

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

| | |
|----------------|---------------|
| Common name | n-Hexane |
| Chemical name | Normal Hexane |
| Chemical class | Alkane |

1.2 Relevant identified uses of the substances or mixture and of the company/undertaking

Solvent, adhesives

1.3 Details of the supplier of the safety data sheet

| | |
|------------------------|---|
| Manufacturer | South Hampton Resources, Inc. 7752 FM 418 West Silsbee, Texas 77656 USA Tel: + 1 409-385-8300 E mail: customerservice@southhamptonr.com |
| EU Only Representative | TSGE Concordia House, St James Business Park, Grimbald Crag Court, Knaresborough, North Yorkshire, HG5 8QB, United Kingdom Tel: +44 (0) 1423 799 633 Fax: +44 (0) 1423 797 804 |

1.4 Emergency telephone number

In case of emergency Tel. +1 703 527 3887 (CHEMTREC)

Section 2. Hazards Identification

2.1 GHS Classification

Flammable Liquid, Category 2
Aspiration Toxicity, Category 1
Specific Target Organ Systemic Toxicity Repeated Exposure, Category 2
Reproductive Toxicity, Category 2
Specific Target Organ Systemic Toxicity Single Exposure, Category 3
Skin Irritation, Category 2
Acute Aquatic Toxicity, Category 2
Chronic Aquatic Toxicity, Category 2

2.2 GHS Label elements

Pictograms:



Signal Word: Danger

Hazard Statements

- H225 Highly flammable liquid and vapour
 H304 May be fatal if swallowed and enters airways
 H315 Causes skin irritation
 H336 May cause drowsiness or dizziness
 H361 Suspected of damaging fertility
 H373 May cause damage to peripheral nervous system through prolonged or repeated exposure
 H411 Toxic to aquatic life with long lasting effects

Precautionary statements:

- P210 Keep away from heat/ sparks/open flames/hot surfaces. — No smoking.
 P240+P243 Ground/bond container and receiving equipment. Take precautionary measures against static discharge.
 P273+P202 Avoid release to the environment. Do not handle until all safety precautions have been read and understood
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P310+P331 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P370+P378 In case of fire: Use foam, carbon dioxide or dry powder extinguisher for extinction.
 P403+P235+P233 Store in a well-ventilated place. Keep cool. Keep container tightly closed

Section 3. Composition

| Name | EC No | CAS No | Concentration |
|--------------------|-----------|-----------|---------------|
| n-Hexane | 203-777-6 | 110- 54-3 | >65 w% |
| Methylcyclopentane | 202-503-2 | 96-37-7 | 10-25 w% |
| 2-Methylpentane | 203-523-4 | 107-83-5 | 1-10 w% |
| 3-Methylpentane | 202-481-4 | 96-14-0 | 10-20 w% |
| Cyclohexane | 203-806-2 | 110-82-7 | 0-2 w% |

Section 4. First Aid Measures

4.1 Description of first aid measures

Inhalation

If breathing difficulties, dizziness, or light-headedness occur when working in areas with high vapour concentrations, remove victim to fresh air. If victim experiences continued breathing difficulties, keep patient warm and at rest, and seek medical attention. If breathing stops, begin artificial respiration and seek immediate medical attention.

Skin contact

If this product comes into contact with the skin. Remove contaminated clothing and wash with soap and water before re-use. Seek medical attention if irritation persists.

Accidental eye contact

If this product comes into contact with the eyes, flush with large quantities of water for several minutes, while gently holding the eyelids open. Seek medical attention if irritation persists.

Ingestion

If this product is swallowed, DO NOT INDUCE VOMITING. Give small quantities (<250 ml) of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention

Notes to doctor/physician

Aspiration of solvent may cause chemical pneumonitis.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: n-Hexane may cause dizziness and drowsiness if inhaled, and high concentrations may result in central nervous system depression, and loss of consciousness. Repeated or prolonged exposure to n-hexane may cause peripheral neuropathy, with symptoms including weakness and numbness of the extremities, headache and blurred vision.

Ingestion: Symptoms of ingestion may include nausea, vomiting, as well as symptoms of dizziness, drowsiness and central nervous system depression. If vomiting occurs, n-hexane may be aspirated into the lungs, with a risk of chemical pneumonitis.

Reproductive toxicity: n-Hexane is classified as hazardous to reproduction. n-Hexane has been found to cause testicular damage in laboratory animals.

4.3 Indication of any immediate attention and special treatment needed

If ingested, seek medical attention immediately. If product comes in contact with either the skin or the eyes immediately flush with water for at least 15 minutes.

Section 5. Firefighting Measures

5.1 Extinguishing media

Small fires: Use foam, carbon dioxide or dry powder extinguisher.

Large fires: Use foam to extinguish fires. Water spray should not be used, as n-hexane is lighter than water and may form pools of burning liquid on top of water. Keep adjacent containers cool using water spray.

5.2 Special hazards arising from the substance or mixture

n-Hexane is extremely flammable. Remove all sources of ignition. Vapors are heavier than air and may travel considerable distances to a source of ignition and flash back. Vapor/air mixtures may be explosive. Electrostatic discharges may cause fire and/or explosion.

5.3 Advice for fire-fighters

Wear positive pressure Self Contained Breathing Apparatus.

5.4 Evacuation

If tank, rail car, or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions, also, consider initial evacuation for 300 meters (1/2 mile) in all directions.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all ignition sources and evacuate unnecessary personnel from the area. Ventilate the area if possible. Wear suitable protective clothing including solvent resistant gloves and coveralls. If vapor concentrations are high, respiratory protective equipment may be required. See section 8 for more information.

6.2 Environmental precautions

Prevent entry into sewers and watercourses. If product enters sewers or watercourses, inform the appropriate environmental authorities.

6.3 Method for cleaning up

Small spills: Remove all ignition sources. Use non-sparking hand tools. Take precautions to avoid electrostatic discharge. Absorb spillage in a non-combustible absorbent, e.g. sand or vermiculite, and place in a suitable container for disposal.

Large spills: Remove all ignition sources. Use non-sparking hand tools. Contain spill and cover if possible to reduce evaporation. Transfer to a suitable container by mechanical means. Take precautions to avoid static discharge, e.g. by grounding (earthing) containers, etc. Consider initial downwind evacuation for at least 300 meters (1,000 feet).

6.4 Reference to other sections

Refer to section 8 of SDS for personal protection details.

Section 7. Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Use only in well ventilated areas. n-Hexane is extremely flammable. Avoid contact with all ignition sources, including hot surfaces. Take precautions to avoid electrostatic discharges, such as grounding of containers and equipment, and restricting flow rates. Vapors are heavier than air and may accumulate in low lying areas and below ground areas such as ducts and sewers.

7.2 Condition for safe storage, including any incompatibilities

Store in a well ventilated area away from all ignition sources. If stored in drums, keep out of direct sunlight.

Section 8. Exposure Controls/Personal Protection

8.1 Control parameters

| Substance | TWA | IDLH | Source, Type |
|-------------|--------------------------------|----------|--------------|
| n-Hexane | 50 ppm 180 mg/m ³ | | NIOSH (REL) |
| n-Hexane | 500 ppm 1800 mg/m ³ | | OSHA (PEL) |
| n-Hexane | | 1100 ppm | NIOSH |
| Cyclohexane | 200 ppm 700 mg/m ³ | | NIOSH |

8.2 Exposure controls

Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids. General mechanical ventilation may be sufficient to keep product vapor concentrations within specified time-weighted TLV ranges. If general ventilation proves inadequate to maintain safe vapor concentrations, supplemental local exhaust may be required. Other special precautions such as respiratory masks or environmental containment devices may be required in extreme cases.

Respiratory protection

Use only in well ventilated area. If exposure levels are likely to exceed the OEL then suitable respiratory protection will be required. Very high vapor concentrations may result in oxygen displacement and self-contained breathing apparatus or airline may be required.

Hand Protection

Wear suitable chemical resistant gloves recommended for use with hydrocarbon solvent. Nitrile gloves may be suitable, but glove manufacturers' specifications should always be checked first. Natural rubber gloves are not suitable. Change gloves in accordance with manufacturer recommendations. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves.

Eye protection

Wear suitable eye protection, safety glasses or goggles, when handling this product.

Skin protection

Aprons or coveralls are recommended. These should be changed after use or if contaminated. Wash before re-use.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

| | |
|--|--------------------|
| Appearance: | Colorless Liquid |
| Odor: | Gasoline-like odor |
| pH: | not applicable |
| Melting point/freezing point °C: | not applicable |
| Approximate boiling range: | 150-161°F/65-72°C |
| Flash point: | -9°F/-23°C |
| Evaporation rate: | not available |
| Flammability limits in air: | |
| Lower: | 1.1 v% |
| Upper: | 8.7 v% |
| Reid vapor pressure at 100°F: | 6.3 psia |
| Vapor density | 3.0 |
| Relative density at 60°F: | 0.68 kg/l |
| Solubility: | negligible |
| Partition Coefficient: n-octanol/water: | 3.6 |
| Auto-ignition temperature: | 473°F/245°C |
| Viscosity: | not applicable |

9.2 Sources of Information

1. Company product testing
2. Hawley's Condensed Chemical Directory revised by N. Irving Sax and Richard J. Lewis
3. CHRIS directory

Section 10. Stability and Reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

Keep away from sources of ignition.

10.5 Incompatible materials

This product is incompatible with strong oxidizing agents, strong acids and bases, and selected amines.

10.6 Hazardous decomposition products

None

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

LD₅₀ (Rat, oral) 28,700 mg/kg.

LC₅₀ (Rat, inhalation) 271,040 mg/m³ (77 000 ppm) 1 hour

However, it can be harmful when inhaled in high concentrations or ingested. n-Hexane may cause dizziness and drowsiness if inhaled, and high concentrations may result in central nervous system depression, and loss of consciousness. Symptoms of ingestion may include nausea, vomiting, as well as symptoms of dizziness, drowsiness and central nervous system depression. If vomiting occurs, n-hexane may be aspirated into the lungs, with a risk of chemical pneumonitis.

Irritation: n-Hexane can be classified as irritating to the eye; may cause redness and irritation at high vapor concentrations or if splashed into the eye. n-Hexane is classified as irritating to the skin, and may produce redness and irritation. Prolonged or repeated contact of this product will result in defatting of the skin, causing dryness and cracking.

Corrosivity: Not corrosive

Sensitisation: Not known to be a sensitiser

Repeated dose toxicity: Repeated or prolonged exposure to n-hexane may cause peripheral neuropathy, with symptoms including weakness and numbness of the extremities, headache and blurred vision.

Carcinogenicity: Not expected to be carcinogenic.

Mutagenicity: Not expected to be mutagenic

Toxicity for reproduction: n-Hexane is classified as hazardous to reproduction. n-Hexane has been found to cause testicular damage in laboratory animals.

Route of exposure: Inhalation and Ingestion

Symptoms related to the physical, chemical and toxicological characteristics: nausea, vomiting, as well as symptoms of dizziness, drowsiness and central nervous system depression. If vomiting occurs, n-Hexane may be aspirated into the lungs, with a risk of chemical pneumonitis. n-Hexane may cause dizziness and drowsiness if inhaled, and high concentrations may result in central nervous system depression, and loss of consciousness.

Section 12. Ecological Information

12.1 Toxicity

LC₅₀ (*Daphnia magna*) >50 mg/l (24 hr)
LC₅₀ (Goldfish) 4 mg/l (24 hr)

n-Hexane is classified as toxic to aquatic organisms and likely to cause long term effects in the environment.

12.2 Persistence and degradability

n-Hexane is expected to be inherently biodegradable in aquatic systems, however, in view of its high evaporation rate, n-hexane is expected to volatilize rapidly from water sources into the atmosphere, where it will be degraded by photochemical reaction.

12.3 Bioaccumulative potential

No Information available.

12.4 Mobility in soil

No Information available.

12.5 Results of PBT and vPvB assessment

No Information available.

12.6 Other adverse effects

None reported

Section 13. Disposal Considerations

13.1 Waste treatment methods

Recover and recycle product if possible. If recovery and recycling are not possible, n-hexane may be disposed of by incineration.

Please follow all local, regional, national and international laws.

Section 14. Transport Information

14.1 UN number

1208

14.2 US DOT (United States Department of Transportation) (Domestic)

| | | |
|---------------------------|----------|-------------------|
| UN-Number: 1208 Class: | 3 | Packing group: II |
| Proper shipping name: | Hexanes | |
| Reportable Quantity (RQ): | 5000 lbs | |
| Marine pollutant: | Yes | |
| Poison Inhalation Hazard: | No | |

14.3 IMO/IMDG (International Maritime Dangerous Goods) (Water)

| | | |
|------------------------|---|------------------------------------|
| UN-Number: 1208 Class: | 3 | Packing group: II EMS-No: F-E, S-D |
|------------------------|---|------------------------------------|

Proper shipping name: HEXANES
Marine pollutant: Yes

14.4 IATA

UN-Number: 1208 Class: 3 Packing group: II
Proper shipping name: Hexanes

14.5 Additional information

This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packaging meet the general provisions of §§ 173.24 and 173.24a.

14.6 Reportable quantity

9090.9 lbs / 4127.3 kg [1603.4 gal / 6069.5 L]

Section 15. Regulatory Information

15.1 Clean Air Act

- This product neither contains nor was it manufactured with any class 1 or class2 ozone depleting substances.
- None of the components of this product have a threshold quantity under section 112 (r), 40 CFR Part 68.

15.2 Emergency Planning and Community Right to Know (EPCRA)

- Section 302- This product does not contain any constituents that are classified as an extremely hazardous substance.
- Section 311/312- This product is considered a fire hazard, an acute health hazard, and a chronic health hazard.
- Section 313- Cyclohexane and n-hexane, both constituents of this product, are considered toxic chemicals.

15.3 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- N-hexane has a CERCLA reportable quantity of 5000 lbs.
- Cyclohexane has a CERCLA reportable quantity of 1000 lbs.

15.4 California Office of Environmental Health Hazard Assessment.

- Proposition 65- This product contains none of the chemicals which may cause cancer or birth defects as listed in this legislation.

15.5 Coalition of Northeast Governors (CONEG)

- This product contains no lead, mercury, cadmium, or hexavalent chromium.

15.6 New Jersey Right-to-Know

- All constituents of this product except 3-methylpentane appear on this state's hazardous substance list.

15.7 Pennsylvania Right-to-Know

- All constituents of this product appear on this state's hazardous substance list.

15.8 Toxic Substance Control Act (TSCA)

- All constituents of this product are listed in TSCA.

Section 16. Other Information

Hazard Ratings:

GHS:

Health: 4
Flammability: 2
Reactivity: 5

NFPA:

Health: 1
Fire: 3
Reactivity: 0
Specific Hazard: None

The above information is believed to be correct as of the date hereof. However no warranty of merchantability fitness for any use or any other warranty is expressed or is to be implied regarding the accuracy of this data, the results to be obtained from the use of the material, or the hazards connected with such use. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar, and since data made available subsequent to the data hereof may suggest modification of the information, we do not assume responsibility for the results of its use. This information is furnished on the condition that the person receiving it shall make his own determination as to the suitability of the material for his particular purpose and on the condition that he assumes the risk of his use thereof.