



Carolina International Sales Co., Inc

MATERIAL SAFETY DATA SHEET

2522 Plantation Center Drive
Matthews, NC 28105
(704) 845 9440

www.ciscochem.com

1. PRODUCT NAME: Hexane
2. CHEMICAL NAME:
3. SYNONYMS:
4. CAS NUMBER: 110-54-3
5. COMPOSITION: Heptane (110-54-3)
100%

**IN CASE OF
TRANSPORT EMERGENCY
CONTACT CHEMTREC
USA: 1-800-424-9300
INTERNATIONAL: 1-703-527-3887**

6. PROPERTIES: ODOR & APPEARANCE: clear, colorless liquid with mild, pleasant, gasoline-like odor
ODOR THRESHOLD: 60ppm – above TWAEV, odor poor guide to presence of harmful concentrations
VAPOUR PRESSURE: 124mmHg/16.5kPa* (20 c)
EVAPORATION RATE (butyl Acetate=1): 8.3*
VAPOR DENSITY (air=1): 3*
BOILING RANGE: 56 c – 70 c*
FREEZING POINT: -95 c*
SPECIFIC GRAVITY: 0.673* (20/20 c)
WATER SOLUBILITY: 10mg per litre – very low solubility
IN OTHER SOLVENTS: soluble in most organic solvents
VISCOSITY: 0.3 centipoise (20 c)
*Note: This is NOT a specification sheet. Actual values can vary depending on the hexane isomers present.

7. HAZARDS: HMIS (USA): Health - 0, Fire - 3, Reactivity - 0

8. FIRE FIGHTING INFORMATION: FLASH POINT: -22 c/-7 F (closed cup)*
AUTOIGNITION TEMPERATURE: 225 c/437 F
FLAMMABLE LIMITS: 1.2% - 7.4%
Note: Heptane is less flammable than gasoline or acetone, but liable to ignite under any normal work condition.
COMBUSTION PRODUCTS: carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments
FIREFIGHTING PRECAUTIONS: foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water – water jet spreads flames; firefighters must wear SCBA
STATIC DISCHARGE: will accumulate a static charge
MECHANICAL IMPACT: not sensitive
CHEMICAL STABILITY: stable; will not polymerize
REACTIVE WITH: strong oxidizing agents
DECOMPOSITION PRODUCTS: none apart from Hazardous Combustion Products

9. PERSONAL PROTECTION MEASURES: HANDS: nitrile or “Viton” rubber gloves
EYES: safety glasses with side shields or chemical goggles
RESPIRATOR: not required if ventilation is adequate, or use organic vapor cartridge
CLOTHING: impermeable (hands, above) apron, boots, long sleeves, if splashing is anticipated

10. FIRST AID PROCEDURES: SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.
EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.



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INHALATION: Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.
INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.
NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

11. EXPOSURE LIMITS: TWAEV ppm: 50 (skin)
LD50 ORAL: 25,000
SKIN (mg/kg): not known
LC50ppm INHALATION: 48,000

12. TOXICOLOGICAL INFORMATION: EFFECTS ACUTE EXPOSURE
SKIN CONTACT: drying, mild irritant
SKIN ABSORPTION: yes; toxic effects unlikely by this route – but skin absorption may add to body burden
EYE CONTACT: irritating, will not damage eyes
INHALATION: irritating; high concentrations cause headache, dizziness, intoxication
INGESTION: not readily absorbed, but effects similar to inhalation
EFFECTS OF CHRONIC EXPOSURE
GENERAL: prolonged exposure may cause skin cracking and dermatitis, repeated absorption may damage nervous system
SENSITISING: not a sensitizer
REPRODUCTIVE EFFECT: experimental mutagen in rodents; no effects documented in humans
SYNERGISTIC WITH: not known
LD50: 25,000mg/kg (oral, rat)
LC50: 40,000ppm (inhalation, mouse)

13. ECOLOGICAL INFORMATION: This product cannot accumulate in living tissue, this product is readily and rapidly biodegradable in the presence of oxygen.

14. DISPOSAL CONSIDERATIONS: DO NOT FLUSH TO SEWER; may be incinerated in approved facility.

15. CARCINOGENIC PROPERTIES & NOTIFICATIONS: Experimental tumorigen in rodents; no effects documented in humans.

16. TRANSPORT INFORMATION: USA 49 CFR
Product identification number: UN – 1208
Shipping name: hexanes
Classification: Class 3; Packing group II
Label: 3 - Flammable
Class: B2, D 2B

17. HANDLING & STORAGE: Store and use a cool dry environment, away from sources of ignition, heat and oxidizing agents. Use with adequate ventilation. Always ground the container before handling to prevent static discharge. This product is highly flammable. Take care to avoid sparks – use non-sparking tools and explosion-proof electrical



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equipment nearby. Do not cut, drill, weld or grind on or near this container. Warning: Product vapor has a mild, pleasant odor which does not adequately warn of hazard. Inhalation of product vapor can cause intoxication, which the victim may be unaware of. Avoid prolonged contact with skin and wash work clothes frequently. An eye bath and safety shower should be available near the workplace.

18. ACCIDENTAL LEAK PRECAUTION: dyke to control spillage and prevent environmental contamination. Serious fire potential: blanket spill with foam as a precaution against accidental ignition. Take extremely care to avoid RELEASE sparks – do not operate (turn on OR off) electrical appliances near spill, unless explosion proof. MEASURES: HANDLING SPILL: ventilate contaminated area; recover free liquid with explosion-proof pumps; absorb residue on an inert sorbent, pick up using non-sparking plastic or aluminium shovel, & store in closed containers for disposal.

19. REGULATORY INFORMATION: IMMEDIATELY DANGEROUS TO LIFE OR HEALTH (IDLH)
1100ppm (Based on 10 % of the lower explosion limit for safety considerations even though the relevant toxicological data indicated that irreversible health effects or impairment of escape existed only at higher concentrations.)
- ALLOWABLE TOLERANCE
Residues of hexane are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Hexane (include hexane isomers) is exempted from the requirement of tolerance when used as a solvent or cosolvent in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops only.
- OSHA STANDARDS
Permissible Exposure Limit: Table Z-1 8-hr Time Weighted Avg: 500ppm (1800mg/cu m). Vacated 1989 OSHA PEL TWA 50ppm (180mg/cu m) is still enforced in some states.
- NIOSH RECOMMENDATIONS
Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 50ppm (180mg/cu m).
- THRESHOLD LIMIT VALUES
8 hr Time Weighted Avg (TWA): 50ppm, skin. Excursion Limit Recommendation: Excursions in worker exposure levels may exceed three times the TLV - TWA for no more than a total of 30 min during a work day, and under no circumstances should they exceed five times the TLV-TWA, provided that the TLV-TWA is not exceeded. Biological Exposure Index (BEI): Determinant: 2,5-hexanedione in urine; Sampling Time: end of shift; BEI: 5mg/g creatinine. The determinant is nonspecific, since it is also observed after exposure to other chemicals. Biological Exposure Index (BEI): Determinant: n-hexane in end-exhaled air. The biological determinant is an indicator of exposure to the chemical, but the quantitative interpretation of the measurement is ambiguous. These determinants should be used as a screening test if a quantitative test is not practical or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question. Notice of Intended Change for 2002: These biological exposure indices (BEIs), with their corresponding values, comprise those for which a limit has been proposed or for which retention on the Notice of Intent to Establish or Change has been proposed. In each case, the proposed indices should be considered trial values that will remain in the listing for the year following ratification by the ACGIH Board of Directions. If, during the year, no evidence comes to light that questions the appropriateness of the values herein, the values will be reconsidered for Adoption. Determinant: 2,5-hexanedione in urine; Sampling Time: end of shift at end of workweek; BEI: 0.4 mg/l.
- ATMOSPHERIC STANDARDS
Listed as a hazardous air pollutant (HAP) generally known or suspected to cause serious health problems. The Clean Air Act, as amended in 1990, directs EPA to set standards requiring major sources to sharply reduce routine emissions of toxic pollutants. EPA is required to establish and phase in specific performances based standards for all air emission sources that emit one or more of the listed pollutants. Hexane is included on this list.



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STATE DRINKING WATER GUIDELINES

Arizona 4000 ug/l [QR] [REF – 100]

Florida 10 ug/l [QR] [REF – 100]

Maine 4000 ug/l [QR] [REF – 100]

Minnesota 400 ug/l [QR] [REF – 100]

North Carolina 14300 ug/l [QR] [REF – 100]

New Jersey 33 ug/l [QR] [REF – 100]

Wisconsin 600 ug/l [QR] [REF – 100]

FIFRA REQUIREMENTS

Residues of hexane are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Hexane (include hexane isomers) is exempted from the requirement of tolerance when used as a solvent or cosolvent in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops only.