

Safety Data Sheet

Hexanes, ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hexanes, ACS

Synonyms/Generic Names: None

Product Number: 2535

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Flammable liquid, Target organ effect, Irritant, Toxic by ingestion, Teratogen

Target Organs: Peripheral nervous system, Kidney, Testes

Signal Words: Danger

Pictograms:



GHS Classification:

Flammable liquids	Category 2
Skin irritation	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity – single exposure	Category 3
Specific target organ toxicity – repeated exposure, Inhalation	Category 2
Aspiration hazard	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

GHS Label Elements, including precautionary statements:

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.

H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure if ingested.
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/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/Bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use appropriate media to extinguish.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	Toxic if swallowed. Aspiration hazard if swallowed – can enter lungs and cause damage.

NFPA Ratings

Health	2
Flammability	3
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	3
Reactivity	0
Personal	Not Available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
n-Hexanes	45-60	110-54-3			
Hexane Isomers	15-40	Mixture	Mixture	Mixture	Mixture
Cyclohexane	0-3	110-82-7			

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
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.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far away as possible. Use very large quantities of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides) under fire conditions. Vapor can cause flash fire. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation and grounding. Wash thoroughly after using. Keep container closed when not in use. Keep away from sources of ignition. No smoking. Take measure to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Store in tightly closed, containers in a cool, dry, well ventilated area. Keep away from heat, sparks and flame. Maintain adequate ventilation. Ground all equipment containing this material. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Ventilation and appropriate grounding of containers.

Component	Exposure Limits	Basis	Entity
n-Hexane	50 ppm 176 mg/m ³	TLV	ACGIH
	500 ppm 1800 mg/m ³	PEL	OSHA
	50 ppm 180 mg/m ³	REL	NIOSH
Hexane Isomer	500 ppm	TLV	ACGIH
Cyclohexane	100 ppm	TLV	ACGIH
	300 ppm 1050 mg/m ³	PEL	OSHA
	300 ppm 1050 mg/m ³	REL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Face shield and safety glasses.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. Handle with gloves.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear liquid
Odor	Light hydrocarbons
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	-108 °C (-162 °F)
Initial boiling point and boiling range	60 °C (140°F)
Flash point	Closed cup: -18 °C (-0.4°F)
Evaporation rate	8.12
Flammability (solid, gas)	Not Available
Upper/lower flammability or explosive limit	Lower: 1.2% Upper: 7.3%
Vapor pressure	17.7 kPa (133 mm Hg) at 20 °C
Vapor density	3.0 (air = 1.0)
Relative density	0.67
Solubility (ies)	Very slightly soluble in cold water.
Partition coefficient: n-octanol/water	Not Available

Auto-ignition temperature	232 °C (450°F)
Decomposition temperature	Not Available
Viscosity	Kinematic: 0.46 cSt

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Keep away from heat, flame and sparks. Extremes of temperature and direct sunlight.
Incompatible Materials	Oxidizers
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

n-Hexane

Skin	LD50 Dermal – rabbit – >3350 mg/kg
Eyes	Not Available
Respiratory	LC50 Inhalation – rat – 4 hours – 48,000 ppm
Ingestion	LD50 Oral – rat – 28,705 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Eyes	Redness, blurred vision, tearing.
Inhalation	Lung irritation, chest pain, pulmonary edema, giddiness, dizziness, drowsiness, headache, unconsciousness.
Skin	Defatting, dermatitis, drying, redness.
Ingestion	Gastrointestinal discomfort, central nervous system depression, slurred speech, slowed reaction time, headache, unconsciousness.

Chronic Toxicity	Carcinogenicity - Rat – Inhalation Tumorigenic: Carcinogenic by RTECS criteria. Tumorigenic Effects: Testicular tumors.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Ingestion - May cause damage to organs through prolonged or repeated exposure. - Nervous system
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. Suspected human reproductive toxicant Suspected of damaging fertility.
Aspiration Hazard	May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

n-Hexane

Aquatic Vertebrate	LC50 - Pimephales promelas (fathead minnow) - 2.5 mg/l - 96.0 h
Aquatic Invertebrate	EC50 - Daphnia magna (Water flea) - 3,878.00 mg/l - 48 h
Terrestrial	Not Available
Algae	EC50 - Chlorella vulgaris (Fresh water algae) - 12,840.00 mg/l - 3 h EC50 - SKELETOMA - 0.30 mg/l - 8 h

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1208, Hexanes, 3, pg II
TDG	UN1208, HEXANES, 3, PG II
IMDG	UN1208, HEXANES, 3, PG II
Marine Pollutant	Yes
IATA/ICAO	UN1208, Hexanes, 3, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Listed: n-Hexane
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 313	Listed: n-Hexane, Cyclohexane
WHMIS Canada	Class B-2: Flammable and combustible liquid- Flammable liquid Class D-2A: Poisonous and infectious material- Other effects- Very toxic Class D-2B: Poisonous and infectious material- Other effects- Toxic

16. OTHER INFORMATION

Revision	Date
Revision 1	08-02-2011
Revision 2	02/23/2015
Revision 3	08/13/2018

Disclaimer: The information provided in this Safety Data Sheet ("SDS") is correct to the best of our knowledge, information and belief at the date of publication. The information in this SDS relates only to the specific Product identified under Section 1, and does not relate to its use in combination with other materials or products, or its use as to any particular process. Those handling, storing or using the Product should satisfy themselves that they have current information regarding the particular way the Product is handled, stored or used and that the same is done in accordance with federal, state and local law. WE DO NOT MAKE ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE. WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, INJURY, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.