

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Trade name: Hexane (S)

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

Relevant identified uses: Industrial or Commercial Use only.

Uses advised against: All other uses.

1.3 Details of the supplier of the Safety Data Sheet

USA Lab Inc.
12400 Belden Ct., Livonia,
MI 48150,
USA

Hazard emergency contact: Chemtrec 800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to OSHA Hazardous Communication Standard 29 CFR 1910.1200.

Flammable liquid, category 2

Aspiration toxicity, category 1

Skin irritation, category 2

Respiratory sensitization, category 1

Reproductive toxicity, category 1

Specific target organ toxicity, category 3

Aquatic toxicity (chronic), category 2

2.2 Label elements

Labelling according to OSHA Hazardous Communication Standard 29 CFR 1910.1200:



Signal word:

Danger

Hazard statements:

H225

Highly flammable liquid and vapor.

H304

May be fatal if swallowed and enters airways.

H315

Causes skin irritation.

H336

May cause drowsiness or dizziness.

H361f

Suspected of damaging fertility.

H373

May cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled).

H411

Toxic to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep/Store away from clothing/combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

2.3 Other hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture meeting the criteria for classification in accordance with OSHA Hazardous Communication Standard 29 CFR 1910.1200.

Ingredients:

Name	CAS No.	GHS classification	% (w/v)
n-Hexane	110-54-3	Flamm. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Resp. Sens. 1, H336 Repr. Tox. 1, H361f STOT RE 3, H373 Aquatic Chronic 2, H411	>60

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Following inhalation:

If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

Following skin contact:

Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse.

Following eye contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Following ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

Protection of first aider: Not applicable.

4.2 Most important symptoms and effects

Symptoms: Effects of overexposure may include irritation of the digestive tract, irritation of the respiratory tract, headaches, nausea and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue). Prolonged or repeated contact may dry skin and cause irritation

Risks: Untreated symptoms may result in additional health risks.

4.3 Indication of any immediate medical and special treatment

The physician may contact the national poison center for advice.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

Unsuitable extinguishing media: No data available.

5.2 Specific hazards arising from mixture

Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion.

5.3 Advice for fire fighters

Special protective equipment for firefighters:

For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to



unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

5.4 Other information

No other information available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Highly Flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

6.2 Environmental Precautions: Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use foam on spills to minimize vapors. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

6.3 Methods and material for containment and cleaning up: Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe vapor or mist. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Highly Flammable. May vaporize easily at ambient temperatures. The vapor is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low lying areas. Open container slowly to relieve any pressure. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-70 and/or API RP 2003 for specific bonding/grounding requirements. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

7.2 Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

Incompatible materials: See section 10.

7.3 Specific end uses

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Chemical Name	ACGIH	OSHA	Mexico	Phillips 66
n-Hexane	TWA-8hr: 50 ppm Skin	TWA-8hr: 500 ppm TWA-8hr: 1800 mg/m3	TWA-8hr: 50 ppm (VLE-PPT) Skin	TWA-8hr: 50 ppm Skin

8.2 Exposure controls

Engineering controls:

If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Personal Protective equipment:

Hand: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products.

Body protection: Depending on exposure and use conditions, additional protection may be necessary to prevent skin contact including use of items such as chemical resistant boots, aprons, arm covers, hoods, coveralls, or encapsulated suits. Suggested protective materials: Nitrile rubber.

Eye: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

Respiratory: Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with organic vapor cartridges/canisters may be used.

Other measures: No statement available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Color:	Colorless
Odor:	Mild
Odor threshold:	No data available
pH:	No data available
Melting point/range:	-95 °C
Boiling point/range:	62 – 69 °C
Flash point:	-26 °C
Evaporation rate:	No data available
Flammability:	flammable liquid in accordance with GHS criteria
Upper/lower flammability or explosive limits:	1.1 vol% (LEL) – 7.5 vol%
Vapor pressure:	5.6 psia at 37.8 °C
Vapor density:	No data available
Relative Density:	0.66 g /cm ³ at 20 °C
Solubility(ies):	No data available
Partition coefficient (n-octanol/water):	No data available
Auto-ignition temperature:	258 °C
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Not chemically reactive.

10.2 Chemical stability

Stable under normal ambient and anticipated conditions of use.

10.3 Possibility of hazardous reactions

Hazardous reactions not anticipated.

10.4 Conditions to avoid

Avoid high temperatures and all sources of ignition. Prevent vapor accumulation.

10.5 Incompatible materials

Avoid contact with strong oxidizing agents and strong reducing agents.

10.6 Hazardous decomposition products

Not anticipated under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

General information:

This product does not contain known human carcinogens.

11.1 Information on toxicological effects

Acute Toxicity:

No statements available for any of the ingredients.

Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/irritation:

No statements available for any of the ingredients.

Respiratory or skin sensitization:

May cause drowsiness or dizziness.

Germ cell mutagenicity:

No statements available for any of the ingredients.

Carcinogenicity:

This product does not contain known human carcinogens.

Reproductive toxicity:

Suspected of damaging fertility.

STOT – single exposure:

No statements available for any of the ingredients.

STOT – repeated exposure:

May cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled).

Aspiration hazard:

May be fatal if swallowed and enters airways.

Likely route(s) of exposure:

Skin exposure and eye exposure are the most likely to occur. Accidental ingestion is also possible.

SECTION 12: ECOLOGICAL INFORMATION

General information:

No statements available for any of the ingredients

12.1 Toxicity

No statements available for any of the ingredients.

12.2 Persistence and degradability

Physical- and photochemical elimination:

No statements available for any of the ingredients.

Biodegradation:

Volatilization from soil surfaces is expected to be an important fate process. n-Hexane will be degraded in the atmosphere by reaction with hydroxyl radicals; the half-life for this reaction in air is estimated to be 3 days.

Screening studies suggest that n-hexane will undergo biodegradation in soil and water surfaces, but volatilization is expected to be the predominant fate process in the environment. Hydrolysis is not expected to be an important environmental fate process.

12.3 Bioaccumulative potential

An estimated bioconcentration factor (BCF) of 200 and log Kow of 3.9 for n-hexane suggest the potential for bioconcentration in aquatic organisms is high. Metabolites may partially bioaccumulate in the lipid bilayer of fish tissues.

12.4 Mobility in soil

Known/Predicted environmental distribution:

No statements available for any of the ingredients.

Surface tension:

No statements available for any of the ingredients.

Adsorption/Desorption:

n-Hexane is highly volatile and will partition rapidly to air. When released into water, n-hexane will be lost by volatilization and possible biodegradation. n-Hexane is expected to have high mobility into soils/sediments based on a Koc of 150.

Volatilization from moist soil surfaces is expected to be an important fate process based upon a Henry's Law constant of 1.83 atm-m³/mole. n-Hexane may volatilize from dry soil surfaces based upon its vapor pressure.

12.5 Results of PBT and vPvB assessment

This product does not contain components which are considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No statements available for any of the ingredients.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product:

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.

Waste material:

Dispose according to Federal, State, Provincial and Local regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR/RID/IDMG/IATA: UN 1208

14.2 UN proper shipping name

ADR/RID/IDMG/IATA: HEXANES

14.3 Transport hazard class(es)

ADR/RID/IDMG/IATA: 3

14.4 Packing group

ADR/RID/IDMG/IATA: II

14.5 Environmental hazards

ADR/RID/IDMG/IATA: Yes

14.6 Special precautions for user

No statements available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable, as product is not shipped in bulk.

SECTION 15: REGULATORY INFORMATION

International Inventories

TSCA: Complies

DSL: All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List.

US Federal Regulations

SARA 313: This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372: n-Hexane (>60%).

SARA 311/312 Hazard Categories

Acute health hazard: Yes

Chronic Health Hazard: Yes

Fire hazard: No

Sudden release of pressure hazard: No

Reactive Hazard: No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).



CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product can expose you to chemicals including n-Hexane (CASRN 110-54-3), which is known to the State of California to cause birth defects or other reproductive harm.

Canada**WHMIS Hazard Class**

Not determined.

SECTION 16: OTHER INFORMATION

Further information

The information presented in this Safety Data Sheet (SDS) is accurate to the best of our knowledge at the date of publication. The information given within the SDS is meant solely as a guide for safe handling, use, transportation, processing, storage, release and disposal. In no means can the information within the SDS be considered as a warranty or specification for quality.