : Category 3

2) Health Hazards

- Skin corrosion/irritation : Category 2
- Carcinogenicity : Category 2
- Aspiration hazard : Category 2

3) Environmental Hazards

- Hazardous to the aquatic environment (Acute) : Category 3
- Hazardous to the aquatic environment (chronic) : Category 3

B. Precautionary Statement(s) & Warning Label

1) Symbol





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2) Signal Word : Warning

3) Hazard Statement(s) :

H226 : Flammable liquid and vapour.

H305 May be harmful if swallowed and enters airways.

H315 : Causes skin irritation.

H351 Suspected of causing cancer.

H402 Harmful to aquatic organisms.

H412 Harmful to aquatic life with long lasting effects.

4) Precautionary Statement(s) :

■ Precaution

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..

P243 : Take precautionary measures against static discharge.

P264 : Wash hands thoroughly after handling.

P273 : Avoid release to the environment.

P280 : Wear protective gloves/protective clothing/eye protection/face protection.

P281 : Use personal protective equipment as required.

■ Treatment

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.

P308+P313 : IF exposed or concerned: Get medical advice/attention.

P321 : Specific treatment.

P331 : Do not induce vomiting.

P332+P313 : If skin irritation occurs: Get medical advice/ attention.

P362 : Take : off contaminated clothing and wash before reuse.

P370+P378 : In case of fire: Use alcohol foam, carbon dioxide, or water spray for extinction

■ Storage

P403+P235 : Store in a well–ventilated place. Keep cool.

P405 : Store locked up.

■ Disposal

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



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## C. Other hazards

NFPA : Health=2, Fire=2, Reactivity=0

## 3. composition/information on ingredients

Chemical Name	Other Name	CAS No. or EC No	Content (%)
Naphtha (petroleum), hydrodesulfurized heavy	Hydrodesulfurized heavy naphtha	64742-82-1	100

## 4. first aid measures

### A. Eye contact :

- Call emergency medical service.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

### B. Skin Contact :

- If on skin (or hair): Remove/Take off immediately all contaminated clothing.
- Rinse skin with water/shower.
- If skin irritation occurs: Get medical advice/ attention.
- Get immediate medical advice/attention.
- Remove and isolate contaminated clothing and shoes.
- In case of burns, immediately cool affected skin for as long as possible with cold water.
- Do not remove clothing if adhering to skin.
- Wash skin with soap and water.

### C. Inhalation :

- Specific medical treatment is urgent.
- Do not induce vomiting.
- Move victim to fresh air.

### D. Ingestion :

- If swallowed: Immediately call a poison center or doctor/physician.
- Do not induce vomiting.

### E. Indication of immediate medical attention and notes for physician

- Exposures require specialized first aid with contact and medical follow-up.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.



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## 5. fire fighting measures

### A. Extinguishing media :

- 1) Suitable extinguishing media
  - Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
  - Use dry sand or earth to smother fire.
- 2) Unsuitable extinguishing media : Not available
- 3) Unusual fire(big fire) : Not available

### B. Unusual fire & Explosion hazard :

- 1) Hazardous combustion product : Material may produce irritating and highly toxic gases from decomposition by heat and combustion during burning.
- 2) Fire & Explosion hazard :
  - Flammable liquid and vapour.
  - May violently polymerize and result in fire and explosion.
  - Vapors may travel to a source of ignition and ignite,
  - Material may produce irritating and highly toxic gases from decomposition by heat and combustion during burning
  - May form explosive mixtures at temperatures at or above the flashpoint.
  - Containers may explode when heated.
  - HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
  - Spilled material may create fire or explosion hazard.
  - May cause vapor explosion hazard indoors, outdoors or in sewers.
  - Some of these materials may burn, but none ignite readily.
  - Vapors may form explosive mixtures with air.

### C. Special fire fighting procedure / protection of firefighters :

- Rescuers should put on appropriate protective gear.
- Evacuate area and fight fire from a safe distance.
- Many liquids are lighter than water.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas.
- Substance may be transported hot.
- Substance may be transported in a molten form.
- Some may be transported hot.
- Dike fire—control water for later disposal; do not scatter the material.
- Move containers from fire area if you can do it without risk.
- Fire involving Tanks; Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.



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- Fire involving Tanks; Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks; Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Fire involving Tanks; Always stay away from tanks engulfed in fire
- Fire involving Tanks; For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire bu

### 6. additional release measures

#### A. Personal precautions :

- Clean up spills immediately, observing precautions in Protective Equipment section.
- Isolate hazard area.
- Keep unnecessary and unprotected personnel from entering.
- Eliminate all ignition sources.
- All equipment used when handling the product must be grounded.
- Stop leak if you can do it without risk.
- A vapor suppressing foam may be used to reduce vapors.
- Prevent dust cloud.
- Please note that there are materials and conditions to avoid.

#### B. Environmental precautions :

- Avoid release to the environment.
- Prevent entry into waterways, sewers, basements or confined areas.

#### C. Spill cleanup methods :

##### 1) Small liquid spill :

- Collect spillage.
- Absorb spills with inert material (e.g., dry sand or earth), then place in a chemical waste container.
- Flush area with flooding quantities of water. And take up with sand or other noncombustible absorbent material and place into containers for later disposal.
- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

##### 2) Large spillages : Dike far ahead of liquid spill for later disposal.



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## 7. handling and storage

### A. Handling :

- Do not handle until all safety precautions have been read and understood.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.
- Follow all MSDS/label precautions even after container is emptied because they may retain product residues.
- Use carefully in handling/storage.
- Loosen closure cautiously before opening.
- Avoid prolonged or repeated contact with skin.
- All equipment used when handling the product must be grounded.
- Please note that there are materials and conditions to avoid.
- Be careful to high temperature.
- Be careful to heat.
- You need measurement of air concentration and ventilation in low, closed and confined areas due to lack of oxygen.

### B. Storage :

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Store in a well-ventilated place. Keep container tightly closed.
- Store in a well-ventilated place. Keep cool.
- Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner, or properly disposed of

## 8. exposure controls/personal protection

### A. Occupational Exposure Limits :

- 1) Regulation in Korean: Not available
- 2) US (NIOSH/OSHA /ACGIH):
  - ACGIH : TWA = 200mg/m<sup>3</sup> (Total hydrocarbon vapor Skin)
  - NIOSH : Not available
  - OSHA : Not available
- 3) Biological Exposure Index : Not available



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### B. Appropriate engineering controls :

- Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
- Facilities for storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### C. Personal protective equipment

#### 1) Respiratory protection :

- Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.
- In case exposure to gaseous/liquid material, the respiratory protective equipments as follow are recommended. escape full facepiece gas mask (of use for acid gas, in case of acid gas for organic compounds) or escape half facepiece gas mask (of use or acid gas, in case of acid gas for organic compounds) or direct full facepiece gas mask (of use for acid gas, in case of acid gas for organic compounds) half facepiece gas mask (of use for acid gas, in case of acid gas for organic compounds) or powered air-purifying gas mask.
- In lack of oxygen(<19.5%), wear the supplied-air respirator or self-contained breathing oxygen apparatus.

#### 2) Eye protection :

- Wear enclosed safety goggles to protect from gaseous state organic material causing eye irritation or other disorder.
- An eye wash unit and safety shower station should be available nearby work place.

#### 3) Hand protection :

- Wear appropriate protective gloves by considering physical and chemical properties of chemicals(ex; solvent resistant gloves)

#### 4) Skin / Body protection :

- Wear protective cloths.
- Wear appropriate protective clothing by considering physical and chemical properties of chemicals.

## 9. physical and chemical properties

A. Appearance(physical state, color etc.) : Colourless liquid

B. Odor : Not available

C. Odor Threshold : Not available

D. pH : Not available

E. Melting point/Freezing point : < -60°C

F. Boiling point/range : 155 ~ 200°C)

G. Flash point : 44°C

H. Evaporation rate : Not available

I. Flammability (solid, liquid): Not applicable



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- J. Flammability Limit (lower/upper) : 0.7/6.5 vol%
- K. Vapor pressure :  $\leq$  240 kPa (37.8 °C)
- L. Solubility in water : Not available
- M. Vapor density(Air=1) : Not available
- N. Specific gravity : 0.7853(15°C)
- O. Partition Coefficient(n-Octanol/water) : Log Kow = 4.76(estimated)
- P. Auto-ignition temperature : 280~470°C(101.325kPa)
- Q. Thermal decomposition : Not available
- R. Viscosity : 1 mm<sup>2</sup>/s (37.8 °C)
- S. Molecular weight : Not available

### 10. stability and reactivity

#### A. Stability :

- Flammable liquid and vapour
- May decompose at high temperatures into forming toxic gases.
- May violently polymerize and result in fire and explosion.
- May form explosive mixtures at temperatures at or above the flashpoint.
- Containers may explode when heated.
- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
- Spilled material may create fire or explosion hazard.
- May cause vapor explosion hazard indoors, outdoors or in sewers.
- Some of these materials may burn, but none ignite readily.
- Vapors may form explosive mixtures with air.

#### B. Conditions to avoid :

- Keep away from heat/sparks/open flames/hot surfaces. No smoking.

#### C. Incompatible material : Combustibles, reducing agents

#### D. Hazardous decomposition products :

- Material may produce irritating and highly toxic gases from decomposition by heat and combustion during burning.
- Corrosive and/or toxic fume

### 11. toxicological information

#### A. Information on the likely routes of exposure

- 1) Respiratory tracts : May be harmful if swallowed and enters airways.
- 2) Oral : Not available
- 3) Eye·Skin : Causes skin irritation.





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

1) Acute toxicity : Not classified

- Oral : Rat, LD50 > 5,000 mg/kg (OECD TG 401, GLP)
- Dermal : Rabbit, LD50 > 2,000 mg/kg (OECD TG 402, GLP)
- Inhalation : Rat, LC50 > 5 . 2 mg/L 4hr (OECD TG 403, GLP)

2) Skin corrosion/irritation : Category 2

- Rabbit/semioclusive/24hour(s)/irritating (IUCLID), Rabbit/500mg/24h Moderate (TOMES)

3) Serious eye damage/irritation : Not classified

- In eyes irritation test with rabbits, irritations were not observed

4) Respiratory sensitization : Not available

5) Skin sensitization : Not classified

- In skin sensitization test with guinea pigs, sensitizations were not observed (OECD TG 406, GLP).

6) Carcinogenicity : Category 2

- KOREA-ISHL : Not listed
- IARC: Not listed
- NTP : Not listed
- ACGIH : A3
- OSHA : Not listed
- EU Regulation 1272/2008 : Not listed

7) Germ cell mutagenicity : Not available

8) Reproductive toxicity : Not available

9) STOT-single exposure : Not available

10) STOT-repeated exposure : Not available

11) Aspiration hazard : Category 2

- Classified R65 (EU CLP). Aspiration into the lungs through the mouth of the rat, it causes pulmonary edema, hemorrhage and death.

## 12. ecological information

A. Ecotoxicity :

- Acute toxicity : Category 3
- Chronic toxicity : Category 3
- 1) Fish : LC50 = 45 mg/L 96 hr Pimephales promelas
- 2) crustacean : EC50 = 21 mg/L 48 hr Daphnia magna
- 3) Algae : Not available

B. Persistence and Degradability :

- 1) Persistence : Not available
- 2) Degradability : Not available



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### C. Bioaccumulation potential :

- 1) Biodegradation : Not available
- 2) Bioaccumulation : BCF = 130 ~ 159 ((Duration of exposure 128 days, Exposure concentrations 1 mg/L, Species of test *Jordanella floridae*) (IUCLID))

### D. Mobility in soil : Not available

### E. Other adverse effects : Not available

## 13. disposal considerations

### A. Disposal method :

- Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### B. Disposal instruction :

- Consider the required attentions in accordance with waste treatment management regulation.

## 14. transport information

### A. UN classification : UN1268

### B. Proper shipping name : PETROLEUM DISTILLATES, N.O.S. OR PETROLEUM PRODUCTS, N.O.S.

### C. Class/division : 3

### D. Packing group : III

### E. Marine pollutant : Not applicable

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

- In case of fire : F-E (Non-water-reactive flammable liquids)
- In case of leakage : S-E (Flammable liquids, floating on water)

## 15. regulatory information

### A. National and/or international regulatory information

#### 1) POPs Management Law: Not applicable

#### 2) Information of EU Classification

- \* EC 1272/2008(CLP) Classification : Asp. Tox. 1
- \* EC 1272/2008(CLP) Risk Phrases : H304
- \* EC 1272/2008(CLP) Safety Phrases : P301+P310, P331, P405, P501

#### 3) U.S. Federal regulations

- \* OSHA PROCESS SAFETY (29CFR1910.119): Not applicable
- \* CERCLA Section 103 (40CFR302.4): Not applicable
- \* EPCRA Section 302 (40CFR355.30): Not applicable
- \* EPCRA Section 304 (40CFR355.40): Not applicable
- \* EPCRA Section 313 (40CFR372.65): Not applicable



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- 4) Rotterdam Convention listed ingredients: Not applicable
- 5) Stockholm Convention listed ingredients: Not applicable
- 6) Montreal Protocol listed ingredients: Not applicable
- 7) Japan listed ingredients
  - \* MITI number : Not applicable
  - \* ISHL listing status : Not applicable
  - \* ENCS listing status : Not applicable

### 16. other information

#### A. Information source and references:

- REACH information on registered substances;  
<http://apps.echa.europa.eu/registered/registered-sub.aspx>
- OECD SIDS; <http://webnet.oecd.org/hpv/ui/Search.aspx>
- International Uniform Chemical Information Database(IUCLID); <http://esis.jrc.ec.europa.eu/>
- National Institute of Technology and Evaluation(NITE);  
<http://www.safe.nite.go.jp/english/db.html>
- TOMES-LOLI® ; <http://www.rightanswerknowledge.com/loginRA.asp>
- U.S. National library of Medicine(NLM) Hazardous Substances Data Bank(HSDB);  
<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB>
- IARC Monographs on the Evaluation of Carcinogenic Risks to Humans;  
<http://monographs.iarc.fr>
- EPISUITE v4.1; <http://www.epa.gov/opt/exposure/pubs/episuitedl.htm>
- EU Regulation Np. 487/2013/EEC
- Korea Occupational Health & Safety Agency; <http://www.kosha.net>
- National Chemicals Information System; <http://ncis.nier.go.kr/ncis/>
- National Emergency Management Agency-Korea dangerous material inventory management system; <http://www.nema.go.kr/hazmat/main/main.jsp>
- Waste Control Act enforcement regulation attached [1]; <http://www.me.go.kr>
- UN Recommendations on the transport of dangerous goods 18th

B. Issue date : 2009. 07. 16

#### C. Revision number and date :

- Revision number : Rev. 9
- Revision date : 2019. 08 . 30

#### D. Other material safety data sheet information:

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled.

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