

# SAFETY DATA SHEET



## Isohexane

This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with the material, as well as describing potential risks to the consumer and the environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material. This Safety Data Sheet is prepared in accordance with formatting described in the Regulation (EU) No 453/2010, and described in CLP Regulation (EC) No 1272/2008.

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

#### 1.1 Product identifier

Common name	<b>Isohexane</b>
Chemical class	Low boiling aliphatic hydrocarbon
REACH registration	This substance is derived from natural gas condensate and meets the criteria for exemption from REACH registration under Annex V.

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

Solvent

#### 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: <a href="mailto:customerservice@southhamptonr.com">customerservice@southhamptonr.com</a>
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)
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### Section 2. Hazards Identification

#### 2.1 Classification of the mixture

<b>Classification under CHIP:</b>	[F], R11; [Xn], R38, R65, R67; [N], R51/53
<b>Classification under CLP:</b>	Flam. Liq. 2, H225, Asp. Tox. 1, H304, Skin Irrit. 2, H315, STOT SE 3, H336, Aquatic Chronic 2, H411

**Physicochemical hazards:** Isohexane is extremely flammable. . Vapours are heavier than air and may travel considerable distances to a source of ignition and flash back. Vapour/air mixtures may be explosive.

**Human health:** Isohexane may cause dizziness and drowsiness if inhaled, and high concentrations may result in central nervous system depression, and loss of consciousness. Prolonged or repeated skin contact with isohexane will result in defatting of the skin, causing dryness and cracking.

**Environment:** Isohexane is classified as toxic to aquatic organisms and likely to cause long term effects in the environment, however, in view of its high evaporation rate, Isohexane is expected to volatilise rapidly from water sources into the atmosphere, where it will be degraded by photochemical reaction.

Please see Section 16 for full text of each classification.

## 2.2 Label elements

Regulation (EC) No 1272/2008:



### 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
- H411 Toxic to aquatic life with long lasting effects

### Precautionary statements:

- P210 Keep away from heat/ sparks/open flames/hot surfaces. — No smoking.
- P243+P240 Take precautionary measures against static discharge. Ground/bond container and receiving equipment.
- P273 Avoid release to the environment.
- P301+P310+P331 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
- P370+P378 In case of fire: Use foam, carbon dioxide or dry powder for extinction.
- P403+P235 Store in a well-ventilated place. Keep cool. Keep container tightly closed

## 2.3 Other hazards

<b>PBT:</b>	No information available
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**Section 3. Composition**

Name	EC No	CAS No	Concentration	Classification according to CHIP	Classification according to CLP
Hexane isomers (includes 2-methylpentane; 3-methylpentane; 2, 2-dimethylbutane; and 2, 3-dimethylbutane)	Index no 601-007-00-7	107-83-5	90-100%	F; R11, Xn; R65, Xi; R38, R67, N; R51-53	Flam. Liq.2, H225; Asp. Tox 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H 411.
n-Pentane	203-692-4	109-66-0	0-10%	F+; R12, Xn; R65, R66, R67, N; R51-53	Flam. Liq. 1, H224; Asp. Tox 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H 411.
n-Hexane	203-777-6	110-54-3	<5%	F; R11, Repr. Cat. 3; R62, Xn; R65-48/20, Xi; R38, R67, N; R51-53	Flam. Liq.2, H225; Repr 2 H361f ; Asp. Tox 1, H304; STOT RE 2 H373; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H 411.

See section 16 for full description of the text of each classification.

**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. Seek medical attention if irritation persists. Wash contaminated clothing before re-use.

**Accidental eye contact**

If this product comes into contact with the eyes, flush with large quantities of water for several minutes, whilst 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:** Isohexane may cause dizziness and drowsiness if inhaled, and high concentrations may result in central nervous system depression, and loss of consciousness. Animal studies have shown that isohexane is less neurotoxic than n-hexane.

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

#### **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. 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.

### **Section 5. Firefighting Measures**

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#### **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 isohexane 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**

Isohexane is extremely flammable. Remove all sources of ignition. Vapours are heavier than air and may travel considerable distances to a source of ignition and flash back. Vapour/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 and fire kit.

### **Section 6. Accidental Release Measures**

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#### **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 vapour 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.

#### **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. Isohexane is extremely flammable. Avoid contact with all ignition sources, including hot surfaces. Take precautions to avoid electrostatic discharges, such as grounding (earthing) of containers and equipment, and restricting flow rates. Vapours 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, bunded area, away from all ignition sources. If stored in drums, keep out of direct sunlight.

**7.3 Specific end use(s)**

No further details

**Section 8. Exposure Controls/Personal Protection****8.1 Control parameters**

Substance	8 hour exposure limit	15 minute exposure limit	Source, Type
n-Hexane	20 ppm 72 mg/m <sup>3</sup>		EU IOELV
n-Hexane	20 ppm 72 mg/m <sup>3</sup>		UK EH40
Pentane	1000 ppm 3000 mg/m <sup>3</sup>		EU IOELV
Pentane	600 ppm 1800 mg/m <sup>3</sup>		UK EH40

**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 vapour concentrations within specified time-weighted TLV ranges. If general ventilation proves inadequate to maintain safe vapour 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 vapour 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, meeting the requirements of BS EN166 3, 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:** Colourless Liquid

<b>Odour:</b>	Gasoline-like odour
<b>Odour threshold:</b>	n.a.
<b>pH:</b>	n.a.
<b>Melting point/freezing point °C:</b>	n.a.
<b>Initial boiling point and boiling range °C:</b>	49-63
<b>Flash point:</b>	-28°C
<b>Evaporation rate:</b>	n.a.
<b>Flammability limits %</b>	
<b>Lower:</b>	n.a.
<b>Upper:</b>	n.a.
<b>Vapour pressure:</b>	23kPa at 25°C (2-methylpentane)
<b>Vapour density</b>	n.a.
<b>Relative density:</b>	0.67 kg/l
<b>Solubility:</b>	14 mg/l at 25°C (2-methylpentane)
<b>Partition Coefficient: n-octanol/water:</b>	3.74 (2-methylpentane)
<b>Auto-ignition temperature:</b>	264°C (2-methylpentane)
<b>Decomposition temperature:</b>	n.a.
<b>Viscosity:</b>	n.a.
<b>Explosive properties:</b>	1-7% (2-methylpentane)
<b>Oxidising properties:</b>	n.a.

## 9.2 Other information

No further details

## 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 polymerisation 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:** Harmful when inhaled in high concentrations or ingested. Symptoms of ingestion may include nausea, vomiting, as well as symptoms of dizziness, drowsiness and central nervous system depression. If vomiting occurs, isohexane may be aspirated into the lungs, with a risk of chemical pneumonitis.

**Irritation:** Isohexane is not classified as irritating to the eye, but may cause redness and irritation at high vapour concentrations or if splashed into the eye. Isohexane is classified as irritating to the skin, and may produce redness and irritation.

**Corrosivity:** No corrosive effect.

**Sensitisation:** No known to be a sensitizer.

**Repeated dose toxicity:** Prolonged or repeated contact of this product will result in defatting of the skin, causing dryness and cracking. Isohexane may cause dizziness and drowsiness if inhaled, and high concentrations may result in central nervous system depression, and loss of consciousness. Animal studies have shown that Isohexane is less neurotoxic than n-hexane.

**Carcinogenicity:** Not expected to be carcinogenic.

**Mutagenicity:** Not expected to be mutagenic

**Toxicity for reproduction:** Not expected to be toxic to reproduction

**Route of exposure:** Inhalation and Ingestion

**Symptoms related to the physical, chemical and toxicological characteristics:** dizziness, drowsiness depression of central nervous system, loss of consciousness, nausea and vomiting.

## Section 12. Ecological Information

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### 12.1 Toxicity

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

### 12.2 Persistence and degradability

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

### 12.3 Bioaccumulative potential

Minimal Bioaccumulation potential.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

No information available.

### 12.6 Other adverse effects

No further information.

## Section 13. Disposal Considerations

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### 13.1 Waste treatment methods

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

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

## Section 14. Transport Information

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### 14.1 UN number

1208

**14.2 UN proper shipping name**

Hexanes

**14.3 Transport hazard class(es)**

3

**14.4 Packing group**

II

**14.5 Environmental hazards**

Marine Pollutant

**14.6 Special precautions for user**

Keep away from sources of heat and ignition.

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable to packaged goods

ADR HIN	33
EAC	3YE

**Section 15. Regulatory Information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
Labelling information in accordance with Directive 67/548/EEC**

No further information

**15.2 Chemical safety assessment**

A chemical safety assessment has not been conducted.

**Section 16. Other Information****Other information**

This safety data sheet is prepared in accordance with Regulation (EC) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

\*Section 1: It is explained that the test substance is exempt from REACH registration.

\*Section 2: The label according to DSD has been removed since substances are now labelled according to CLP only.

**Phrases used in Section 3**

R11 Highly flammable

R12 Extremely flammable

R38 Irritating to skin

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment



- R62 Possible risk of impaired fertility
- R65 Harmful: may cause lung damage if swallowed
- R66 Repeated exposure may cause skin dryness or cracking
- R67 Vapours may cause drowsiness and dizziness
- H224 Extremely flammable liquid
- H225 Highly flammable liquid and vapour
- H304 May be fatal if swallowed and enters airway
- H315 Causes skin irritation
- H336 May cause drowsiness or dizziness.
- H361f Suspected of damaging fertility
- H373 May cause damage to organs through prolonged or repeated exposure
- H411 Toxic to aquatic life with long lasting effects

**Note:** The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.