

Hexanes

SECTION 1. IDENTIFICATION

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|--------------------------------------|--|
| Product Identifier | Hexanes |
| Other Means of Identification | Hexyl Hydride |
| Product Code(s) | HE2210, HE2220 |
| Product Family | Organic solution |
| Recommended Use | Laboratory and industrial use. |
| Restrictions on Use | None known. |
| Supplier Identifier | Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995 |
| Emergency Phone No. | Infotrac, 1-800-535-5053, 24 Hours |
| SDS No. | 0250 |

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Flammable liquid - Category 2; Acute toxicity (Oral) - Category 5; Acute toxicity (Dermal) - Category 5; Skin irritation - Category 2; Eye irritation - Category 2B; Specific target organ toxicity (single exposure) - Category 3; Specific target organ toxicity (repeated exposure) - Category 2; Aspiration hazard - Category 1

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Highly flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes eye irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention:
Obtain special instructions before use.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Use explosion-proof electrical, ventilating, and lighting equipment.
Keep container tightly closed.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands and skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

Wear personal protective equipment/face protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Immediately call a POISON CENTRE or doctor.

Other Hazards

May be a health and fire hazard in a confined space.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

| Chemical Name | CAS No. | % | Other Identifiers | Other Names |
|---|------------|---------|---------------------------------|-------------|
| Naphtha (petroleum), hydrotreated light | 64742-49-0 | 30 - 80 | None | |
| n-Hexane | 110-54-3 | 20 - 70 | Hexyl Hydride, Normal Hexane | |

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

In case of oxygen deficiency: take precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment). Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. If breathing has stopped, trained personnel should begin rescue breathing. If the heart has stopped, trained personnel should start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). Immediately call a Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Quickly and gently blot or brush chemical off the face. Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

None known.

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Immediate Medical Attention and Special Treatment

Special Instructions

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

Water is not effective for extinguishing a fire. It may not cool product below its flash point.

Specific Hazards Arising from the Product

Can accumulate static charge by flow, splashing or agitation. Liquid can float on water and may travel to distant locations and/or spread fire. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, resulting in a fire and/or health hazard. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Stop leak before attempting to put out the fire. Product could form an explosive mixture and reignite. If the leak cannot be stopped, let the fire burn itself out. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Use water spray to flush spills away from ignition sources. Dike and recover contaminated water for appropriate disposal.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Remove or isolate incompatible materials as well as other hazardous materials. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, if ventilation is not sufficient. Monitor area for flammable or explosive atmosphere. Test for sufficient oxygen levels.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Ventilate the area to prevent the gas from accumulating, especially in confined spaces. Contain and soak up spill with absorbent that does not react with spilled product. Do NOT use combustible materials such as sawdust. Place used absorbent into suitable, covered, labelled containers for disposal. Large spills or leaks: dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Store recovered product in suitable containers that are: tightly-covered. Contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Only use where there is adequate ventilation. Do not get in eyes, on skin or on clothing. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Use non-sparking tools. Avoid generating vapours or mists. Electrically bond and ground equipment. Ground clips must contact bare metal. Prevent accidental contact with incompatible chemicals. Do not weld,

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cut or perform hot work on empty container until all traces of product have been removed. Wash hands thoroughly after handling this material.

Conditions for Safe Storage

Store in an area that is: cool, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Restrict access to authorized personnel only. Clear of combustible and flammable materials (e.g. old rags, cardboard). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Store in a closed container. Keep amount in storage to a minimum. Avoid bulk storage indoors. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Chemical Name | ACGIH TLV® | | OSHA PEL | | AIHA WEEL | |
|---|-----------------|-----------------|-----------------|-----------------|-----------|-----|
| | TWA | STEL | TWA | Ceiling | 8-hr TWA | TWA |
| n-Hexane | 50 ppm | | 50 ppm | | | |
| Naphtha (petroleum), hydrotreated light | Not established | Not established | Not established | Not established | | |

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Exhaust directly to the outside, taking any necessary precautions for environmental protection. Provide safety shower in work area, if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: nitrile rubber, polyvinyl alcohol, Viton®, Viton®/butyl rubber, Barrier® (PE/PA/PE), Silver Shield®, Trellchem® HPS, Trellchem® VPS, Tychem® BR/LV, Tychem® Responder, Tychem® TK.

The following materials should NOT be used: butyl rubber, natural rubber, neoprene rubber, polyethylene, polyvinyl chloride, Tychem® SL (Saranex™).

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge, wear a NIOSH approved air-purifying respirator with an organic vapour cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

| | |
|---|---|
| Appearance | Clear colourless volatile liquid. |
| Odour | Gasoline-like |
| Odour Threshold | Not available |
| pH | Not available |
| Melting Point/Freezing Point | -95 °C (-139 °F) (melting); -95 °C (-139 °F) (freezing) |
| Initial Boiling Point/Range | 55 - 85 °C (131 - 185 °F) |
| Flash Point | -20 °C (-4 °F) |
| Evaporation Rate | Not available |
| Flammability (solid, gas) | Not available |
| Upper/Lower Flammability or Explosive Limit | 8.3% (upper); 1.2% (lower) |
| Vapour Pressure | 19 - 50 kPa (143 - 375 mm Hg) at 25 °C |
| Vapour Density (air = 1) | 2.97 |

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| Relative Density (water = 1) | 0.65 - 0.70 |
| Solubility | Practically insoluble in water; Not available (in other liquids) |
| Partition Coefficient, n-Octanol/Water (Log Kow) | 3.6 - 4.0 |
| Auto-ignition Temperature | > 200 °C (392 °F) |
| Decomposition Temperature | Not available |
| Viscosity | 0.40 - 0.70 mm ² /s at 20 °C (kinematic); Not available (dynamic) |
| Other Information | |
| Physical State | Liquid |

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Vapours may form explosive mixture with air.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|--|---|------------------------|-----------------------|
| n-Hexane | 38500 ppm (male rat) (4-hour exposure) | 28670 mg/kg (male rat) | > 3295 mg/kg (rabbit) |
| Naphtha (petroleum), hydrotreated light | 34-42 mg/L (rat) (4-hour exposure) | > 5800 mg/kg (rat) | > 2920 mg/kg (rabbit) |

Skin Corrosion/Irritation

Causes skin irritation.

Serious Eye Damage/Irritation

Causes eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Ingestion

May be harmful May cause irritation of the mouth, throat and stomach.

Aspiration Hazard

May be drawn into the lungs (aspirated) if swallowed or vomited.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause damage to organs.

Respiratory and/or Skin Sensitization

Not known to be a skin sensitizer. No information was located for respiratory sensitization.

Carcinogenicity

| Chemical Name | IARC | ACGIH® | NTP | OSHA |
|--|---------------|----------------|------------|------------|
| n-Hexane | Not evaluated | Not designated | Not Listed | Not Listed |
| Naphtha (petroleum), hydrotreated light | Group 3 | A3 | Not Listed | Not Listed |

Group 3 – Not classifiable as to its carcinogenicity to humans.

A3 – Confirmed animal carcinogen.

Reproductive Toxicity

Development of Offspring

Not expected to cause reproductive effects.

Sexual Function and Fertility

Not expected to cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Recycle and reuse product, if possible. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Treat waste in an approved waste disposal facility. The container for this product can present explosion or fire hazards, even when emptied. Do not cut, puncture, or weld on or near this container. Do not reuse empty containers.

SECTION 14. TRANSPORT INFORMATION

| Regulation | UN No. | Proper Shipping Name | Transport Hazard Class(es) | Packing Group |
|--------------|--------|----------------------|----------------------------|---------------|
| Canadian TDG | UN1208 | Hexanes | 3 | II |

Environmental Hazards Marine Pollutant

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

| | |
|------------------------------|--|
| NFPA Rating | Health - Not assigned. Flammability - 3 Instability - 0 |
| SDS Prepared By | Alphachem Limited |
| Phone No. | (905)-821-2995 |
| Date of Preparation | December 01, 2015 |
| Date of Last Revision | December 28, 2017 |
| References | CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). |
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