

# SAFETY DATA SHEET



## Jotun Thinner No. 42

(In accordance with Article 41, Paragraph 1, of Industrial Safety and Health Act)

### Section 1. Chemical product and company identification

- A. Product name** : Jotun Thinner No. 42  
**Label No.** : 36162  
**Product description** : Solvent.  
**Product type** : Liquid.

**B. Relevant identified uses of the substance or mixture and uses advised against**

**Identified uses**

Use in coatings - Industrial use  
Use in coatings - Professional use

- C. Supplier/Manufacturer** : Chokwang Jotun Ltd.  
96, Gwahaksandan 1-ro  
Gangseo-gu, Busan  
South Korea  
Tel: +82 51 797 6000  
Fax: +82 51 711 7735  
SDSJotun@jotun.com
- Emergency telephone number** : H.G.LEE Chokwang Jotun Ltd.  
Tel: +82 51 797 6000

### Section 2. Hazards identification

- A. Hazard classification** : FLAMMABLE LIQUIDS - Category 3  
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3  
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

**B. GHS label elements, including precautionary statements**

**Symbol** :



**Signal word** : Warning.

**Hazard statements** : Flammable liquid and vapour.  
Causes serious eye irritation.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention** : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapour. Wash hands thoroughly after handling.

## Section 2. Hazards identification

- Response** : Collect spillage. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

- C. Other hazards which do not result in classification** : None known.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

### CAS number/other identifiers

- CAS number** : Not applicable.
- EC number** : Mixture.
- Product code** : 36162

Ingredient name	Synonyms	CAS number	%
2-methoxy-1-methylethyl acetate	2-methoxy-1-methylethyl acetate	108-65-6	40-50
hydrocarbons, C9, aromatics, (<0.1% Benzene)	hydrocarbons, C9, aromatics, (<0.1% Benzene)	64742-95-6	20-30
n-butyl acetate	n-butyl acetate	123-86-4	20-30
2-methoxypropyl acetate	2-methoxypropyl acetate	70657-70-4	0.1-1

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

- A. Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- B. Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- C. Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## Section 4. First aid measures

- D. Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- E. Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Firefighting measures

- A. Extinguishing media**
- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- B. Specific hazards arising from the chemical** : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide
- C. Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

## Section 6. Accidental release measures

- A. Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flames, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- B. Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
- C. Methods and material for containment and cleaning up**

## Section 6. Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### A. Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### B. Conditions for safe storage, including any incompatibilities

- : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### A. Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
n-butyl acetate	<b>Ministry of Employment and Labor (Republic of Korea, 7/2018).</b> STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours.

- B. Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

## Section 8. Exposure controls/personal protection

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### C. Personal protective equipment

**Respiratory protection** : If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387(as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.

**Eye protection** : Use safety eyewear designed to protect against splash of liquids.

**Hand protection** : There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred. Wear suitable gloves tested to EN374. Recommended, gloves(breakthrough time) > 8 hours: Teflon, polyvinyl alcohol (PVA), butyl rubber  
Not recommended, gloves(breakthrough time) < 1 hour: neoprene, PE  
May be used, gloves(breakthrough time) 4 - 8 hours: 4H, PVC, Viton®, nitrile rubber

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Skin protection** : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## Section 9. Physical and chemical properties

### A. Appearance

**Physical state** : Liquid.

**Colour** : Clear.

**B. Odour** : Characteristic.

**C. Odour threshold** : Not available.

**D. pH** : Not applicable.

**E. Melting/freezing point** : Not applicable.

**F. Boiling point/boiling range** : Lowest known value: 126°C (258.8°F) (n-butyl acetate). Weighted average: 147.53°C (297.6°F)

## Section 9. Physical and chemical properties

- G. Flash point** : Closed cup: 30°C (86°F)  
**Burning time** : Not applicable.  
**Burning rate** : Not applicable.
- H. Evaporation rate** : Highest known value: 1 (n-butyl acetate) Weighted average: 0.53 compared with butyl acetate
- I. Flammability (solid, gas)** : Not available.
- J. Lower and upper explosive (flammable) limits** : 1.4 - 7.6%
- K. Vapour pressure** : Highest known value: 1.5 kPa (11.3 mm Hg) (at 20°C) (n-butyl acetate). Weighted average: 0.77 kPa (5.78 mm Hg) (at 20°C)
- L. Solubility** : Insoluble in the following materials: cold water and hot water.  
**Solubility in water** : Not available.
- M. Vapour density** : Highest known value: 4.6 (Air = 1) (2-methoxy-1-methylethyl acetate). Weighted average: 4.4 (Air = 1)
- N. Relative density** : 0.92 g/cm<sup>3</sup>
- O. Partition coefficient: n-octanol/water** : Not available.
- P. Auto-ignition temperature** : Lowest known value: 333°C (631.4°F) (2-methoxy-1-methylethyl acetate).
- Q. Decomposition temperature** : Not available.  
**SADT** : Not available.
- R. Viscosity** : Kinematic (40°C (104°F)): >0.205 cm<sup>2</sup>/s (>20.5 mm<sup>2</sup>/s)
- S. Molecular weight** : Not applicable.

## Section 10. Stability and reactivity

- A. Chemical stability** : The product is stable.  
**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- B. Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- C. Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
- D. Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

- A. Information on likely routes of exposure** : Not available.
- Potential acute health effects**
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : Causes serious eye irritation.
- Over-exposure signs/symptoms**

## Section 11. Toxicological information

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Ingestion** : No specific data.
- Skin contact** : No specific data.
- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

### B. Health hazards

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
n-butyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LC50 Inhalation Vapour	Rat	>21.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	13100 mg/kg	-

#### Irritation/Corrosion

Not available.

#### Sensitisation

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
2-methoxy-1-methylethyl acetate	Category 3	Not applicable.	Narcotic effects
hydrocarbons, C9, aromatics, (<0.1% Benzene)	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
n-butyl acetate	Category 3	Not applicable.	Narcotic effects
2-methoxypropyl acetate	Category 3	Not applicable.	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

## Section 11. Toxicological information

Name	Result
hydrocarbons, C9, aromatics, (<0.1% Benzene)	ASPIRATION HAZARD - Category 1

### Potential chronic health effects

#### Chronic toxicity

Not available.

<b>General</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

#### ATE value

Not available.

## Section 12. Ecological information

### A. Aquatic and terrestrial toxicity

**Ecotoxicity** : This material is toxic to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
hydrocarbons, C9, aromatics, (<0.1% Benzene)	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours

### B. Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
hydrocarbons, C9, aromatics, (<0.1% Benzene)	-	-	Not readily

### C. Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-methoxy-1-methylethyl acetate	1.2	-	low
hydrocarbons, C9, aromatics, (<0.1% Benzene)	-	10 to 2500	high
n-butyl acetate	2.3	-	low

### D. Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**E. Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations





**A. Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.



## Section 13. Disposal considerations

- B. Disposal precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	UN	IMDG	IATA
<b>A. UN number</b>	UN1263	UN1263	UN1263
<b>B. UN proper shipping name</b>	Paint related material	Paint related material. Marine pollutant (hydrocarbons, C9, aromatics, (<0.1% Benzene))	Paint related material
<b>C. Transport hazard class(es)</b>	3 	3  	3 
<b>D. Packing group</b>	III	III	III
<b>E. Environmental hazards</b>	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
<b>F. Additional information</b>	Tunnel restriction code: (D/E) Hazard identification number: 30	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <b>Emergency schedules</b> F-E, S-E	The environmentally hazardous substance mark may appear if required by other transportation regulations.

- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.

## Section 15. Regulatory information

### A. Regulation according to ISHA

**ISHA article 37 (Harmful substances prohibited from manufacture)** : None of the components are listed.

**ISHA article 38 (Harmful substances requiring permission)** : None of the components are listed.

### B. Regulation according to AREC & CCA

**AREC Toxic chemicals** : Not applicable

**AREC Article 32 (Banned)** : None of the components are listed.

**AREC Article 32 (Restricted)** : None of the components are listed.

**AREC Article 17 (TRI)** : None of the components are listed.

**Korea inventory** : All components are listed or exempted.

## Section 15. Regulatory information

- C. Dangerous Materials Safety Management Act** : Class: Class 4 - Flammable Liquid  
Item: 4. Class 2 petroleum - Water-insoluble liquid  
Threshold: 1000 L  
Danger category: III  
Signal word: Contact with sources of ignition prohibited
- D. Wastes regulation** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- E. Regulation according to other foreign laws**
- Europe inventory** : At least one component is not listed.
- United States inventory (TSCA 8b)** : Not determined.
- Japan inventory** : **Japan inventory (ENCS)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.
- Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

## Section 16. Other information

- A. References** : Not available.
- B. Date of issue/Date of revision** : 04.06.2019
- C. Version** : 1  
**Date of printing** : **04.06.2019**
- D. Other**
- ✔ Indicates information that has changed from previously issued version.

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

### Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.