

Section 1 - Chemical Product and Company Identification

Product Name	Hexane
Synonyms	normal-Hexane; Hexyl hydride; n-Hexylhydride; n-Caproylhydride; Hexane, normal
Product Use	Hydrocarbon solvent
Restriction on Use	None identified
Manufacturer/Supplier	CFR Chemicals 38451 Range Road 22 County of Red Deer T4E 2N6
General Assistance	1 (877) 269-3419
Emergency Telephone	613-966-6666 (CANUTEC 24 Hour Phone Number)
Date of Preparation of SDS	April 1, 2017

Section 2 – Hazard Identification

Signal Word
GHS Pictogram(s)

Danger



Target Organs

Peripheral nervous system, Kidney, Testes.

Hazard Statement:

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315 + H320	Causes skin irritation and causes eye 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 swallowed.
H411	Toxic to aquatic life with long lasting effects

Precautionary Statement

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 surface, sparks, open flames and other ignition sources. No smoking
P233	Keep container tightly closed.
P240	Ground/Bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.



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P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.
Response	
P321	Specific treatment: See Response Statements on this label.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminate clothing. Rinse skin with water / shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep 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 CENTRE or doctor/physician if you feel unwell
P331	DO NOT induce vomiting.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam to extinguish
P391	Collect spillage
Storage	
P403 + P233	Store in well-ventilated place. Keep contained tightly closed.
P403 + P235	Store in well-ventilated place. Keep cool
P405	Store locked up.
Disposal	
P501	Dispose of contents/container to an approved waste disposal unit.

GHS Classification	Flammable liquids (Category 2)
	Skin corrosion/irritation (Category 2)
	Serious eye damage/eye irritation (Category 2B)
	Reproductive toxicity (Category 2)
	Specific target organ toxicity - single exposure (Category 3),
	Specific target organ toxicity - repeated exposure: Oral (Category 2)
	Aspiration hazard (Category 1)
	Acute aquatic toxicity (Category 2)
	Chronic aquatic toxicity (Category 2)

HMIS Classification	
Health Hazard	2
Chronic Health Hazard	*
Flammability	3
Physical Hazards	0

Potential health effects

Inhalation	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed. Aspiration hazard if swallowed – can enter lungs and cause damage.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Section 3 – Composition Information on Ingredients

HAZARDOUS INGREDIENT	Hazardous Ingredient, Synonyms	PERCENT	CAS NUMBER
Hexane	n-hexane, normal-Hexane; Hexyl hydride; n-Hexylhydride; n-Caproylhydride; Hexane, normale * = Various ** = Mixture *** = Proprietary	100%	110-54-3
Chemical Formula	C ₆ H ₁₄		

Section 4 - First Aid Measures

Inhalation	Move victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that vapour is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison centre or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.
Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower lids. Check for and remove contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Skin Contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	Get medical attention immediately. Call a poison control centre or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.

Most Important Symptoms/Effects

Acute

Eye contact	No known significant effects or critical hazards.
Inhalation	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	No known significant effects or critical hazards.
Frostbite	Try to warm up the frozen tissues and seek medical attention.
Ingestion	Can cause central nervous system (CNS) depression.

Delayed

Eye contact	No specific data.
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Inhalation	Adverse symptoms may include the following:, nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness, reduced fetal weight, increase in fetal deaths, skeletal malformations
Skin contact	Adverse symptoms may include the following:, reduced fetal weight, increase in fetal deaths, skeletal malformations
Ingestion	Adverse symptoms may include the following:, reduced fetal weight, increase in fetal deaths, skeletal malformations
Note to Physician	Treat symptomatically.

Section 5 – Fire-Fighting Measures

Flash Point (°C)	-26°C
Flash Point Method	PMCC
Auto Ignition Temperature	234°C
Conditions of Flammability	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Extinguishing Media	Use water spray (fog), alcohol-resistant foam, dry chemical or carbon dioxide
Unsuitable Extinguishing Media	Do not use water jet.
Unusual Fire/	
Explosion Hazard	No data available.
Hazardous Combustion	
Products	Carbon oxides
Special Protective Equipment and Precautions for Firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.

Section 6 – Accidental Release Measures

Personal precautions	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for	

containment and cleaning up Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7 – Handling and Storage

Precautions for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

Conditions for safe storage Keep container tightly closed in a dry and well-ventilated place.

Incompatible Conditions Heat, flames and sparks.

Incompatible Materials Oxidizing materials.

Section 8 – Exposure Controls / Personal Protection

Occupational Exposure Limits

Ingredient Name

n-hexane

Exposure Limits

Canada, Alberta, Occupational Health and Safety Code (table 2: OEL)

TWA: 50ppm

ACGIH TLV (USA, 4/2014). Absorbed through skin.

TWA: 50ppm 8 Hours

OSHA PEL (USA, 2/2013)

TWA: 500 ppm 8 hours

TWA: 1800 mg/m³ 8 Hours

Personal protective equipment

Eye/face protection

Chemical safety glasses with side shields to prevent eye contact. As a general rule do not wear contact lenses when handling chemicals.

Skin protection

Wear chemical resistant gloves, impermeable protective clothing and safety shoes.

Respiratory protection

Use NIOSH approved respirators and components.

General hygiene

Considerations

Handle in accordance with good industrial hygiene and safety.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure. Safety shower, eye wash, and fire extinguisher should be present.

Section 9 – Physical and Chemical Properties

Physical State	Liquid	Water Solubility	Insoluble
Appearance & Odour	Clear, Colourless. Hydrocarbon solvent odour.	Boiling Point	69°C
Vapour Pressure	132 mmHg (20.0°C)	Boiling Range	Not applicable
Odour Threshold	Not available.	Melting Point	<-40°C
Evaporation Rate	6.82	Freezing Point	<-40°C
Vapour Density	0.66	Lower Explosive Limit (LEL)	1.2%



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Specific Gravity	0.65-0.68	Upper Explosive Limit (UEL)	7.7%
pH	Not available.	Partition coefficient (n-octonal/water)	4
Flammability (Solid, Gas)	Extremely flammable in the presence of the following materials or conditions: oxidizing materials..		
Decomposition Temperature	Not available.	Viscosity	Not available.

Section 10 – Stability and Reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur
Conditions to avoid	Heat, flames and sparks.
Materials to avoid	Oxidizing materials.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides. Other decomposition products - No data available

Section 11- Toxicological Information

Information on Likely Routes of Exposure

No data available

Acute toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
n-Hexane	LC50 Inhalation gas	Rat	48000ppm	4 Hr
	LD50 Oral	Rat	15840mg/kg	-

Skin corrosion/irritation Irritating to skin

Serious eye damage/eye irritation

Eyes – Rabbit – n-hexane – Mild Irritant – 10mg

Respiratory or skin sensitization

No data available

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

IARC: 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.

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

Reproductive toxicity

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals. Suspected human reproductive toxicant. Suspected of damaging fertility.



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Teratogenicity No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

Name	Category	Route of Exposure	Target Organs
n-hexane	Category 3	Not applicable.	Narcotic Effects

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

Name	Category	Route of Exposure	Target Organs
n-hexane	Category 2	Oral	Not determined
		Inhalation	Not determined

Aspiration hazard

Name	Result
n-hexane	Aspiration Hazard - Category 1

Potential health effects

Inhalation Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed. Aspiration hazard if swallowed – can enter lungs and cause damage.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure

Inhalation Adverse symptoms may include: nausea and vomiting, headache, drowsiness/fatigue, dizziness/vertigo and unconsciousness

Ingestion Adverse symptoms may include: nausea and vomiting

Skin Adverse symptoms may include: irritation, redness

Eyes Adverse symptoms may include: pain or irritation, watering, redness

Synergistic effects No data available

Delayed and Immediate Effects and also Chronic Effects from Short and Long Term Exposure

Short Term Exposure

Potential immediate Health Effects	No data available.
Potential Delayed Health Effects	No data available.

Long Term Exposure

Potential immediate Health Effects	No data available.
Potential Delayed Health Effects	No data available.
Potential Chronic Effects	No data available.

Section 12 – Ecological Information

Toxicity

Product / Ingredient Name	Result	Species	Exposure
n-hexane	LC50 2.5mg/L	Fish – Pimephales promelas	96 Hr
	EC50 3878mg/L	Daphnia – Daphnia magna	48 Hr

Persistence and degradability

Biodegradability No data available

Bioaccumulative potential

Product/Ingredient Name	LogP _{ow}	BCF	Potential
n-hexane	4	502	High

Mobility in soil	No data available
PBT and vPvB assessment	No data available
Other adverse effects	No known significant effects or critical hazards.

Section 13 – Disposal Considerations

Product	This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging	Dispose of as unused product.

Section 14 - Transportation Information

CANADA Transportation of Dangerous Goods (TDG)

Shipping Name	UN1208, Hexane, 3. PG II
Class	3
UN Number	UN1208
Packaging Group:	II
Label	



Environmental hazards	Not a marine pollutant.
Transportation in bulk, if applicable	No data available
Special Precautions	No data available

Section 15 – Regulatory Information

**DSL (Canadian Domestic Substances List)
and CEPA (Canadian Environmental Protection Act)**

All components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

TSCA Inventory (8b)

All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

Section 16 – Other Information

REVISION SUMMARY:

Date of Preparation	April 1, 2017
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SDS Prepared by: CFR Lab Manager

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