

Aluflex

Section 1. Identification

| | |
|--------------------------------------|------------------|
| GHS product identifier | : Aluflex |
| Other means of identification | : Not available. |
| Product code | : 344 |
| Product description | : Paint. |
| Product type | : Liquid. |

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Professional spray painting, near-industrial setting
 Professional low-energy painting, near-industrial setting
 Professional spray painting, indoor (Level II)
 Professional painting, indoor brush/roller
 Professional spray painting, outdoor (Level II)
 Professional painting, outdoor brush/roller
 Use in coatings - Industrial use
 Use in coatings - Professional use

| | |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Supplier's details | : Jotun (Singapore) Pte Ltd 37 Tuas View Crescent Singapore 637236 Phone: 6508 8288 Fax: 6265 7484 SDSJotun@jotun.com |
| Emergency telephone number | : Jotun (Singapore) Pte Ltd, Tel: 6508 8288 |

Section 2. Hazards identification

| | |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification of the substance or mixture | : FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

GHS label elements

Hazard pictograms



Signal word : Danger.

Hazard statements : H226 - Flammable liquid and vapour.
 H336 - May cause drowsiness or dizziness.
 H372 - Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS))
 H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapour or spray.
 P270 - Do not eat, drink or smoke when using this product.

Section 2. Hazards identification

- Response** : P391 - Collect spillage.
P314 - Get medical advice/attention if you feel unwell.
P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
- Storage** : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 - Keep cool.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

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** : 344

| Ingredient name | % | CAS number |
|-------------------------------------------------------------------------|-----------|------------|
| hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | ≥25 - ≤50 | 64742-82-1 |
| hydrocarbons, C9, aromatics | ≤5 | 64742-95-6 |

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.

Chemical formula : Not applicable.

Section 4. First aid measures

Description of necessary first aid measures

- 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 following exposure or if feeling unwell.
- 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.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : May cause drowsiness or dizziness.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

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

Indication of immediate medical attention and special treatment needed, if necessary

- 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

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

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
metal oxide/oxides

Special protective actions 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.

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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : 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 spilt material. Shut off all ignition sources. No flares, 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.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilt 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.

Methods and material for containment and cleaning up

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

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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.

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 oxidising 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

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Workplace Safety and Health Act (Singapore, 2/2006). PEL (long term): 100 ppm 8 hours. PEL (long term): 525 mg/m ³ 8 hours. |

Section 8. Exposure controls/personal protection

- 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.
- 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.
- Individual protection measures**
- 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.
- Eye/face protection** : Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- 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 ISO 374-1:2016. Recommended, gloves(breakthrough time) > 8 hours: nitrile rubber (> 0.4 mm)
- 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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

| | |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical state | : Liquid. |
| Colour | : Aluminium |
| Odour | : Characteristic. |
| Odour threshold | : Not available. |
| pH | : Not applicable. |
| Melting point | : Not applicable. |
| Boiling point | : Lowest known value: 142 to 200°C (287.6 to 392°F)(hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)). Weighted average: 180.63°C (357.1°F) |
| Flash point | : Closed cup: 38°C (100.4°F) |
| Burning time | : Not applicable. |
| Burning rate | : Not applicable. |
| Evaporation rate | : 0.11 (hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)) compared with butyl acetate |
| Flammability (solid, gas) | : Not applicable. |
| Lower and upper explosive (flammable) limits | : 1.4 - 7.6% |
| Vapour pressure | : Highest known value: 2.7 kPa (20.3 mm Hg) (at 20°C) (hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)). Weighted average: 2.39 kPa (17.93 mm Hg) (at 20°C) |
| Vapour density | : Not available. |
| Relative density | : 0.948 g/cm ³ |
| Solubility | : Insoluble in the following materials: cold water and hot water. |
| Solubility in water | : Not available. |
| Partition coefficient: n-octanol/water | : Not available. |
| Auto-ignition temperature | : Lowest known value: 256 to 266°C (492.8 to 510.8°F) (Fatty acids, C16-18 and C18-unsatd., Me esters). |
| Decomposition temperature | : Not available. |
| SADT | : Not available. |
| Viscosity | : Dynamic: Highest known value: 3.8 cP (Fatty acids, C16-18 and C18-unsatd., Me esters) Kinematic (40C): >20.5 cSt |

Section 10. Stability and reactivity

| | |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : The product is stable. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| 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. |
| Incompatible materials | : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids. |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| SADT | : Not available. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

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 |
|-------------------------------------------------------------------------|------------|-------------------|------------------------------|
| hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Category 3 | - | Narcotic effects |
| hydrocarbons, C9, aromatics | Category 3 | - | Respiratory tract irritation |
| | Category 3 | | Narcotic effects |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|-------------------------------------------------------------------------|------------|-------------------|------------------------------|
| hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Category 1 | - | central nervous system (CNS) |

Aspiration hazard

| Name | Result |
|-------------------------------------------------------------------------|--------------------------------|
| hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | ASPIRATION HAZARD - Category 1 |
| hydrocarbons, C9, aromatics | ASPIRATION HAZARD - Category 1 |

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : May cause drowsiness or dizziness.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

Section 11. Toxicological information

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------------------------------------------------------|---------------------|---------|----------|
| hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | Acute EC50 <10 mg/l | Daphnia | 48 hours |
| hydrocarbons, C9, aromatics | Acute IC50 <10 mg/l | Algae | 72 hours |
| | Acute LC50 <10 mg/l | Fish | 96 hours |
| | Acute EC50 <10 mg/l | Daphnia | 48 hours |
| | Acute IC50 <10 mg/l | Algae | 72 hours |
| | Acute LC50 <10 mg/l | Fish | 96 hours |

Persistence/degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------------------------------------------------------|-------------------|------------|------------------|
| hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | - | - | Not readily |
| hydrocarbons, C9, aromatics | - | - | Not readily |

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------------------------------------------------------|--------------------|------------|-----------|
| hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | - | 10 to 2500 | high |
| hydrocarbons, C9, aromatics | - | 10 to 2500 | high |

Mobility in soil





Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

- 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. 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.
- Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

Section 14. Transport information

| | UN | IMDG | IATA |
|-----------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| UN number | UN1263 | UN1263 | UN1263 |
| UN proper shipping name | Paint | Paint. Marine pollutant (hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)) | Paint |
| Transport hazard class(es) | 3  | 3   | 3  |
| Packing group | III | III | III |
| Environmental hazards | Yes. The environmentally hazardous substance mark is not required. | Yes. | Yes. The environmentally hazardous substance mark is not required. |
| Additional information | - | The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E, S-E | The environmentally hazardous substance mark may appear if required by other transportation regulations. |

Additional information

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

- ADR / RID** : Tunnel restriction code: (D/E)
Hazard identification number: 30

- 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 bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

[Singapore - hazardous chemicals under government control](#)

None.

Section 16. Other information

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

References : Not available.

✔ Indicates information that has changed from previously issued version.

[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.