



# SAFETY DATA SHEET

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Revision Number 1

## 1. Identification

**Product Name** n-Hexane

**Cat No. :** AC326920000; AC326920010; AC326920025; AC326921000;  
AC326922500

**Synonyms** Hex

**Recommended Use** Laboratory chemicals

**Uses advised against** No Information available

### Details of the supplier of the safety data sheet

<b>Company</b>	<b>Entity / Business Name</b>	<b>Emergency Telephone Number</b>
Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	Acros Organics One Reagent Lane Fair Lawn, NJ 07410	For information <b>US</b> call: 001-800-ACROS-01 / <b>Europe</b> call: +32 14 57 52 11 Emergency Number <b>US</b> :001-201-796-7100 / <b>Europe</b> : +32 14 57 52 99 <b>CHEMTREC</b> Tel. No. <b>US</b> :001-800-424-9300 / <b>Europe</b> :001-703-527-3887

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system, Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Liver, Heart, Blood.	
Aspiration Toxicity	Category 1

### Label Elements

#### **Signal Word**

Danger

#### **Hazard Statements**

Highly flammable liquid and vapor

May be fatal if swallowed and enters airways  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
May cause drowsiness or dizziness  
Suspected of damaging fertility  
Causes damage to organs through prolonged or repeated exposure



### Precautionary Statements

#### Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Wash face, hands and any exposed skin thoroughly after handling  
Wear eye/face protection  
Do not breathe dust/fume/gas/mist/vapors/spray  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool

#### Response

IF exposed or concerned: Get medical attention/advice

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

#### Skin

If skin irritation occurs: Get medical advice/attention  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention.

#### Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Do NOT induce vomiting

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Storage

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

#### Disposal

Dispose of contents/container to an approved waste disposal plant

### Hazards not otherwise classified (HNOC)

Toxic to aquatic life with long lasting effects

### 3. Composition / Information on ingredients

#### Haz/Non-haz

Component	CAS-No	Weight %
Hexane	110-54-3	>95

### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention. Aspiration into lungs can produce severe lung damage.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately. If vomiting occurs, lean victim forward to reduce the risk of aspiration.
<b>Most important symptoms/effects</b>	Breathing difficulties. . Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
<b>Notes to Physician</b>	Treat symptomatically.

### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.
<b>Unsuitable Extinguishing Media</b>	Water may be ineffective, This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained.
<b>Flash Point</b>	-22°C / -7.6°F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	223°C / 433.4°F
<b>Explosion Limits</b>	
<b>Upper</b>	7.5 vol %
<b>Lower</b>	1.1 vol %
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

#### Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

**Hazardous Combustion Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**Health  
2Flammability  
3Instability  
0Physical hazards  
N/A**6. Accidental release measures****Personal Precautions**

Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**

Do not flush into surface water or sanitary sewer system. Avoid release to the environment. Collect spillage.

**Methods for Containment and Clean Up**

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

**7. Handling and storage****Handling**

Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area.

**8. Exposure controls / personal protection****Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hexane	TWA: 50 ppm Skin	(Vacated) TWA: 50 ppm (Vacated) TWA: 180 mg/m <sup>3</sup> TWA: 500 ppm TWA: 1800 mg/m <sup>3</sup>	IDLH: 1100 ppm TWA: 50 ppm TWA: 180 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Hexane	TWA: 50 ppm TWA: 176 mg/m <sup>3</sup> Skin	TWA: 50 ppm TWA: 176 mg/m <sup>3</sup>	TWA: 50 ppm Skin

**Legend**

**ACGIH** - American Conference of Governmental Hygienists

**OSHA** - Occupational Safety and Health Administration

**NIOSH IDLH**: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.

**Personal Protective Equipment****Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

<b>Respiratory Protection</b>	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice

## 9. Physical and chemical properties

<b>Physical State</b>	Liquid
<b>Appearance</b>	Colorless
<b>Odor</b>	Petroleum distillates
<b>Odor Threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Melting Point/Range</b>	-95°C / -139°F
<b>Boiling Point/Range</b>	69°C / 156.2°F @ 760 mmHg
<b>Flash Point</b>	-22°C / -7.6°F
<b>Evaporation Rate</b>	No information available.
<b>Flammability (solid,gas)</b>	Not applicable
<b>Flammability or explosive limits</b>	
<b>Upper</b>	7.5 vol %
<b>Lower</b>	1.1 vol %
<b>Vapor Pressure</b>	160 mbar @ 20 °C
<b>Vapor Density</b>	2.97
<b>Relative Density</b>	0.659
<b>Solubility</b>	Insoluble in water
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	223°C / 433.4°F
<b>Decomposition temperature</b>	No information available.
<b>Viscosity</b>	0.31 mPa s at 20 °C
<b>Molecular Formula</b>	C6 H14
<b>Molecular Weight</b>	86.18

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available.
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Heat, flames and sparks. Exposure to light. Keep away from open flames, hot surfaces and sources of ignition.
<b>Incompatible Materials</b>	Strong oxidizing agents, Halogens
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur
<b>Hazardous Reactions</b>	None under normal processing

## 11. Toxicological information

### Acute Toxicity

### Product Information

### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexane	25 g/kg ( Rat )	3000 mg/kg ( Rabbit )	48000 ppm ( Rat ) 4 h

**Toxicologically Synergistic Products** No information available.

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

**Irritation** Irritating to eyes and skin

**Sensitization** No information available.

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Hexane	110-54-3	Not listed				

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects** Developmental effects have occurred in experimental animals.

**Teratogenicity** Teratogenic effects have occurred in experimental animals..

**STOT - single exposure** Respiratory system, Central nervous system (CNS).

**STOT - repeated exposure** Liver, Heart, Blood.

**Aspiration hazard** No information available.

**Symptoms / effects, both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Hexane	Not listed	2.1 - 2.98 mg/L LC50 96 h	Not listed	EC50: 3.87 mg/L/48h

**Persistence and Degradability** Persistence is unlikely, based on information available.

**Bioaccumulation/ Accumulation** No information available

**Mobility** Will likely be mobile in the environment due to its volatility.

Component	log Pow
Hexane	4.11

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

**14. Transport information**

**DOT**

UN-No UN1208  
 Proper Shipping Name Hexanes  
 Hazard Class 3  
 Packing Group II

**TDG**

UN-No UN1208  
 Proper Shipping Name HEXANES  
 Hazard Class 3  
 Packing Group II

**IATA**

UN-No UN1208  
 Proper Shipping Name Hexanes  
 Hazard Class 3  
 Packing Group II

**IMDG/IMO**

UN-No UN1208  
 Proper Shipping Name Hexanes  
 Hazard Class 3  
 Packing Group II

**15. Regulatory information**

**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Hexane	X	X	-	203-777-6	-		X	X	X	X	X

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

**SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Hexane	110-54-3	>95	1.0

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard Yes  
 Chronic Health Hazard Yes  
 Fire Hazard Yes  
 Sudden Release of Pressure Hazard No  
 Reactive Hazard No

**Clean Water Act** Not applicable

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hexane	X		-

**OSHA** Occupational Safety and Health Administration  
 Not applicable

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Hexane	5000 lb	-

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hexane	X	X	X	X	X

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

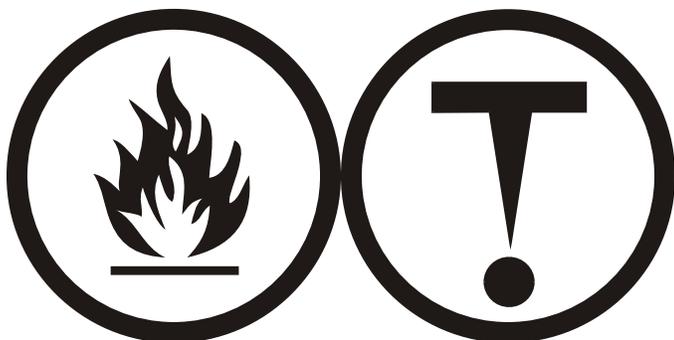
**Other International Regulations**

**Mexico - Grade** Serious risk, Grade 3

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class** B2 Flammable liquid  
 D2A Very toxic materials



## 16. Other information

<b>Prepared By</b>	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
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<b>Print Date</b>	02-Apr-2014
<b>Revision Summary</b>	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

### Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**