

CLIP, Chemical Laboratory Information Profile

"Only when you know the hazards, can you take the necessary precautionary measures."

***n*-Hexane****CAS No.: 110-54-3**

Synonyms: hexane, normal-hexane, hexyl hydride

Physical Properties**Exposure Limits**

Colorless volatile liquid, mild odor at concentrations >130 ppm
 Vapor pressure at 20 °C: approx 124 Torr
 Melting point: approx -95 °C
 Boiling point: approx 69 °C

OSHA PEL: 500 ppm
 ACGIH TLV: 50 ppm

Hazardous Characteristics

Overall toxicity	Flammability	Destructive to skin/eye	Absorbed through skin	Sensitizer?	Self-reactive?	Incompatible with:
3	3	1	0	No	No	Oxidizing agents*

0: None (or very low); 1: Slight; 2: Moderate; 3: High; 4: Severe

***Reaction with:**

Oxidizing agents can start fires.

See Bretherick's *Handbook of Reactive Chemical Hazards* for details and for other incompatibilities.

Cited as known to be or reasonably anticipated to be carcinogenic in NTP-9?

No

Reproductive toxin? Frazier and Hage describe rat pups that "weighed less than expected" when dams were exposed during pregnancy.

Typical symptoms of acute exposures:

Irritation of the eyes, nose; light-headedness, dizziness, nausea, headache; numbness in the hands, fingers, feet, toes; muscle weakness; dermatitis; giddiness. Chemical pneumonia if swallowed and then vomited.

Principal target organ(s) or system(s):

Eyes, skin, respiratory system, central nervous system, peripheral nervous system.

Storage Requirements

Store with other flammables in a cool, dry, well-ventilated location, away from ignition sources and separated from oxidizing agents.

Additional Remarks

Commercial hexane (mixtures of hexane isomers) usually contains from 20% to 80% *n*-hexane. Repeated overexposure to *n*-hexane vapors causes peripheral polyneuropathy (unpleasantly frequent tingling sensations in hands, fingers, feet, and/or toes). The vapor is heavier than air and can travel long distances; it is explosive when mixed with air.

Notes**ReadMe**

This Chemical Laboratory Information Profile is *not* a Material Safety Data Sheet. It is a brief summary for teachers and their students that describes some of the hazards of this chemical as it is typically used in laboratories. On the basis of your knowledge of these hazards and before using or handling this chemical, *you need to select the precautions and first-aid procedures to be followed*. For that information and for other useful information, refer to Material Safety Data Sheets, container labels, and references in the scientific literature that pertain to this chemical.

Reproductive Toxins

Some substances that in fact are reproductive toxins are not yet recognized as such. For the best readily available and up-to-date information, refer to "DART/ETIC". See the TOXNET home page at www.sis.nlm.nih.gov and click on "Toxicology search". *Note that some of the data in DART/ETIC have not been peer-reviewed*. See also Linda M. Frazier and Marvin L. Hage, *Reproductive Hazards of the Workplace*; Wiley, 1998; and T. H. Shepard, *Catalog of Teratogenic Agents*, 9th ed.; Johns Hopkins University Press, 1998.

Abbreviations

ACGIH TLV—American Conference of Governmental Industrial Hygienists—Threshold Limit Value. C—Ceiling. CAS—Chemical Abstracts Service. mg/m³—milligrams per cubic meter. NA—Not applicable. NE—Not established. NI—No information. NTP-9—National Toxicology Program, Ninth Annual Report on Carcinogens. OSHA PEL—Occupational Safety and Health Administration—Permissible Exposure Limit. ppm—parts per million. STEL/C—Short-term exposure limit and ceiling.

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