

Material Safety Data Sheet

n-Hexane

ACC# 00731

Section 1 - Chemical Product and Company Identification

MSDS Name: n-Hexane

Catalog Numbers: AC160780000, AC160780010, AC160780025, AC160780250, AC160780251, AC197360000, AC197360050, AC197360250, AC2683600, AC326660000, AC326660010, AC326660025, AC326710000, AC326710010, AC326710025, AC326780000, AC326780010, AC326780025, AC326920000, AC326920010, AC326921000, AC326922500, AC327890000, AC327890010, AC364370000, AC364370010, AC364371000, AC383800000, AC383800010, AC383800025, AC383800050, AC620040000, AC620048000, 16078-0040, 19736-0010, 19736-0025, H306-1, H306-4, H3064LC, H306SK-4

Synonyms: Hexane; Hexyl hydride; Hex.**Company Identification:**

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
110-54-3	n-Hexane	93+	203-777-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: APHA: 20 max liquid. Flash Point: -22 deg C.

Danger! Flammable liquid and vapor. Danger of serious damage to health by prolonged exposure through inhalation. Breathing vapors may cause drowsiness and dizziness. Causes eye and skin irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Target Organs: Blood, central nervous system, liver, respiratory system, eyes, skin.**Potential Health Effects****Eye:** Causes eye irritation.**Skin:** Causes skin irritation. May be absorbed through the skin in harmful amounts. May cause dermatitis.

There have been no reports of skin sensitization in people occupationally exposed to n-hexane. Skin sensitization was not observed in a maximization test using 25 volunteers.

Ingestion: Aspiration hazard. May cause irritation of the digestive tract. May be harmful if swallowed. May cause lung damage.

Inhalation: Harmful if inhaled. May cause respiratory tract irritation. Exposure produces central nervous system depression. Inhalation of vapors may cause drowsiness and dizziness. n-Hexane vapor concentrations can become so high that oxygen is displaced, especially in confined spaces.

Chronic: Chronic exposure may cause liver damage. Adverse reproductive effects have been reported in animals. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. Animal studies have reported the development of tumors.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Possible aspiration hazard. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media: Use water spray to cool fire-exposed containers. Use foam, dry chemical, or carbon dioxide.

Flash Point: -22 deg C (-7.60 deg F)

Autoignition Temperature: 223 deg C (433.40 deg F)

Explosion Limits, Lower: 1.1 vol %

Upper: 7.5 vol %

NFPA Rating: (estimated) Health: 2; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let

this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
n-Hexane	50 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	50 ppm TWA; 180 mg/m ³ TWA 1100 ppm IDLH (10% LEL)	500 ppm TWA; 1800 mg/m ³ TWA

OSHA Vacated PELs: n-Hexane: 50 ppm TWA; 180 mg/m³ TWA

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear, colorless - APHA: 20 max

Odor: faint odor - peculiar odor

pH: Not available.

Vapor Pressure: 160 mbar @ 20 deg C

Vapor Density: 2.97(Air = 1)

Evaporation Rate: Not available.

Viscosity: 0.31 mPa @ 20 deg C

Boiling Point: 69 deg C @ 760 mmHg

Freezing/Melting Point: -95 deg C

Decomposition Temperature:Not available.

Solubility: Insoluble.

Specific Gravity/Density:0.659

Molecular Formula:C₆H₁₄

Molecular Weight:86.18

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, light, ignition sources, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, fluorine, liquid chlorine, dinitrogen tetraoxide, magnesium perchlorate.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 110-54-3: MN9275000

LD50/LC50:

CAS# 110-54-3:

Draize test, rabbit, eye: 10 mg Mild;

Inhalation, mouse: LC50 = 150000 mg/m³/2H;

Inhalation, rat: LC50 = 48000 ppm/4H;

Inhalation, rat: LC50 = 627000 mg/m³/3M;

Oral, rat: LD50 = 25 gm/kg;

Carcinogenicity:

CAS# 110-54-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Tumorigenic effects have been reported in experimental animals.

Teratogenicity: Teratogenic effects have occurred in experimental animals.

Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.

Mutagenicity: Mutagenic effects have occurred in experimental animals.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Estimated BCF values = 2.24 and 2.89. These values suggest that hexane will show low bioconcentration in aquatic organisms. Estimated Koc value = 4.11. This product will show slight soil mobility and is expected to rapidly volatilize from moist surface soils.

Environmental: Terrestrial: Volatilization and adsorption are expected to be the most important fate processes. Aquatic: Photolysis or hydrolysis are not expected to be important. Atmospheric: Expected to

exist entirely in the vapor phase in ambient air, expected half life 2.8 days. Expected to biodegrade but not bioconcentrate.

Physical: No information available.

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	HEXANES	HEXANES
Hazard Class:	3	3
UN Number:	UN1208	UN1208
Packing Group:	II	II
Additional Info:		FLASHPOINT -22 C

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 110-54-3 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 110-54-3: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 110-54-3: immediate, delayed, fire.

Section 313

This material contains n-Hexane (CAS# 110-54-3, 93+%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 110-54-3 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 110-54-3 can be found on the following state right to know lists: New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

XN F N

Risk Phrases:

R 11 Highly flammable.

R 38 Irritating to skin.

R 48/20 Harmful : danger of serious damage to health by prolonged exposure through inhalation.

R 62 Possible risk of impaired fertility.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 29 Do not empty into drains.

S 33 Take precautionary measures against static discharges.

S 36/37 Wear suitable protective clothing and gloves.

S 9 Keep container in a well-ventilated place.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

S 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 110-54-3: 1

Canada - DSL/NDSL

CAS# 110-54-3 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D2B.

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

Canadian Ingredient Disclosure List

CAS# 110-54-3 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/03/1999

Revision #11 Date: 7/28/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.