COLUMBUS CHEMICAL INDUSTRIES
-An Employee-Owned Company-

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date 14-Jan-2025 **Revision Number** 1

1. Identification

Product identifier

Product Name Hexanes, ACS

Other means of identification

Product Code(s) 2535

UN number or ID number UN1208

Synonyms Hexane

Recommended use of the chemical and restrictions on use

Recommended use Industrial use
Laboratory use
Industrial Manufacturing (all)

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Address
Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI 53925 USA
Phone: (920) 623-2140
Fax: (920) 623-2577
www.columbuschemical.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC: 1-800-424-9300 for US / 703-527-3887 outside US

Emergency Telephone 911

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration hazard	Category 1
Flammable liquids	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements
Danger

Hazard statements
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
H225 - Highly flammable liquid and vapor.

Precautionary Statements - Prevention
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
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/ lighting/ equipment
P242 - Use only non-sparking tools
P243 - Take action to prevent static discharges
P235 - Keep cool

Precautionary Statements - Response
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P321 - Specific treatment (see First-Aid Measures on SDS)
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P363 - Wash contaminated clothing before reuse
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P331 - Do NOT induce vomiting
P370 + P378 - In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage
P405 - Store locked up
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information
May be harmful in contact with skin. Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Mixture

Synonyms Hexane.

Chemical name	CAS No	Weight-%	Formula	Molecular Weight
n-Hexane	110-54-3	45-60	C6H14	86.18 g/mol
Hexane, mixture of isomers	-	15-40	-	-
Cyclohexane	110-82-7	0-3	C6H12	84.16 g/mol

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation Remove to fresh air. Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention. Delayed pulmonary edema may occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get immediate medical attention.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Indication of any immediate medical attention and special treatment needed

Note to physicians Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances.

5. Fire-fighting measures

Suitable Extinguishing Media Large Fire Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam. CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire

extinguishing water must be disposed of in accordance with local regulations.

Hazardous combustion products Carbon oxides.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep out of the reach of children. Store away from other materials.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
n-Hexane	TWA: 50 ppm S*	TWA: 500 ppm TWA: 1800 mg/m^3 (vacated) TWA: 50 ppm (vacated) TWA: 180 mg/m^3	IDLH: 1100 ppm TWA: 50 ppm TWA: 180 mg/m^3
Hexane, mixture of isomers	-	(vacated) TWA: 500 ppm (vacated) TWA: 1800 mg/m^3 (vacated) STEL: 1000 ppm (vacated) STEL: 3600 mg/m^3	-
Cyclohexane	TWA: 100 ppm	TWA: 300 ppm TWA: 1050 mg/m^3 (vacated) TWA: 300 ppm (vacated) TWA: 1050 mg/m^3	IDLH: 1300 ppm TWA: 300 ppm TWA: 1050 mg/m^3

Biological occupational exposure limits

Chemical name	ACGIH
n-Hexane	0.5 mg/L - urine (2,5-Hexanedione without hydrolysis) - end of shift
Cyclohexane	50 mg/g creatinine - urine (1,2-Cyclohexanediol) - end of shift at end of workweek

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear
Color Colorless

Odor	No information available
Odor threshold	No information available

Property	Values	Remarks • Method
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	-95 °C / -139.0 °F	None known
Initial boiling point and boiling range	69 °C / 156.2 °F	None known
Flash point	-22 °C / -7.6 °F	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	0.65 - 0.67	None known
Water solubility	Slightly soluble	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials Oxidizing agent.

Hazardous decomposition products Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Aspiration into lungs can

produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract. May cause drowsiness or dizziness.

Eye contact Specific test data for the substance or mixture is not available. May cause irritation.

Skin contact Repeated exposure may cause skin dryness or cracking. Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).

Ingestion Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Redness. May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
n-Hexane	= 25 g/kg (Rat)	= 3000 mg/kg (Rabbit)	= 48000 ppm (Rat) 4 h
Hexane, mixture of isomers	= 15000 mg/kg (Rat)	-	-
Cyclohexane	= 12705 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 32880 mg/m^3 (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Target organ effects Central nervous system, Respiratory system, Eyes, Skin, Peripheral Nervous System (PNS).

Aspiration hazard May be fatal if swallowed and enters airways.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
n-Hexane	-	LC50: 2.1 - 2.98mg/L (96h, Pimephales promelas)	-	-
Cyclohexane	EC50: >500mg/L (72h, Desmodesmus subspicatus)	LC50: 3.96 - 5.18mg/L (96h, Pimephales promelas) LC50: 23.03 - 42.07mg/L (96h, Pimephales promelas) LC50: 24.99 - 44.69mg/L (96h, Lepomis macrochirus) LC50: 48.87 - 68.76mg/L (96h, Poecilia reticulata)	-	-

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
n-Hexane	4
Cyclohexane	3.44

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

US EPA Waste Number D001.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT Regulated

- **UN number or ID number** UN1208
- **Proper shipping name** Hexanes
- **Transport hazard class(es)** 3
- **Packing group** II
- **DOT Marine Pollutant** P

TDG Regulated

UN number or ID number	UN1208
UN proper shipping name	Hexanes
Transport hazard class(es)	3
Packing group	II

ICAO (air) Regulated

UN number or ID number	UN1208
UN proper shipping name	Hexanes
Transport hazard class(es)	3
Packing group	II

IATA Regulated

UN number or ID number	UN1208
UN proper shipping name	Hexanes
Transport hazard class(es)	3
Packing group	II

IMDG Regulated

UN number or ID number	UN1208
UN proper shipping name	Hexanes
Transport hazard class(es)	3
Packing group	II

15. Regulatory information

International Inventories

TSCA	Complies.
DSL/NDSL	Complies.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
n-Hexane 110-54-3	1.0
Cyclohexane 110-82-7	1.0

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Cyclohexane	1000 lb	-	-	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
n-Hexane	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Cyclohexane	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
n-Hexane 110-54-3	Male Reproductive

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
n-Hexane	X	X	X
Cyclohexane	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 2	**Flammability** 3	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 2 *	**Flammability** 3	**Physical hazards** 0	**Personal protection** X

Chronic Hazard Star Legend * = Chronic Health Hazard*

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 14-Jan-2025
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet