

# Pentane

## SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Pentane
<b>Other Means of Identification</b>	Amyl hydride, Normal pentane
<b>Product Code(s)</b>	PE1110
<b>Product Family</b>	Organic solution
<b>Recommended Use</b>	Solvent.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	1097

## 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 1; Specific target organ toxicity (single exposure) - Category 3; Aspiration hazard - Category 1

### Label Elements



Signal Word:  
Danger

### Hazard Statement(s):

Extremely flammable liquid and vapour.  
May be fatal if swallowed and enters airways.  
May cause drowsiness or dizziness.

### Precautionary Statement(s):

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
Ground/bond container and receiving equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.

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Response:

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

IF ON SKIN: Wash with plenty of water.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

#### Other Hazards

Toxic to aquatic life.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
n-Pentane	109-66-0	> 99	Amyl hydride, Normal pentane	

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. Get medical advice or attention if you feel unwell or are concerned.

##### Skin Contact

Rinse with lukewarm, gently flowing water for 5 minutes. Get medical advice or attention if you feel unwell or are concerned.

##### Eye Contact

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. If vomiting occurs naturally, lie on your side in the recovery position. Rinse mouth with water again. Immediately call a Poison Centre or doctor.

##### First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

#### Most Important Symptoms and Effects, Acute and Delayed

At high concentrations if inhaled: can cause severe irritation of the nose and throat. Aspiration hazard. May be drawn into the lungs if swallowed or vomited, causing severe lung damage. Death can result. Can harm the nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

#### 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

Dry chemical powder and foam. Foam manufacturers should be consulted for recommendations regarding types of foams and application rates.

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### 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

Extremely flammable liquid and vapour. Can ignite at room temperature. Releases vapour that can form explosive mixture with air. Can be ignited by static discharge. May travel a considerable distance to a source of ignition and flash back to a leak or open container. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, resulting in a fire hazard. Liquid can float on water and may travel to distant locations and/or spread fire. 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 protected, explosion-resistant location or maximum distance possible. 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. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat. Do NOT apply water directly to spill. 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.

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

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources. Use grounded, explosion-proof equipment.

### 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: contain spill using noncombustible material such as vermiculite, earth or sand. 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. Flush spill area. Dike and recover contaminated water for appropriate disposal.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Electrically bond and ground equipment. Ground clips must contact bare metal. Use non-sparking tools. Prevent accidental contact with incompatible chemicals. General hygiene considerations: it is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

### 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), clear of combustible and flammable materials (e.g. old rags, cardboard).

## 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-Pentane	1000 ppm		1000 ppm			

### Appropriate Engineering Controls

General ventilation is usually adequate. Use local exhaust ventilation and enclosure, if necessary, to control amount in

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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. 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, Viton®, Barrier® (PE/PA/PE). The following materials should NOT be used: butyl rubber, natural rubber, neoprene rubber.

#### Respiratory Protection

For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an organic vapour cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

<b>Appearance</b>	Colourless liquid.
<b>Odour</b>	Gasoline-like
<b>Odour Threshold</b>	Not available
<b>pH</b>	Not applicable
<b>Melting Point/Freezing Point</b>	-130 °C (-202 °F) (melting); -130 °C (-202 °F) (freezing)
<b>Initial Boiling Point/Range</b>	36 °C (97 °F)
<b>Flash Point</b>	< -40 °C (-40 °F)
<b>Evaporation Rate</b>	28.6 (n-butyl acetate = 1)
<b>Flammability (solid, gas)</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	7.8% (upper); 1.5% (lower)
<b>Vapour Pressure</b>	68.53 kPa (513.98 mm Hg) at 25 °C
<b>Vapour Density (air = 1)</b>	2.49
<b>Relative Density (water = 1)</b>	0.626 at 20 °C
<b>Solubility</b>	Practically insoluble (less than 1 g/L) in water; Highly soluble in alcohols (e.g. ethanol).
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	3.39
<b>Auto-ignition Temperature</b>	260 °C (500 °F)
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	0.37 centistokes at 20 °C (kinematic); 0.23 centipoises at 20 °C (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Liquid
<b>Molecular Weight</b>	72.15

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

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**Conditions to Avoid**

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

**Incompatible Materials**

Strong oxidizing agents (e.g. perchloric acid), strong reducing agents (e.g. hydrides).

**Hazardous Decomposition Products**

None known.

**SECTION 11. TOXICOLOGICAL INFORMATION****Likely Routes of Exposure**

Inhalation; skin contact; eye contact.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
n-Pentane	117000 ppm (rat) (4-hour exposure)	> 2000 mg/kg	Not available

**Skin Corrosion/Irritation**

Human experience and animal tests show mild irritation.

**Serious Eye Damage/Irritation**

Animal tests show very mild irritation.

**STOT (Specific Target Organ Toxicity) - Single Exposure****Inhalation**

At high concentrations may cause depression of the central nervous system, nose and throat irritation. A severe exposure can cause unconsciousness.

**Ingestion**

Not harmful based on animal tests.

**Aspiration Hazard**

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

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

No information was located.

**Respiratory and/or Skin Sensitization**

No information was located for respiratory sensitization. No information was located for skin sensitization.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
n-Pentane	Not Listed	Not designated	Not Listed	Not Listed

**Reproductive Toxicity****Development of Offspring**

Not known to harm the unborn child.

**Sexual Function and Fertility**

Not known to cause effects on sexual function or fertility.

**Effects on or via Lactation**

No information was located.

**Germ Cell Mutagenicity**

Not known to be a mutagen.

**Interactive Effects**

No information was located.

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## 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

Bury in a licensed landfill or burn in an approved incinerator according to federal, provincial/state, and local regulations.

## SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
IMO (Marine)	UN1265	Pentanes	3	I
IATA (Air)	UN1265	Pentanes	3	I
US DOT	UN1265	Pentanes	3	I
Canadian TDG	UN1265	Pentanes	3	I

**Special Precautions** Not applicable

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

Not applicable

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

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

Listed on the DSL.

#### USA

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

Listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**NFPA Rating** Health - 1 Flammability - 4 Instability - 0

**SDS Prepared By** Alphachem Limited

**Phone No.** (905)-821-2995

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**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer** This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.

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