



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 08/21/2004
Date Updated: 03/09/2004
Version 1.80

Section 1 - Product and Company Information

Product Name Hexanes, 98.5+%, A.C.S. HPLC grade
Product Number 293253
Brand Aldrich Chemical
Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052
Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
HEXANES	None	Yes		
Ingredient Name	CAS #	Percent	SARA 313	
N-HEXANE	110-54-3	<= 65.000 %	Yes	
METHYLCYCLOPENTANE	96-37-7	>= 10.000 %	No	
3-METHYLPENTANE	96-14-0	< 5.000 %	No	
2-METHYLPENTANE	107-83-5	< 5.000 %	No	

Formula
Synonyms

Section 3 - Hazards Identification

Emergency Overview
Flammable (USA), Highly Flammable (EU), Harmful.
Irritating to eyes, respiratory system and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.
Target organ(s): Nerves, Kidneys.

HMS Rating

Health: 2+ Flammability: 3 Reactivity: 1

NFPA Rating

Health: 2 Flammability: 3 Reactivity: 1

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, do not induce vomiting; call a physician immediately.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Flammable Hazards: Yes

Explosion Hazards
Vapor may travel considerable distance to source of ignition and flash back.
Container explosion may occur under fire conditions.

Flash Point: -9 °F -23 °C

Explosion Limits: Lower: 1.1 % Upper: 7.5 %

Autoignition Temp: 225 °C **Flammability:** Yes

Extinguishing Media

Suitable
Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)
Flammable liquid. Emits toxic fumes under fire conditions.

Specific Method(s) of Fire Fighting

Use water spray to cool fire-exposed containers.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure

Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

Storage
Suitable
Keep tightly closed. Keep away from heat, sparks, and open flame.

Special Requirements
Moisture sensitive.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

Personal Protective Equipment

Respiratory
Government approved respirator.

Hand

Compatible chemical-resistant gloves.

Eye

Chemical safety goggles.

General Hygiene Measures

Remove and wash contaminated clothing promptly. Wash thoroughly after handling.

Exposure Limits

Country	Type	Value
Poland	NDS	400 MG/M3
Poland	NDSch	3200 MG/M3
Poland	NDSP	

Section 9 - Physical/Chemical Properties

Appearance
Physical State

Liquid

Molecular Weight: N/A

Property **Value** **At Temperature or Pressure**

pH	N/A	
BP/MP Range	68 - 70 °C	760 mmHg
MP/MP Range	-95 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	3 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	0.66 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point °F	-9 °F	
Flash Point °C	-23 °C	Method: closed cup
Explosion Limits	Lower: 1.1 % Upper: 7.5 %	Method: closed cup
Flammability	N/A	

Autoignition Temp 225 °C
Refractive Index 1.379
Solubility N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability

Stable

Stable.

Conditions of Instability

Moisture sensitive.

Conditions to Avoid

Protect from moisture.

Materials to Avoid

Oxidizing agents, incompatible with: chlorine, fluorine, and magnesium perchlorate.

Hazardous Decomposition Products

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact

Causes skin irritation.

Skin Absorption

May be harmful if absorbed through the skin.

Eye Contact

Causes eye irritation.

Inhalation

May be harmful if inhaled. Vapor or mist is irritating to the mucous membranes and upper respiratory tract.

Ingestion

May be harmful if swallowed.

Target Organ(s) or System(s)

Peripheral nervous system. Kidneys. Testes.

Signs and Symptoms of Exposure

Prolonged or repeated contact with skin can cause defatting and dermatitis. Contact with eyes can cause redness, tearing, and blurred vision. Ingestion may cause gastrointestinal irritation. Can cause CNS depression. Exposure can cause: Lung irritation, chest pain, and edema which may be fatal. Headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: N/A

Chronic Exposure - Reproductive Hazard

Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Hexanes
UN#: 1208
Class: 3
Packing Group: Packing Group II
Hazard Label: Flammable liquid
PIH: Not PIH

IATA

Proper Shipping Name: Hexanes
IATA UN Number: 1208
Hazard Class: 3
Packing Group: II

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: F Xn

Indication of Danger

Highly Flammable, Harmful

Risk Statements

R: 11 38 48/20 62 65 67

Highly flammable. Irritating to skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Safety Statements

S: 9 16 29 33 36/37 62

Keep container in a well-ventilated place. Keep away from sources of ignition - no smoking. Do not empty into drains. Take precautionary measures against static discharges. Wear suitable protective clothing and gloves. If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

US Classification and Label Text

Indication of Danger

Flammable (USA) Highly Flammable (EU), Harmful

Risk Statements

Irritating to eyes, respiratory system and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Safety Statements

Keep container in a well-ventilated place. Keep away from sources of ignition - no smoking. Do not empty into drains. Take precautionary measures against static discharges. Wear suitable protective clothing and gloves.

US Statements

Target organ(s): Nerves, Kidneys.

United States Regulatory Information

SARA Listed: Yes

Notes: This product is or contains a component that is subject to SARA313 reporting requirements.

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: NO

NDSL: NO

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.