



# SAFETY DATA SHEET

<b>SECTION 1.0</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
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<b>Product Identifier</b>	UNISOURCE® ISOHEXANE AHS
<b>Other means of identification</b>	2,2-Dimethylbutane; 2,3-Dimethylbutane; 2-Methylpentane; 3-Methylpentane
<b>Recommended use (identified)</b>	Solvent, blowing agent for polystyrene, chemical intermediate

### Manufacturer/Importer/Supplier/Distributor Information

	UNISOURCE-ENERGY, LLC 40 Shuman Blvd, Suite 290 Naperville, IL 60563
<b>E-mail</b>	orders@unisource-energy.com
<b>Telephone number</b>	Phone: 630-470-6030 Fax: 630-470-6031
<b>Emergency telephone number</b>	UNISOURCE-ENERGY, LLC 1-800-444-5510
	CHEMTREC 1-800-424-9300

<b>SECTION 2.0</b>	<b>HAZARD(S) IDENTIFICATION</b>
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### Label Elements

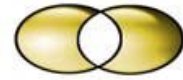
#### NFPA Rating

<b>Health</b>	1
<b>Flammability</b>	3
<b>Reactivity</b>	0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### HMIS Classification

<b>Health</b>	*1
<b>Flammability</b>	3
<b>Reactivity</b>	0
<b>Physical Hazard</b>	B



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Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

## Emergency Overview

Keep away from heat, sparks and flame. This material is an eye and skin irritant. Gross inhalation overexposure may cause: Central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness or death. Warning: Extremely Flammable. Causes respiratory irritation.

## General Description

Watery liquid with a gasoline-like odor, Floats on water. Produces an irritating vapor. (USCG, 1999)

## GHS-Classification

Flammable Liquid 2	H225	Highly flammable liquid and vapor
Aspiration Toxicity 1	H304	May be fatal if swallowed and enters airways
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects
Skin Irritation 2	H315	Cause skin irritation
STOT SE 3	H336	May cause drowsiness or dizziness

## Regulation (EC) No 1272/2008



## Hazard statement

H225	Highly flammable liquid and vapor
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



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## Directive 67/548/EEC



High  
Flammable



Dangerous  
for the  
environment



Harmful

## Risk phrases

R11	Highly flammable
R38	Irritating to skin
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65	Harmful: may cause lung damage if swallowed
R67	Vapors may cause drowsiness and dizziness

## Hazard(s) not otherwise classified (HNOC)

PBT	No information available yet
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<b>SECTION 3.0</b>	<b>COMPOSITION/INFORMATION ON INGREDIENTS</b>
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<b>Chemical name</b>	Isohexane includes 2-methyl Pentane, 3-methyl Pentane, 2,2-Dimethyl Butane, 2,3 Dimethyl Butane
Concentration	90 – 100%
<b>EC number</b>	203-523-4
<b>CAS number</b>	107-83-5
<b>Classification according to CHIP</b>	F; R11; [Xn], R38, R65, R67 [N], R51/53
<b>Classification according to CLP</b>	
Flammable Liquid 2	H225
Aspiration Toxicity 1	H304
Reproduction 2	
Skin Irritation 2	H315
STOT SE 3	H373

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



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<b>SECTION 4.0</b>	<b>FIRST AID MEASURES</b>
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## Description of first aid measures

**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

**Inhalation** If breathing difficulties, dizziness, or light-headedness occurs when working in areas with high vapor 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.

**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.

## Most important symptoms, 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

**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 lungs, with a risk of chemical pneumonitis.

## Indication of immediate medical attention and special treatment needed

If ingested or inhaled seek medical attention immediately

**Notes to physician** Aspiration of solvent may cause chemical pneumonitis.



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<b>SECTION 5.0</b>	<b>FIRE-FIGHTING MEASURES</b>
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## 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

**FIRE:** 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 800 meters (1/2 mile) in all directions. (ERG, 2012)

**FIRE INVOLVING TANKS OR CAR/TRAILER LOADS:** Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. (ERG, 2012)

## Specific hazards arising from the chemical

Isohexane is highly 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.

## Advice for fire-fighters

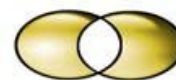
Wear positive pressure Self Contained Breathing apparatus and fire kit.

Fire Extinguishing Agents Not to Be Used: Water may be ineffective

<b>SECTION 6.0</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
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## 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.



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## Environmental precautions

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

## Methods and materials for containment and cleaning up

### Small spill

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

### Large spill

Dike far ahead of liquid spill for later disposal. Water spray may reduce vapor; but may not prevent ignition in closed spaces. 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.

### Reportable quantity

Notify coast guard national response center, phone#: 1-800-424-8802, if spill is greater than 1,000 lbs.

Refer to section 8 of MSDS for personal protection details

## SECTION 7.0

## HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Use only in well ventilated areas. Isohexane is extremely flammable. Avoid contact with ignition sources, including hot surfaces. Take precautions to avoid electrostatic discharges, such as ground (earthing) 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.

### Conditions for safe storage, including any incompatibilities

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

### Specific end use(s)

No further details



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<b>SECTION 8.0</b>	<b>EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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## Occupational exposure limits

Substance	8 hour exposure limit	15 minute exposure limit	Source, Type
Isohexane	100 ppm (350 mg/m <sup>3</sup> )	510 ppm (1800 mg/m <sup>3</sup> )	NIOSH REL
n-Hexane	85 ppm (350 mg/m <sup>3</sup> )	440 ppm (1800 mg/m <sup>3</sup> )	NIOSH REL

Class IB flammable liquid                      Flash Point: below 73 °F and Boiling Point at or above 100 °F.

## Environmental 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.

## Individual Protection measures, such as personal protective equipment

### Eye protection

Wear suitable eye protection, meeting the requirements of BS EN166 3, when handling this product.

### Skin protection

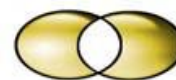
Aprons or coveralls are recommended. These should be changed after use or if contaminated. Wash before re-use.

### 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 manufacturers recommendations. If gloves are damaged during use, remove immediately and wash hands before replacing with new gloves

### 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.



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## Respirator Recommendations

### NIOSH

<b>Up to 1000 ppm</b>	APF = 10) Any supplied-air respirator
<b>Up to 2500 ppm</b>	(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
<b>Up to 5000 ppm</b>	(APF = 50) Any supplied-air respirator that has a tight-fitting face piece and is operated in a continuous-flow mode* (APF = 50) Any self-contained breathing apparatus with a full face piece (APF = 50) Any supplied-air respirator with a full face piece

## Emergency or planned entry into unknown concentrations or IDLH conditions

(APF = 10,000) Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode  
(APF = 10,000) Any supplied-air respirator that has a full face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

## Escape

(APF = 50) Any air-purifying, full-face piece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister  
Any appropriate escape-type, self-contained breathing apparatus

## SECTION 9.0

## PHYSICAL AND CHEMICAL PROPERTIES

<b>Chemical Formula</b>	C6H14
<b>Melting point/freezing point</b>	-244.6 ° F
<b>Flash point</b>	-20 ° F
<b>Boiling Point</b>	140.5 ° F at 760.0 mm Hg
<b>Molecular weight</b>	86.16
<b>Lower Explosive limits</b>	1.2 %
<b>Upper Explosive limits</b>	7.7 %
<b>Auto-ignition temperature</b>	585 ° F
<b>Vapor pressure</b>	310.2 mm Hg
<b>Vapor density (Relative to Air)</b>	data unavailable





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<b>Specific Gravity</b>	0.653 at 68.0 ° F
<b>Water solubility</b>	data unavailable
<b>IIDLH</b>	data unavailable
<b>Other information</b>	no further details

<b>SECTION 10.0</b>	<b>STABILITY AND REACTIVITY</b>
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<b>Chemical stability</b>	STABLE
<b>Conditions to avoid</b>	Keep away from heat, sparks and flame. Avoid any source of ignition.
<b>Materials to avoid</b>	Contact with oxidizing agents, concentrated oxygen.
<b>Hazardous decomposition products</b>	Carbon monoxide. Carbon dioxide
<b>Hazardous Polymerization</b>	WILL NOT OCCUR

<b>SECTION 11.0</b>	<b>TOXICOLOGICAL INFORMATION</b>
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<b>Acute toxicity</b>	However, it can be harmful when inhaled in high concentrations or ingested. Isohexane 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.
<b>Irritation</b>	Isohexane is not classified as irritating to the eye, but may cause redness and irritation at high vapor concentration or if splashed into the eye. Isohexane 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
<b>Corrosivity</b>	Not corrosive
<b>Sensitization</b>	Not known to be a sensitizer



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<b>Mutagenicity</b>	Not expected to be mutagenic.
<b>Carcinogenicity</b>	Not expected to be carcinogenic
<b>Toxicity for reproduction</b>	Not expected to be toxic to reproduction
<b>Repeated dose toxicity</b>	Repeated or prolonged exposure to Isohexane may cause peripheral neuropathy with symptoms including weakness and numbness of the extremities, headache and blurred vision.
<b>Route of exposure</b>	Eyes, skin, respiratory system, central nervous system
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Isohexane may cause nausea, vomiting, as well as symptoms of dizziness, drowsiness and central nervous system depression.

<b>SECTION 12.0</b>	<b>ECOLOGICAL INFORMATION</b>
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<b>Toxicity</b>	Isohexane is classified as toxic to aquatic organisms and likely to cause term effects in the environment.
<b>Persistence and degradability</b>	Isohexane is expected to be inherently biodegradable in aquatic systems; however, in view of its high evaporation rate, Isohexane is expected to volatizes rapidly from water sources into the atmosphere, where it will be degraded by photochemical reaction.
<b>Bioaccumulative potential</b>	no information available
<b>Mobility in soil</b>	no information available
<b>Results of PBT and vPvB assessment</b>	no information available
<b>Other adverse effects</b>	none reported

<b>SECTION 13.0</b>	<b>DISPOSAL CONSIDERATIONS</b>
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<b>Waste treatment methods</b>	Recover and recycle product if possible. If recovery and recycling are not possible, Isohexane may be disposed of by incineration.
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**Please follow all local, regional, national, and international laws**



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<b>SECTION 14.0</b>	<b>TRANSPORT INFORMATION</b>
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## DOT

Proper Shipping Name:	Hexanes
Hazard Class:	3
UN/NA Number:	UN 1208
DOT Packing Group	PG II

## IMDG

Proper Shipping Name:	Hexanes
Hazard Class:	3
Hazard Subclass:	Not applicable
UN No.:	UN 1208
Packing Group:	PG II
Marine Pollutant	Yes

<b>Environmental hazards</b>	Environmentally Hazardous Substance
<b>Special precautions for user</b>	Keep away from sources of heat and ignition.
<b>Transport in bulk according to Annex II of MARPOL, 73/78 and the IBC code</b>	Not applicable to packaged goods

<b>SECTION 15.0</b>	<b>REGULATORY INFORMATION</b>
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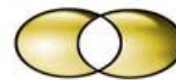
### Safety, health and environmental regulations/legislation specific for the substance or mixture

No further information

### Chemical safety assessment

A chemical safety assessment has not been conducted.

<b>SECTION 16.0</b>	<b>OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION</b>
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## Abbreviations

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = European Road Transport; AAICS = Australia Inventory of Chemical Substances; ATE = Acute Toxicity Estimation; AU = Australia; BCF = Bioconcentration Factor; BOD = Biochemical Oxygen Demand; C – Celsius, CA = Canada, CAS = Chemical Abstracts Service; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; COC = Cleveland Open Cup; CN = China; CPR= Controlled Products Regulations; CWA = Clean Water Act; DEA – Drug Enforcement Administration; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List (Canada); ECC = European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; ENCS = Japan Existing and New Chemical Substances; EPA = Environmental Protection Agency; EU = European Union; F = Fahrenheit; GHS = Globally Harmonized System of Classification and Labelling of Chemicals; HAPs = Hazardous Air Pollutants; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; IBC = Intermediate Bulk Container; ICAO = International Civil Aviation Organization; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life and Health; IMDG = International Maritime Dangerous Goods; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; JP – Japan; , Kow = Octanol/water partition; LEL = Lower Explosive Limit; LogPow = logarithm of the octanol/water partition coefficient; LOLI = List of Lists™ - ChemADVISOR's Regulatory Database; ; MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution; MAK = Maximum Concentration Value in the Workplace; MEL = Maximum Exposure Limits; NDSL = Non-Domestic Substances List (Canada); NE = Not Established; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; NZ – New Zealand; OSHA = Occupational Safety and Health Administration; PAH = Polycyclic Aromatic Hydrocarbon; PEL = Permissible Exposure Limit (OSHA); PH= Philippines; PICCS = Philippines Inventory of Chemicals and Chemical Substances; RCRA = Resource Conservation and Recovery; RID = European Rail Transport; RETCS = Registry of Toxic Effects of Chemical Substances®; RTK = Right To Know; SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); SCBA = Self-Contained Breathing Apparatus; SDWA = Safe Drinking Water Act; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value (ACGIH); TSCA = Toxic Substances Control Act Section 8(b) Inventory; TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; UN = United Nations; US = United States; WHMIS = Worker Hazardous Materials Information System (Canada)

## Disclaimer

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