



MATERIAL SAFETY DATA SHEETS

Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: n-Hexane, 95% min

This MSDS is valid for all grades of 95% min

Synonyms: Hexanes, Normal Hexane; Hexyl Hydride; n-Hexane; 3-Methyl Pentane

Formula: $\text{CH}_3(\text{CH}_2)_4\text{CH}_3$; note that this product is a mixture of n-hexane and other hexane isomers

Manufacturer: Pharmco Products Inc.
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Brookfield, Connecticut 06804, USA
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Emergency Contact:
CHEMTREC 1-800-424-9300

SECTION II

COMPOSITION / INFORMATION ON INGREDIENTS

Exposure Limits

%wt	Material	CAS	Exposure Limits
100%	Hexanes (n-Hexane)	110-54-3	50ppm OSHA/PEL; ACGIH/TLV

SECTION III

HAZARDS IDENTIFICATION

WARNING! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS THE CENTRAL AND PERIPHERAL NERVOUS SYSTEMS.

Routes of Exposure:

Inhalation: Inhalation of vapors irritates the respiratory tract. Overexposure may cause lightheadedness, nausea, headache, and blurred vision. Greater exposure may cause muscle weakness, numbness of the extremities, unconsciousness and death.

Swallowing: This material can enter lungs during swallowing or vomiting and cause lung damage. May cause irritation of the digestive tract, abdominal pain, nausea, nervous system depression and giddiness.

Skin Contact: May cause redness, irritation, with dryness, cracking. May be absorbed through skin with possible systemic effects.

Eye Contact: May cause irritation including stinging, tearing, and redness.

Effects of Repeated Overexposure: Irritation of nose, throat or digestive system. Depression of nervous system.

Medical Conditions Aggravated by Overexposure:

Repeated exposure may aggravate skin disorders respiratory disorder, male reproductive disorders and peripheral nerve disorders Exposure to high concentrations may cause irregular heartbeats. Persons with pre-existing heart disorders may be more susceptible to this effect.

SECTION IV FIRST AID

Obtain medical attention for all cases of over-exposure.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Swallowing: Aspiration hazard - DO NOT induce vomiting.

If vomiting occurs, keep head below hips to prevent aspiration into lungs. Obtain medical attention immediately.

Skin: Wash skin with soap and water for at least 15 minutes.

Eye Contact: Flush eyes with water for at least 15 minutes. Obtain medical assistance.

Note to Physician: BEI=2,5-hexadione in urine, sample at end of shift at workweeks end, 5mg/g creatine. Analgesics may be necessary for pain management. Monitor arterial blood gases in cases of severe aspiration.

SECTION V FIRE FIGHTING MEASURES

Fire/Explosive Properties

Flash Point: -22C (-8F) Tag Closed Cup

Flammable Limits in Air: lel 1.1; uel 7.5

Flammability Classification: 3 (NFPA)

1993 Emergency Response Guidebook: Guide 27

1996 North American Emergency Response Guidebook: Guide 128

Extinguishing Media:

Small Fires: Use dry chemical, foam of carbon dioxide.

Water spray may be ineffective.

Special Fire Fighting Procedures: Wear full protective clothing and NIOSH-approved SCBA with full face piece operated in positive pressure mode. Use water spray to cool fire-exposed containers and structures; Use water spray to disperse vapors - re-ignition is possible.

Unusual Fire and Explosion Hazards:

- Vapors may travel to source of ignition and flash back.

- Vapors may settle in low or confined spaces.
- May produce a floating fire hazard.
- Static ignition hazard can result from handling and use.

SECTION VI

SPILL/ACCIDENTAL RELEASE MEASURES

All spills: Ventilate area of leak and spill. Eliminate all ignition sources; ground all equipment; do not walk through spill; stop spill if possible; prevent entry into sewers, confined spaces, etc.; use a vapor suppressing foam to reduce vapors; absorb spill with non-combustible matter and transfer to containers; use non-sparking tools to collect absorbed material.

SECTION VII HANDLING AND STORAGE

- Flammable material - keep away from heat, sparks, and flame; sudden releases of hot organic vapors or mists from process equipment operating at elevated temperature may result in ignitions without the presence of obvious ignition sources.
- Avoid contact with eyes.
- Keep container closed.
- Use with adequate ventilation.
- Ground container when transferring product.
- Vapors may collect in containers; treat empty containers as hazardous.
- Wash thoroughly after handling
- Vapors may settle in low or confined areas

SECTION VIII EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits:

n-Hexane

OSHA PEL: 50ppm (TWA)

ACGIH TLV: 50ppm (TWA), skin

Other isomers of hexane

ACGIH TLV: 500ppm (TWA), 1000ppm (STEL)

Ventilation: Special, local ventilation is needed where vapors escape to the workplace air

Respiratory Protection: Use self-contained breathing apparatus in high vapor concentration

Personal Protective Equipment: gloves, lab coat or uniform, safety glasses, eye wash, safety shower

SECTION IX

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: clear, colorless liquid

Odor: characteristic, gasoline-like

Vapor pressure: 150 mm Hg @24.8C

Vapor density: 3.0 (air =1)

Boiling point @ 760mm Hg: Approximately 69C

Melting Point: -95C

Solubility in Water: Insoluble

Specific Gravity : 0.664 @ 15.56°C

Evaporation Rate: (BuAc=1): ca. 0.3

Percent Volatiles: 100%

SECTION X

STABILITY/REACTIVITY INFORMATION

Stability: Stable under ordinary conditions of use and storage.

Conditions to avoid: Heat, flames, ignition sources and incompatibles.

Incompatibility/Materials to avoid: strong oxidizing/reducing agents

Hazardous Combustion/Decomposition Products: May produce acrid smoke and irritating fumes when heated to decomposition.

Hazardous Polymerization: Will not occur.

SECTION XI DISPOSAL CONSIDERATIONS

Vapors may collect in empty containers. Treat empty containers as hazardous.

Dispose of spill-clean up and other wastes in accordance with Federal, State, and local regulations.

SECTION XII TRANSPORTATION INFORMATION

Proper Shipping Name: Hexanes

Hazard Class: 3

UN Number: 1208

Packing Group II

IMO Information: Hexanes

Label of Class: 3.1

UN/NA: UN1208

Packing Group II

Low flashpoint group

SECTION XIII REGULATORY INFORMATION

Federal EPA

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are:

Chemical Name	CAS Number	RQ
Hexane	110-54-3	5,000lb

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (used for SARA 302, 304, 311, and 312). Components present in this product at a level which could require reporting under this statute are: Hexane

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS's that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

Hexane (CAS 110-54-3) upper bound conc. 100%

Toxic Substances Control Act (TSCA) Status:

The ingredients of this product are on the TSCA inventory.

State Right to Know

California Proposition 65: This product may contain trace levels of benzene known to the State of California to cause cancer. This product may contain trace levels of toluene known to the State of California to be a developmental toxicant.

This product contains hexane which may be identified as a hazardous substance by individual States.

California SCAQMD Rule 443.1 (VOC's)

A Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbonic acid, metallic carbides, or carbonates, ammonium carbonate, 1,1,1 tri-chloroethane, methylene chloride, (FC-23), (CFC-113), (CFC-12), (CFC-11), (CFC-22), (CFC-114) and (CFC-115). 674 g/l

The information contained herein is based on data considered to be accurate. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use of the product.