

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Hexane
CAS number	110-54-3
Synonyms	Hexanes, Normal Hexane, Hexyl Hydride, n-Hexane, 3-Methyl Pentane

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals. Synthesis of substances.
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture


GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquids	Category 2
Skin Irritation	Category 2
Reproductive Toxicity	Category 2
Specific Target Organ Toxicity (single exposure)	Category 3
Specific Target Organ Toxicity (repeated exposure)	Category 2
Aspiration Hazard	Category 1

Acute Aquatic Hazard
Chronic Aquatic Hazard

Category 2
Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs (Nervous system) through prolonged or repeated exposure if inhaled. Toxic to aquatic life with long lasting effects.
Precautionary statements	<p>Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Do not breathe mist or vapors. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>Response: IF exposed or concerned, get medical advice/ attention.</p> <p>IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Do NOT induce vomiting.</p> <p>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.</p> <p>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.</p> <p>Fire: In case of fire, use dry sand, dry chemical, or alcohol-resistant foam to extinguish.</p> <p>Spills: Collect spillage.</p>

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Naphtha (petroleum), hydrotreated light	-	64742-49-0	30-40%
Cyclohexane	-	110-82-7	5-10%
n-hexane	-	110-54-3	40-50%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

- If inhaled** Remove source of contamination or move to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- In case of skin contact** If irritation is experienced, flush with water. If irritation persists, get medical attention.
- In case of eye contact** Rinse with plenty of water for at least 15 minutes, seek medical attention.
- If swallowed** Do NOT induce vomiting. If material is swallowed, get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see Section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Small Fire: Use dry chemical, CO₂, water spray, or regular foam.
Large Fire: Use water spray, foam, or regular foam.

Unsuitable extinguishing media DO NOT use straight streams.

5.2 Specific hazards arising from the substance or mixture

Carbon oxides. Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

5.3 Special protective equipment and precautions for firefighters

Wear protective clothing and equipment, including self-contained breathing apparatus, protective clothing, including eye protection and boots. Consider containers in the area. Cool containers with flooding amounts of water until well after the fire is out.

5.4 Further information

Flash Point -7 °F (-22 °C) Closed Cup.

Autoignition Temperature 225°C

Explosion limits

Upper 7.50%

Lower 1.10%

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
1	3	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For large spills wear gloves, Tyvek suits, safety glasses, and appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables.

6.2 Environmental precautions

Prevent discharge to open bodies of water, municipal sewers, and watercourses. Any release into the environment may be subject to federal/national or local reporting requirements.

6.3 Methods and materials for containment and cleaning up

Ventilate area of leak or spill. Absorb spill with non-combustible material, then place in a suitable container for disposal. Only use spark-proof tools to sweep or scrape up. Clean surfaces thoroughly with water to remove residual contaminations. Dispose of all waste and clean up materials in accordance with regulations.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements. For disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Keep away from heat, sparks and flames. Use only with adequate ventilation. Avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. For precautions, see Section 2.2.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Ground all equipment container this material. Avoid all possible sources of ignition (spark or flame).

Incompatibilities

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Hexanes	TWA	500 ppm

US. ACGIH Threshold Limit Values

Component	Type	Value
Hexanes	TWA	50 ppm

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the workstation.

Personal protective equipment

Eye/face protection

Face shield and safety glasses or goggles. Facilities storing or utilizing this material should be equipped with eyewash and safety shower facilities.

Skin protection

Wear gloves that are appropriate for the task.

Body Protection

Personal protective equipment for the body should be selected based on the task being performed and the risks and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Respiratory protection

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. If exposure levels are excessive, use an approved respirator.

Control of environmental exposure

Prevent discharge to open bodies of water, municipal sewers, and watercourses. Any release into the environment may be subject to federal/national or local reporting requirements.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Physical State	Liquid
Appearance	Colorless
Odor	Hydrocarbon (gas-like odor)
Odor Threshold	Not available
pH	Not available
Melting Point/Range	-139°F
Boiling Point/Range	62.8 to 73.9 °C (145 to 165°F)
Evaporation Rate	5.2
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	7.50%
Lower	1.10%
Vapor Pressure	124 mmHg
Vapor Density	3.0 - (Air = 1.0)
Density	Not available
Solubility	Negligible in water

Partition coefficient; n-octanol/water	3.9
Autoignition Temp	225°C
Decomposition Temp	Not available
Viscosity	Not available
Molecular Formula	C6H14
Molecular Weight	86.2 g/mol
VOC Content(%)	Not available
Oxidizing properties	None

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

This material is considered stable at ambient temperatures.

10.3 Possibility of hazardous reactions

This product will not undergo polymerization.

10.4 Conditions to avoid

Flames, sparks, electrostatic discharge, heat and other ignition sources.

10.5 Incompatible materials

This product reacts with strong acid, strong bases, and oxidizing agents.

10.6 Hazardous decomposition products

Upon decomposition, this product evolves Carbon monoxide, Carbon dioxide, and/or low weight hydrocarbons.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
n-Hexane	15840 mg/kg (Rat)	-	4800 ppm 4 hours (Rat)
Naphtha (petroleum)	>5000 mg/kg (Rat)	>2000 mg/kg (Rat)	-
Cyclohexane	6240 mg/kg (Rat)	>180000 mg/kg (Rabbit)	-

Skin corrosion/irritation

Defatting, dermatitis, drying redness.

Serious eye damage/eye irritation

Redness, blurred vision, tearing.

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse Result: negative.

Inhalation - Lung irritation, chest pain, pulmonary edema, giddiness, irritation, dizziness, drowsiness, headache, unconsciousness.

Germ cell mutagenicity

No data available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
n-Hexane	110-54-3	Not listed	Not listed	Not listed	Not listed	Not listed
Naphtha (petroleum)	64742-49-0	Not listed	Not listed	Not listed	Not listed	Not listed
Cyclohexane	110-82-7	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness. Central nervous system.

Specific target organ toxicity - repeated exposure

Inhalation: May cause damage to organs through prolonged or repeated exposure. Nervous system.

Reproductive toxicity

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. Suspected human reproductive toxicant. Suspected of damaging fertility.

Chronic effects

None known or reported by the manufacturer.

11.2 Additional Information

May be fatal if swallowed and enters airways.

Aspiration hazard: Aspiration may cause pulmonary edema and pneumonitis.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
n-Hexane	LC50	Pimephales promelas	2.5 mg/L 96h
Cyclohexane	LC50	Pimephales promelas	4.53 mg/L 48h

12.2 Persistence and degradability

Readily biodegradable.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 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.

SECTION 14: Transport information

DOT (US)

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

IMDG

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

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed, n-Hexane (CAS #110-54-3), RQ: 5000 lb.

Listed, Cyclohexane (CAS #110-82-7), RQ: 1000 lb.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Listed, n-Hexane (CAS #110-54-3).

Listed, Cyclohexane (CAS #110-82-7).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Listed, n-Hexane (CAS #110-54-3).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA)

Listed, Cyclohexane (CAS #110-82-7), RQ: 1000 lb.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, n-Hexane (CAS #110-54-3).

Listed, Cyclohexane (CAS #110-82-7).

US. New Jersey Worker and Community Right-to-Know Act

Listed, n-Hexane (CAS #110-54-3).
Listed, Cyclohexane (CAS #110-82-7).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, n-Hexane (CAS #110-54-3).
Listed, Cyclohexane (CAS #110-82-7).

California Proposition 65

Listed, n-Hexane (CAS #110-54-3).

SECTION 16: Other information

Issue date: 05/03/2020
Revision 1: 08/03/2023
Revision 2: 11/08/2024

SECTION 17: 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.