Material Safety Data Sheet

Version 3.1
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Hexane, mixture of isomers
Product Number	:	178918
Brand	:	Sigma-Aldrich
Company	:	Sigma-Aldrich Canada, Ltd 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA
Telephone	:	+19058299500
Fax	:	+19058299292
Emergency Phone #	:	800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Peripheral nervous system., Kidney, Testes.

WHMIS Classification

B2	Flammable liquid	Flammable liquid
D1B		Toxic by ingestion
D2A		Teratogen
D2B		Moderate skin irritant
		Moderate eye irritant

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335 + H336	May cause respiratory irritation, and drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	3
Physical hazards:	0

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	Toxic if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Hexanes
Isohexane

Formula : C_6H_{14}

CAS-No.	EC-No.	Index-No.	Concentration
n-Hexane			
110-54-3	203-777-6	601-037-00-0	<= 65 %
Methylcyclopentane			
96-37-7	202-503-2	-	>= 10 %
Hexane isomers			
96-14-0	202-481-4	601-007-00-7	< 5 %
2-Methylpentane			
107-83-5	203-523-4	601-007-00-7	< 5 %
Hexanes, isomers			
-	-	-	>= 20 - <= 25 %

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Moisture sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
n-Hexane	110-54-3	TWA	20 ppm	2006-11-29	Canada. British Columbia OEL
Remarks	Contributes significantly to the overall exposure by the skin route.				
		TWAEV	50 ppm 176 mg/m3	2005-12-17	Canada. Ontario OELs
		TWA	50 ppm 176 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin				
		TWAEV	50 ppm 176 mg/m3	2006-12-29	Canada. Quebec OELs
	Skin (percutaneous)				
2-Methylpentane	107-83-5	STEL	1,000 ppm 3,500 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	500 ppm 1,760 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	500 ppm 1,760 mg/m3	2000-01-12	Canada. Quebec OELs
		STEL	1,000 ppm 3,500 mg/m3	2000-01-12	Canada. Quebec OELs
		TWAEV	500 ppm 1,760 mg/m3	2005-02-03	Canada. Ontario OELs

		STEV	1,000 ppm 3,520 mg/m3	2005-02-03	Canada. Ontario OELs
		TWA	200 ppm	2004-08-01	Canada. British Columbia OEL
		TWAEV	500 ppm 1,760 mg/m3	2006-12-29	Canada. Quebec OELs
		STEV	1,000 ppm 3,500 mg/m3	2006-12-29	Canada. Quebec OELs
		TWAEV	500 ppm 1,760 mg/m3	2005-12-17	Canada. Ontario OELs
		STEV	1,000 ppm 3,520 mg/m3	2005-12-17	Canada. Ontario OELs
		TWA	200 ppm	2006-11-29	Canada. British Columbia OEL
Hexane isomers	96-14-0	TWA	500 ppm 1,760 mg/m3	2000-01-12	Canada. Quebec OELs
		STEL	1,000 ppm 3,500 mg/m3	2000-01-12	Canada. Quebec OELs
		TWAEV	500 ppm 1,760 mg/m3	2005-02-03	Canada. Ontario OELs
		STEV	1,000 ppm 3,520 mg/m3	2005-02-03	Canada. Ontario OELs
		TWA	200 ppm	2004-08-01	Canada. British Columbia OEL
		TWAEV	500 ppm 1,760 mg/m3	2006-12-29	Canada. Quebec OELs
		STEV	1,000 ppm 3,500 mg/m3	2006-12-29	Canada. Quebec OELs
		TWAEV	500 ppm 1,760 mg/m3	2005-12-17	Canada. Ontario OELs
		STEV	1,000 ppm 3,520 mg/m3	2005-12-17	Canada. Ontario OELs
		TWA	200 ppm	2006-11-29	Canada. British Columbia OEL
		TWA	500 ppm 1,760 mg/m3	2009-04-30	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		STEL	1,000 ppm 3,500 mg/m3	2009-04-30	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves.

Eye protection
Face shield and safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of

workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid

Safety data

pH	no data available
Melting point	-95 °C (-139 °F)
Boiling point	68 - 70 °C (154 - 158 °F) at 1,013 hPa (760 mmHg)
Flash point	-23 °C (-9 °F)
Ignition temperature	no data available
Lower explosion limit	1.1 %(V)
Upper explosion limit	7.5 %(V)
Density	0.672 g/cm3
Water solubility	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Vapours may form explosive mixture with air.

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
Oxidizing agents, Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
Eyes: no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)
no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard
no data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.
Ingestion	Toxic if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure
Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Contact with eyes can cause:, Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:, Gastrointestinal discomfort, Central nervous system depression, Lung irritation, chest pain, pulmonary edema

Additional Information

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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

13. DISPOSAL CONSIDERATIONS

Product
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. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 1208 Class: 3 Packing group: II
Proper shipping name: Hexanes
Reportable Quantity (RQ): 7692 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 1208 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: HEXANES
Marine pollutant: No

IATA
UN-Number: 1208 Class: 3 Packing group: II
Proper shipping name: Hexanes

15. REGULATORY INFORMATION

DSL Status
This product contains the following components that are not on the Canadian DSL nor NDSL lists.

	CAS-No.
Hexanes, isomers	-

WHMIS Classification

B2	Flammable liquid	Flammable liquid
D1B		Toxic by ingestion
D2A		Teratogen
D2B		Moderate skin irritant
		Moderate eye irritant

16. OTHER INFORMATION

Further information

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 Co., 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.