# SAFETY DATA SHEET

## n-Heptane

### Section 1. Identification

<table>
<thead>
<tr>
<th>GHS product identifier</th>
<th>n-Heptane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>heptane</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>n-heptane; Heptane (n-Heptane)</td>
</tr>
<tr>
<td>Product use</td>
<td>Synthetic/Analytical chemistry.</td>
</tr>
<tr>
<td>Synonym</td>
<td>n-heptane; Heptane (n-Heptane)</td>
</tr>
<tr>
<td>SDS #</td>
<td>001108</td>
</tr>
<tr>
<td>Supplier's details</td>
<td>Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253</td>
</tr>
<tr>
<td>Emergency telephone number (with hours of operation)</td>
<td>1-866-734-3438</td>
</tr>
</tbody>
</table>

### Section 2. Hazards identification

<table>
<thead>
<tr>
<th>OSHA/HCS status</th>
<th>This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification of the substance or mixture</td>
<td>FLAMMABLE LIQUIDS - Category 1  SKIN CORROSION/IRRITATION - Category 2  SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  AQUATIC HAZARD (ACUTE) - Category 1  AQUATIC HAZARD (LONG-TERM) - Category 1</td>
</tr>
</tbody>
</table>

**GHS label elements**

**Hazard pictograms**

- ![Flammable Liquid](image-url)
- ![Danger](image-url)
- ![Aqueous Tox](image-url)

**Signal word**

- Danger

**Hazard statements**

- Extremely flammable liquid and vapor.
- May form explosive mixtures with air.
- Causes skin irritation.
- May cause drowsiness and dizziness.
- Very toxic to aquatic life.
- Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

<table>
<thead>
<tr>
<th>General</th>
<th>Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - 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 vapor. Wash hands thoroughly after handling.</td>
</tr>
</tbody>
</table>

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Section 2. Hazards identification

Response: Collect spillage. IF INHALED: Remove victim to fresh air and keep at rest in a position 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 ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: 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.

Hazards not otherwise classified: None known.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>heptane</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>n-heptane; Heptane (n-Heptane)</td>
</tr>
</tbody>
</table>

CAS number/other identifiers:

<table>
<thead>
<tr>
<th>CAS number</th>
<th>142-82-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>001108</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>heptane</td>
<td>100</td>
<td>142-82-5</td>
</tr>
</tbody>
</table>

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

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.

**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. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**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.
Section 4. First aid measures

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

**Eye contact**: Causes serious eye irritation.

**Inhalation**: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

**Skin contact**: Causes skin irritation.

**Frostbite**: Try to warm up the frozen tissues and seek medical attention.

**Ingestion**: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

**Eye contact**: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

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

**Skin contact**: Adverse symptoms may include the following:
- irritation
- redness

**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. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**: Use dry chemical, CO₂, water spray (fog) or foam.

**Unsuitable extinguishing media**: Do not use water jet.
Section 5. Fire-fighting measures

Specific hazards arising from the chemical: Extremely flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is very 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

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor 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".

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.

Methods and materials 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 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 spilled 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 ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor 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.

**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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| heptane         | ACGIH TLV (United States, 3/2012).  
|                 | STEL: 2050 mg/m³ 15 minutes.  
|                 | STEL: 500 ppm 15 minutes.  
|                 | TWA: 1640 mg/m³ 8 hours.  
|                 | TWA: 400 ppm 8 hours.  
|                 | NIOSH REL (United States, 1/2013).  
|                 | CEIL: 1800 mg/m³ 15 minutes.  
|                 | CEIL: 440 ppm 15 minutes.  
|                 | TWA: 350 mg/m³ 10 hours.  
|                 | TWA: 85 ppm 10 hours.  
|                 | OSHA PEL (United States, 6/2010).  
|                 | TWA: 2000 mg/m³ 8 hours.  
|                 | TWA: 500 ppm 8 hours.  
|                 | STEL: 2000 mg/m³ 15 minutes.  
|                 | STEL: 500 ppm 15 minutes.  
|                 | TWA: 1600 mg/m³ 8 hours.  
|                 | TWA: 400 ppm 8 hours.  |

**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, vapor 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.

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 with an approved standard 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: chemical splash goggles.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state: Liquid. [Watery liquid.]
Color: Colorless.
Molecular weight: 100.23 g/mole
Molecular formula: C7-H16
Boiling/condensation point: 98.5°C (209.3°F)
Melting/freezing point: -90.6°C (-131.1°F)
Critical temperature: 266.85°C (512.3°F)
Odor: Characteristic.
Odor threshold: Not available.
pH: Not available.
Flash point: Closed cup: -3.89°C (25°F)
Burning time: Not applicable.
Burning rate: Not applicable.

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Date of previous issue: 10/28/2014.
Version: 0.02
**n-Heptane**

### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>3.18 (butyl acetate = 1)</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Lower: 1.05%</td>
</tr>
<tr>
<td></td>
<td>Upper: 6.7%</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>4.6 kPa (34.502803352 mm Hg) [room temperature]</td>
</tr>
<tr>
<td>Vapor density</td>
<td>3.46 (Air = 1)</td>
</tr>
<tr>
<td>Specific Volume (ft³/lb)</td>
<td>1.462</td>
</tr>
<tr>
<td>Gas Density (lb/ft³)</td>
<td>0.684</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.68</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>4.66</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>285°C (545°F)</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>SADT</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Kinematic (room temperature): 0.00641 cm²/s (0.641 cSt)</td>
</tr>
</tbody>
</table>

### 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 pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
- **Incompatibility with various substances**: Extremely reactive or incompatible with the following materials: oxidizing materials.
- **Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **Hazardous polymerization**: Under normal conditions of storage and use, hazardous polymerization will not occur.

### Section 11. Toxicological information

#### Information on toxicological effects

- **Acute toxicity**
  - **Product/ingredient name**: n-Heptane
  - **Result**: LC50 Inhalation Gas.
    - **Species**: Rat
    - **Dose**: 48000 ppm
    - **Exposure**: 4 hours
  - **Result**: LC50 Inhalation Vapor
    - **Species**: Rat
    - **Dose**: 50242 ppm
    - **Exposure**: 1 hour
  - **Result**: LC50 Inhalation Vapor
    - **Species**: Rat
    - **Dose**: 103 g/m³
    - **Exposure**: 4 hours

- **Irritation/Corrosion**

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**Date of previous issue**: 10/28/2014
**Version**: 0.02

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Section 11. Toxicological information

Not available.

**Sensitization**
Not available.

**Mutagenicity**
Not available.

**Carcinogenicity**
Not available.

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>heptane</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity (repeated exposure)**
Not available.

**Aspiration hazard**
Not available.

**Information on the likely routes of exposure**
Not available.

**Potential acute health effects**

**Eye contact**: Causes serious eye irritation.

**Inhalation**: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

**Skin contact**: Causes skin irritation.

**Ingestion**: Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact**: Adverse symptoms may include the following: pain or irritation, watering, redness.

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

**Skin contact**: Adverse symptoms may include the following: irritation, redness.

**Ingestion**: No specific data.
Section 11. Toxicological information

Delayed and immediate effects and also 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 : No known significant effects or critical hazards.
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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>heptane</td>
<td>Acute LC50 375000 µg/l Fresh water</td>
<td>Fish - Oreochromis mossambicus</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>heptane</td>
<td>4.66</td>
<td>552</td>
<td>high</td>
</tr>
</tbody>
</table>

Mobility in soil

| Soil/water partition coefficient (K<sub>OC</sub>) | 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 minimized 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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>Mexico</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN1206</td>
<td>UN1206</td>
<td>UN1206</td>
<td>UN1206</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Heptanes</td>
<td>Heptanes</td>
<td>Heptanes</td>
<td>Heptanes</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>Additional information</td>
<td>-</td>
<td>Explosive Limit and Limited Quantity Index 1</td>
<td>-</td>
<td>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</td>
</tr>
</tbody>
</table>

“Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.”

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 Annex II of MARPOL 73/78 and the IBC Code: Not available.
Section 15. Regulatory information

U.S. Federal regulations
- TSCA 8(a) PAIR: heptane
- TSCA 8(a) CDR Exempt/Partial exemption: Not determined
- TSCA 12(b) one-time export: heptane
- United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed
Clean Air Act Section 602 Class I Substances: Not listed
Clean Air Act Section 602 Class II Substances: Not listed
DEA List I Chemicals (Precursor Chemicals): Not listed
DEA List II Chemicals (Essential Chemicals): Not listed

New York: This material is not listed.
New Jersey: This material is listed.
Pennsylvania: This material is listed.

SARA 302/304
Composition/information on ingredients
No products were found.
SARA 304 RQ: Not applicable.
SARA 311/312
Classification: Fire hazard
Immediate (acute) health hazard

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>heptane</td>
<td>100</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
</tbody>
</table>

State regulations
Massachusetts: This material is listed.
New York: This material is not listed.
New Jersey: This material is listed.
Pennsylvania: This material is listed.
Canada inventory: This material is listed or exempted.

International regulations
International lists
- Australia inventory (AICS): This material is listed or exempted.
- China inventory (IECSC): This material is listed or exempted.
- Japan inventory: This material is listed or exempted.
- Korea inventory: This material is listed or exempted.
- Malaysia Inventory (EHS Register): Not determined.
- New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
- Philippines inventory (PICCS): This material is listed or exempted.
- Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals: Not listed

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**Section 15. Regulatory information**

**Chemical Weapons Convention List Schedule II Chemicals**
- Not listed

**Chemical Weapons Convention List Schedule III Chemicals**
- Not listed

**Canada**

**WHMIS (Canada)**
- Class B-2: Flammable liquid
- Class D-2B: Material causing other toxic effects (Toxic).
- CEPA Toxic substances: This material is not listed.
- Canadian ARET: This material is not listed.
- Canadian NPRI: This material is listed.
- Alberta Designated Substances: This material is not listed.
- Ontario Designated Substances: This material is not listed.
- Quebec Designated Substances: This material is not listed.

**Section 16. Other information**

**Canada Label requirements**
- Class B-2: Flammable liquid
- Class D-2B: Material causing other toxic effects (Toxic).

**Hazardous Material Information System (U.S.A.)**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

**National Fire Protection Association (U.S.A.)**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability/Reactivity</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**History**

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Section 16. Other information

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Version : 0.02  
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  
UN = United Nations  
ACGIH – American Conference of Governmental Industrial Hygienists  
AIHA – American Industrial Hygiene Association  
CAS – Chemical Abstract Services  
CEPA – Canadian Environmental Protection Act  
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)  
CPR – Controlled Products Regulations  
DSL – Domestic Substances List  
GWP – Global Warming Potential  
IARC – International Agency for Research on Cancer  
ICAO – International Civil Aviation Organisation  
Inh – Inhalation  
LC – Lethal concentration  
LD – Lethal dosage  
NDSL – Non-Domestic Substances List  
NIOSH – National Institute for Occupational Safety and Health  
TDG – Canadian Transportation of Dangerous Goods Act and Regulations  
TLV – Threshold Limit Value  
TSCA – Toxic Substances Control Act  
WEEL – Workplace Environmental Exposure Level  
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.