Safety Data Sheet · OSHA HCS 2024

Hexane ACS Reagent Grade

ACS Reagent

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Hexane ACS Reagent Grade
Grade	ACS Reagent
CAS Number	110-54-3
Chemical Formula	C6H14
Molecular Weight	86.18 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	n-Hexane; normal hexane; hexyl hydride
Recommended Use	Laboratory and analytical solvent (ACS reagent): extraction, chromatography and spectroscopy.
Restrictions on Use	For industrial, professional and laboratory use. Do not use for cleaning or degreasing in poorly ventilated spaces: repeated n-hexane exposure damages the peripheral nerves.

2 Hazard Identification



Flammable



Irritant / harmful



Health hazard



Environmental hazard

Classification

Flammable liquids, Category 2

Aspiration hazard, Category 1

Skin corrosion/irritation, Category 2

Specific target organ toxicity, single exposure, Category 3 (narcotic effects)

Reproductive toxicity, Category 2

Specific target organ toxicity, repeated exposure, Category 2

Hazardous to the aquatic environment, long-term hazard, Category 2 †

† GHS environmental hazard class; not adopted under OSHA HCS (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 through prolonged or repeated exposure
- H411 Toxic to aquatic life with long lasting effects

Precautionary Statements

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof electrical, ventilating, and lighting equipment.
- P242 Use non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust, fume, gas, mist, vapors or spray.
- P261 Avoid breathing dust, fume, gas, mist, vapors or spray.
- P264 Wash hands and face thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves, protective clothing, and eye/face protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- P302+P352 IF ON SKIN: Wash with plenty of water and soap.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P308+P313 IF exposed or concerned: Get medical advice or attention.
- P312 Call a POISON CENTER or doctor if you feel unwell.
- P314 Get medical advice or attention if you feel unwell.
- P321 Specific treatment (see first-aid information on this label).
- P331 Do NOT induce vomiting.
- P332+P313 If skin irritation occurs: Get medical advice or attention.
- P362 Take off contaminated clothing and wash before reuse.
- P370+P378 In case of fire: Use alcohol-resistant foam, CO2 or dry chemical powder to extinguish.
- P391 Collect spillage.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration

Component	CAS No.	Formula	Concentration
Hexane	110-54-3	C6H14	>98.5% (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes
Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin
Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation
Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion
Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects
Aspiration into the lungs, for example during vomiting, may cause chemical pneumonitis, which can be fatal.

Skin contact causes irritation: redness, itching and pain; repeated contact may dry and crack the skin.

Inhalation of vapors may cause drowsiness, dizziness, headache and nausea.

Immediate Medical Attention and Special Treatment
Aspiration hazard: if swallowed, do not induce vomiting and get medical attention immediately. Note to physician: observe for chemical pneumonitis; protect the airway before any gastric procedure.

5 Fire-Fighting Measures

Suitable Extinguishing Media
Alcohol-resistant foam, CO2, dry chemical powder. Water spray may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media
Do not use a solid water stream — may scatter and spread fire.

Specific Hazards Arising from the Chemical
Vapors are heavier than air and may form explosive mixtures with air; they can travel to a source of ignition and flash back. Containers may rupture when heated.

Protective Equipment
Wear self-contained breathing apparatus and full protective clothing.

Hazardous Combustion Products
Carbon monoxide and carbon dioxide on combustion.

6 Accidental Release Measures

Personal Precautions
Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.

Hazard-Specific Precautions
Eliminate all ignition sources. Use non-sparking tools and explosion-proof equipment; ground and bond containers during cleanup.

Environmental Precautions
Prevent leakage or spillage from entering drains, sewers, or waterways.

Containment & Cleanup
Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area away from heat, sparks, and open flame. Keep away from incompatible materials (see Section 10). Keep containers tightly closed. Ground and bond containers when transferring material.
Specific Storage Precautions	Keep containers tightly closed in a cool, dry, well-ventilated flammables area away from heat, sparks, open flame and direct sunlight. Ground and bond containers when transferring. Protect from light.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	500 ppm TWA
ACGIH TLV	50 ppm TWA (skin notation: absorbed through the skin)
NIOSH REL	50 ppm TWA
IDLH	1100 ppm (10% LEL)

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.
Respiratory Protection	Use a NIOSH-approved respirator with organic vapor cartridges. For confined spaces or exposures above the OEL, use supplied-air respiratory protection.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Clear, volatile light hydrocarbon liquid
Odor	Gasoline-like (petroleum distillate) odor
Odor Threshold	No data available
pH	No data available
Melting Point / Freezing Point	-95 °C (-139 °F)
Boiling Point	69 °C (156 °F) at 760 mmHg
Flash Point	-22 °C (-8 °F), closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	LEL 1.1% / UEL 7.5% (v/v in air)
Vapor Pressure	160–176 hPa (120–132 mmHg) at 20 °C
Vapor Density	2.97 (air = 1)

Relative Density	0.659 at 25 °C (water = 1)
Solubility	Practically insoluble in water (about 0.01 g/L)
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	0.31 mPa·s at 20 °C
Particle Characteristics	Not applicable
Form	Liquid
Density	0.659 at 68 °F (USCG, 1999) - Less dense than water; will float
Refractive Index	1.372 - 1.380

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Not reactive under normal conditions of use and storage.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, static discharge and other ignition sources; direct sunlight. Vapor is heavier than air and travels to ignition sources.
Incompatible Materials	Strong oxidizing agents; halogens (chlorine, fluorine) and halogen compounds.
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide on combustion.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Aspiration into the lungs, for example during vomiting, may cause chemical pneumonitis, which can be fatal. Skin contact causes irritation: redness, itching and pain; repeated contact may dry and crack the skin. Inhalation of vapors may cause drowsiness, dizziness, headache and nausea.
Delayed and Chronic Effects	Reproductive toxicity: may damage or is suspected of damaging fertility or the unborn child. Prolonged or repeated exposure may damage organs. Repeated skin contact may cause dermatitis (dry, cracked skin).

Route	Value
LD50 Oral (rat)	25,000 mg/kg
LD50 Dermal (rabbit)	3,000 mg/kg
LC50 Inhalation (rat, 4h)	48,000 ppm (vapor)

Carcinogen Classification

Agency	Status
IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Aquatic Hazard	H411 Toxic to aquatic life with long lasting effects
Ecotoxicity	Fish LC50: 4 mg/L (24 h, Carassius auratus (goldfish); 24-h window (non-standard))
Persistence & Degradability	Readily biodegradable (100% ThBOD in 4 wk)
Bioaccumulative Potential	log Kow 3.90, BCF 170 (estimated)
Mobility in Soil	High soil mobility (estimated Koc 130)

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	D001 (ignitable). n-Hexane is not a P-, U- or F-listed waste; spent mixtures with listed solvents may carry F-codes.

If discarded, this material may be an ignitable hazardous waste (EPA RCRA D001, 40 CFR 261.21(a)(1): flash point below 60 °C; aqueous solutions with less than 24% alcohol by volume are excluded). The waste generator must make the final hazardous-waste determination.

14 Transport Information

US DOT (49 CFR)

UN Number	UN1208
Proper Shipping Name	Hexanes
Hazard Class	3
Packing Group	II
Additional US DOT Requirements	Bulk packaging over 119 gal (for example a 275-gal tote): Marine Pollutant (hexane, 49 CFR 172.101 Appendix B). Non-bulk packages by highway or rail are excepted from the marine-pollutant requirements (49 CFR 171.4(c)). No single package reaches the 5,000 lb RQ.
Environmental Hazards	Meets GHS aquatic-hazard criteria; may be a marine pollutant under the IMDG Code (vessel transport).

IMDG / IATA classifications may differ from US DOT. Verify current regulations before international shipment.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Listed (since 2017-12-15)

Inventory / List	Status
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Listed
CERCLA Reportable Quantity (RQ)	n-Hexane (CAS 110-54-3) 5,000 lb (2,270 kg), about 910 US gal. EPCRA Section 313 (TRI) listed, de minimis 1.0%.

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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