

**Section 1: Product & Company Information**

**Product Identifier:** Hexane

**Other Means of Identification**

Product Number: No data available.

**Recommended Use and Restrictions on Use**

Recommended Use: Solvent

Restrictions on Use : No data available.

**Manufacturer / Importer / Supplier / Distributor Information**

**Company Name:** CORECHEM Inc.

**Address:** 4320 Greenway Drive  
Knoxville, TN 37918  
USA

**Information Telephone Number:** 1-865-524-4239

**Fax Number:** 1-865-524-3375

**Website:** www.corecheminc.com

**Contact Person:** Regulatory Manager

**E-mail:** regulatory@corecheminc.com

**Emergency Phone Number:** Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

**Section 2: Hazards Identification**

**GHS Hazard Classification(s)**

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

**Physical Hazard(s)**

Flammable, Liquids - 2

**Health Hazard(s)**

Aspiration Hazard - 1

Corrosion/Irritation, Skin - 2

(Corrosion)Damage/Irritation, Eye - 2B

Toxic to Reproduction - 2

Specific Target Organ Toxicity (STOT)-Respiratory Irritation, Single exposure - 3

Specific Target Organ Toxicity (STOT), Repeated exposure - 1

**Environmental Hazard(s)**

Aquatic, Acute - 2

Aquatic, Chronic - 2

**Label Elements**

**Signal Word**

**DANGER**

**Hazard Symbol(s)**



**Hazard Statement(s)**

H225: Highly flammable liquid and vapor.

H304: May be fatal if swallowed and enters airways.

H315: Causes skin Irritation.

H320: Causes eye Irritation.

H335: May cause respiratory Irritation.

H361: Suspected of damaging fertility or the unborn child.

H372: Causes damage to organs.

H401: Toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

**Precautionary Statements**

**General**

Not applicable.

**Prevention**

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.
- P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264: Wash face, hands and any exposed skin 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/eye protection/face protection.
- P281: Use personal protective equipment as required.

#### Response

- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
- P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313: IF exposed or concerned: Get medical advice/attention.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P314: Get medical advice/attention if you feel unwell.
- P321: Specific treatment (see supplemental first aid instructions on this label).
- P331: Do NOT induce vomiting.
- P333 + P313: If skin irritation or rash occurs: Get medical advice/attention.
- P337 + P313: If eye irritation persists: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P370 + P378: In case of fire: Use suitable extinguishing media for extinction.
- P391: Collect spillage.

#### Storage

- 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.

#### Disposal

- P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### Hazard(s) not otherwise classified (HNOC)

None known.

## Section 3: Composition/Information on Ingredients

#### Mixture

Chemical Identity <sup>2</sup>	Common Name/Synonym(s)	CAS # <sup>3</sup>	Weight %	Impurity or Stabilizing Additive
Hexane	-	110-54-3	90 - 100%	No
3-Methylpentane	-	96-14-0	0.1 - 1%	No
2,4-Dimethylpentane	-	108-08-7	0.1 - 1%	No

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

## Section 4: First-Aid Measures

#### General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

#### Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

#### Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

#### Ingestion

Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Most important symptoms/effects, acute and delayed**

**Symptoms**

Narcotic effect. Respiratory tract irritation.

**Indication of immediate medical attention and special treatment needed**

**Hazards**

No data available.

**Treatment**

Treat symptomatically. Symptoms may be delayed.

**Section 5: Fire-Fighting Measures**

**General Fire Hazards**

Flammable liquid and vapor.

**Suitable (and Unsuitable) Extinguishing Media**

**Suitable Extinguishing Media**

Extinguishing powder, alcohol resistant foam, carbon dioxide, water fog

**Unsuitable Extinguishing Media**

Avoid water in straight hose stream; will scatter and spread fire.

**Specific Hazards Arising from the Chemical**

Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.

**Special Protective Equipment and Precautions for Firefighters**

**Special Fire-Fighting Equipment Procedures**

Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

**Special Protective Equipment for Fire-Fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

**Section 6: Accidental Release Measures**

**Personal Precautions, Protective Equipment and Emergency Procedures**

Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Keep unauthorized personnel away. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate area.

**Methods and Materials for Containment and Clean-Up**

Eliminate all ignition sources if safe to do so. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Environmental Precautions**

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**Section 7: Handling and Storage**

**Precautions for Safe Handling**

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Ground/bond container and receiving equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using the product. Use caution when adding this material to water. See Section 8 of the MSDS for Personal Protective Equipment. Avoid contact with eyes. Avoid contact with skin.

**Conditions for Safe Storage, including any Incompatibilities**

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (See Section 10). Ensure that all local regulations regarding handling and storage facilities are followed.

**Section 8: Exposure Controls/Personal Protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Value	Source
HEXANE	TWA	50 ppm	US. ACGIH Threshold Limit Values
	PEL	500 ppm 1,800 mg/m3	US OSHA Table Z-1
3-METHYLPENTANE	TWA	50 ppm 180 mg/m3	US OSHA Table Z-1
	STEL	1,000 ppm	US. ACGIH Threshold Limit Values
	TWA	500 ppm	US. ACGIH Threshold Limit Values

	STEL	1,000 ppm 3,600 mg/m3	US OSHA Table Z-1
	TWA	500 ppm 1,800 mg/m3	US OSHA Table Z-1
2,4-DIMETHYLPENTANE	STEL	500 ppm	US. ACGIH Threshold Limit Values
	TWA	400 ppm	US. ACGIH Threshold Limit Values
	TWA	400 ppm 1,600 mg/m3	US OSHA Table Z-1
	STEL	500 ppm 2,000 mg/m3	US OSHA Table Z-1

### Biological Limit Values

Chemical Identity	CAS #	Parameter	Value	Biological Specimen	Source
Hexane	110-54-3	2,5-Hexanedion, without hydrolysis	0.4 mg/l	Urine	ACGIH – Biological Exposure Indices (BEI)
Remarks: Sampling Time: End of shift at end of work week					

### Appropriate Engineering Controls

No data available.

### Individual protection measures, such as personal protective equipment (PPE)

#### General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

#### Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

#### Skin Protection

##### Hand Protection

Wear appropriate chemical resistant gloves.

##### Other

Wear appropriate chemical resistant clothing.

#### Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

#### Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

## Section 9: Physical and Chemical Properties

### Appearance:

Physical State: Liquid  
Color: Colorless

### Odor:

Slight Odor

### Odor Threshold:

No data available.

### pH:

No data available.

### Melting Point/Freezing Point:

-95 °C

### Initial Boiling Point and Boiling Range:

68 °C

### Flash Point:

-23 °C

### Evaporation Rate (butyl acetate=1):

9 (butyl acetate=1)

### Flammability (solid, gas):

No data available.

### Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: 7.7 %(V) (Hexane)

Flammability Limit – Lower: 1.2 %(V) (Hexane)

Explosive Limit – Upper: No data available.

Explosive Limit – Lower: No data available.

### Vapor Pressure:

20.2 kPa

### Vapor Density (air =1):

3 AIR=1

### Relative Density (water=1):

0.66 (20 °C)

### Solubility(ies):

Solubility in water: Insoluble in water

Solubility (other): No data available.

### Partition coefficient (n-octanol/water):

No data available.

### Auto-Ignition Temperature:

224 °C (Hexane)

### Decomposition Temperature:

No data available.

### Viscosity:

No data available.

### Other Information:

Molecular Weight: 86.18 g/mol

Formula: No data available.

### Section 10: Stability and Reactivity

**Reactivity**

No dangerous reaction known under conditions of normal use.

**Chemical Stability**

Material is stable under normal conditions.

**Possibility of Hazardous Reactions**

Hazardous polymerization does not occur.

**Conditions to Avoid**

Heat, sparks, flames. Moisture. Contact with incompatible materials.

**Incompatible Materials**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Thermal decomposition may release oxides of carbon.

### Section 11: Toxicological Information

**Information on routes of exposure**

**Ingestion:** May be fatal if swallowed. May cause irritation of the gastrointestinal tract.

**Inhalation:** May cause irritation to the mucous membranes and upper respiratory tract. Irritating to respiratory system.

**Skin Contact:** Causes skin irritation.

**Eye Contact:** Causes eye irritation.

**Information on Toxicological Effects**

**Acute Toxicity (List all possible routes of exposure)**

**Oral**

Hexane: LD 50 (Rat): 24 mg/kg

**Dermal**

No data available

**Inhalation**

No data available

**Repeated Dose Toxicity**

Hexane: LC 50 (Rat, 4 h): < 48,000 mg/l

**Skin Corrosion/Irritation**

Causes skin irritation.

**Serious Eye Damage/Eye Irritation**

Causes eye irritation.

**Respiratory/Skin Sensitization**

Not a skin sensitizer.

**Carcinogenicity**

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**US. National Toxicology Program (NTP) Report on Carcinogens**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Germ Cell Mutagenicity**

**In Vitro**

No mutagenic components identified.

**In Vivo**

No mutagenic components identified.

**Reproductive Toxicity**

Suspected of damaging fertility or the unborn child.

**Specific Target Organ Toxicity – Single Exposure**

Narcotic effect. Respiratory tract irritation.

**Specific Target Organ Toxicity – Repeated Exposure**

Central nervous system. Peripheral nervous system

**Aspiration Hazard**

May be fatal if swallowed and enters airways.

**Other Effects**

Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility.

**Section 12: Ecological Information**

**Ecotoxicity**

**Acute Hazards to the Aquatic Environment**

**Fish**

Hexane: LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 2.101 – 2.981 mg/l Mortality  
Hexane: LC 50 (Carp (*Leuciscus idus melanotus*), 48 h): 210 mg/l Mortality

**Aquatic Invertebrates**

Hexane: EC 50 (Brine shrimp (*Artemia salina*), 24 h): 1.36 – 1.66 mg/l Intoxication  
Hexane: LC 50 (Water flea (*Daphnia magna*), 24 h): > 50 mg/l Mortality

**Toxicity to Aquatic Plants**

No data available.

**Chronic Hazards to the Aquatic Environment**

**Fish**

No data available.

**Aquatic Invertebrates**

No data available.

**Toxicity to Aquatic Plants**

No data available.

**Persistence and Degradability**

**Biodegradation**

The product is not expected to be biodegradable.

**BOD/COD Ratio**

No data available.

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF)**

Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

**Partition Coefficient n-octanol / water (log Kow)**

Hexane Log Kow: 3.90  
3-Methylpentane Log Kow: 3.60

**Mobility in Soil**

The product is insoluble in water and will spread on the water surface.

**Other Adverse Effects**

Expected to be very toxic to aquatic organisms. May cause long-term adverse effects in the environment.

**Section 13: Disposal Considerations**

**Disposal Instructions**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Contaminated Packaging**

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

**Section 14: Transportation Information**

**US Department of Transportation (DOT)**

UN Number: UN1208  
UN Proper Shipping Name: Hexanes  
Technical Name: -  
Hazard Class: 3  
Subsidiary Hazard Risk: -  
Packing Group: II  
DOT Label/Placard Exemptions: Not determined  
Special Provisions: IB2, T4, TP1  
Packaging Exceptions: 49CFR 173.150  
Packaging Non-Bulk: 49CFR 173.202  
Packaging Bulk: 49CFR 173.242  
Reportable Quantity (RQ): 5000lb (2270kg)  
Marine Pollutant: Yes

Poison Inhalation Hazard: No  
Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Emergency Response Guidebook (ERG) #: 128

*Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

## Section 15: Regulatory Information

### US Federal Regulations

#### Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

#### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:

Hexane (CAS# 110-54-3)

#### Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

#### Emergency Planning and Community Right-To-Know Act (EPCRA)

##### EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

##### EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: Yes

Sudden Release of Pressure: No

Reactive: No

Acute (Immediate) Health Hazard: Yes

Chronic (Delayed) Health Hazard: Yes

##### EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 313:

Hexane (CAS# 110-54-3)

### US State Regulations

#### California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

*Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.*

## Section 16: Other Information

### Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2

Chronic Health Hazard: \*

Flammability: 3

Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

### National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2

Fire Hazard: 3

Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By: Regulatory Manager

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Revisions: -

### Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate

BCF - Bioconcentration Factor

EC50 - Effective concentration, 50%

IDHL - Immediately Dangerous to Life and Health

Kg - Kilogram

l - Liter

lb - Pound

LC50 - Lethal Concentration, 50%

ACGIH - American Conference of Industrial Hygienists

AIHA - American Industrial Hygiene Association

BEI - Biological Exposure Indices

CAS - Chemical Abstracts Service

DOT - US Department of Transportation

EPA - US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose, 50%

mg - milligram

ml - milliliter

N/A - Not Applicable

N/D - Not Determined

PEL - Permissible Exposure Limit

REL - Recommended Exposure Limit

STEL - Short-term Exposure Limit

TWA - Time weighted average

IATA - International Air Transport Association

IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - US Occupational Health and Safety Administration

SARA - US EPA Superfund Amendments and Reauthorization Act

TSCA - US EPA Toxic Substances Control Act

UN - United Nations

**References**

HSDB® - Hazardous Substances Data Bank

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