

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Cyclopentylchloride

Company Identification:

Alkali Metals Ltd.,
Plot B-5, Block III, IDA Uppal
Hyderabad, India - 500 039
Tel :- 0091 40 2756 3002 / 2720 1179 Fax :- 0091 40 2756 2634
Email :- alkalimetals@alkalimetals.com

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	EINECS#
930-28-9	Cyclopentylchloride	213-212-5

Hazard Symbols:- Xi F

Risk Phrases:- 11 38

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance:- Colourless

Potential Health Effects:- The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.

SECTION 4 - FIRST AID MEASURES

Eyes:- Immediately flush eyes with plenty of water., occasionally lifting the upper and lower lids. Get medical aid.

Skin:- Flush skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical aid.

Ingestion:- Do NOT induce vomiting. Allow the victim to rinse his mouth with water, and get medical aid.

Inhalation:- Remove from exposure to fresh air immediately.

SECTION 5 - FIRE FIGHTING MEASURES

General Information:- As in any fire, wear a self-contained breathing apparatus and full protective gear. Vapours may form an explosive mixture with air.

Extinguishing Media:- In case of fire, use water, dry chemical, chemical foam, or Carbondioxide foam.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information:- Use proper personal protective equipment.

Spills/Leaks:- Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Remove all sources of ignition. Use a spark proof tool.

SECTION 7 - HANDLING and STORAGE

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Handling:- Use spark-proof tools and explosion proof equipment. Avoid breathing dust vapor mist or gas, avoid skin and eyes. Take precautionary measures against static discharges .

Storage:- Keep away from sources of ignition. Store in a cool , dry place, store in a tightly closed container.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:- Use adequate general or local exhaust ventilation to keep airborne concentrations low.

Personal Protective Equipment:-

Eyes:- Wear chemical goggles and safety glasses.

Skin:- Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:- Wear appropriate protective clothing to prevent skin exposure

Respirators:- Wear appropriate respirators where necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	: Clear liquid.
Appearance	: Colourless
Odor	: Not available.
PH	: Not available.
Vapor Pressure	: Not available.
Vapor Density	: Not available.
Evaporation Rate	: Not available.
Viscosity	: 1.03 MPA 20 ⁰
Boiling Point	: 114 ⁰ C
Freezing/Melting Point	: -50 ⁰ C
Decomposition Temperature	: Not available.
Solubility	: 760 mg / Ltr. In water
Specific Gravity/Density	: 1.0050 gms/cc
Molecular Formula	: C ₅ H ₉ Cl
Molecular Weight	: 104.57

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:- Stable under normal temperatures and pressures.

Conditions to Avoid:- Incompatible materials

Incompatibilities with Other Materials:- Strong oxidizing agents - strong bases.

Hazardous Decomposition Products:-Hydrogen chloride , Carbon monoxide, Carbon dioxide .

Hazardous Polymerization:- Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:- CAS# 930-28-9 Unlisted

LD50/LC50:- Not available.

Carcinogenicity:- Cyclopentylchloride not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. Se actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:- Not available.

Environmental Fate:-Not available.

Physical/Chemical:- Not available.

Other:- Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

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SECTION 14 - TRANSPORT INFORMATION

IMO:- Shipping Name: Flammable liquid , N.O.S , Hazard Class: 3.2 UN Number: 1993
Packing Group: II

IATA:- Shipping Name: Flammable liquid , N.O.S, Hazard Class: 3 UN Number: 1993
Packing Group: II

RID/ADR:- Shipping Name: Flammable liquid , N.O.S Goods Code: 3(3B) UN Number:
1993

SECTION 15 - REGULATORY INFORMATION

European / International Regulations

European labeling in Accordance with EC Directives

Hazard Symbols : XI F

Risk Phrases :

R 11 Highly flammable

R 38 Irritating to skin

Safety phrases :

S 9 Keep container in well-ventilated place.

S 16 Keep away from sources of ignition – No smoking.

S 33 Take precautionary measures against static discharges.

S 37 Wear suitable gloves

WGK (Water Danger / Protection)

CAS # 930-28-9 : No information available.

United Kingdom Occupational Exposure Limits

Canada

CAS # 930-28-9 is listed on Canada's NDSL List.

CAS # 930-28-9 is not listed on Canada's Ingredient disclosure list.

Exposures Limits

US Federal

TSCA CAS # 930-28-9 is listed on the TSCA Inventory.

SECTION 16 - ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Alkali Metals Ltd., be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Alkali Metals Ltd., has been advised of the possibility of such damages.

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Alkali Metals Ltd.,	Issued Dt. : 31-01-2002	Rev. No.&Dt.:-	F.No.: MSDS/R 4173
Material Safety Data Sheet			
Product Code	R 4173		
Product	Cyclopentyl Chloride		
Synonyms	Chlorocyclopentane		
CAS No.	[930-28-9]		
Emergency contact / manufacturer	Alkali Metals Ltd., Plot B-5, Block III, I.D.A, Uppal, Hyderabad – 500 039, India Tel :- +91 40 7563002 / 7562932 / 7201179/7202298 Fax : + 90 40 7562364 / 7201454 Email :- alkali@hd1.vsnl.net.in Website : www.alkalimetals.com		

Physical and Chemical Properties :			
Physical state	Clear liquid	Decomposition temp.	
Appearance	Colourless	Autoignition temp.	380 °C
Odor	Not available	Solubility	760 mg / ltr in water
PH	Not available	Viscosity	1.03 MPA 20°
Boiling point	114 °C	Specific gravity/density	1.0050 gms / cc
Freezing / melting point	- 50°	Molecular Formula	C ₅ H ₉ Cl
Flash Point	15 °C	Molecular Weight	104.57

First aid measures :	
Eyes	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower lids. Get medical aid immediately
Skin	Flush with plenty of water while removing contaminated clothing and shoes. Get medical aid immediately.
Ingestion	Get medical aid. Wash mouth out with water
Inhalation	Remove from exposure to fresh air. If not breathing give artificial respiration. If breathing is difficult give Oxygen. Give medical aid.

Fire fight measures :	
General information	As in case of any fire use a self contaminated breathing apparatus
Extinguishing media	Use water fog, dry chemical, Carbon dioxide or chemical powder.

Accidental release measures :	
General information	Use personal protective equipment.
Spills/leaks	Absorb spills with inert material(E.g. dry sand or earth) then place into a chemical waste container using appropriate protective equipment.

Handling & storage :	
Handling	Wash thoroughly after handling, remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.
Storage	Store in a cool, dry, well-ventilated area away from incompatible substances like heat, sparks and flame. Keep containers tightly closed. Do not store in a metal containers

Transport Information :			
	IATA	IMO	RID/ADR
Shipping Name	Flammable liquid N.O.S.	Flammable liquid N.O.S.	Flammable liquid N.O.S.
Hazard Class	3	3.2	--
UN Number	1993	1993	1993
Packing group	II	II	--
Dangerous Goods Code	--	--	3 (3B)

Additional Information :

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ALKALI METALS LTD	Material Safety Data Sheet	Page : 01
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Product	Cyclopentylchloride
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Synonyms	Chlorocyclopentane
CAS No.	[930-28-9]
Emergency contact / manufacturer	Alkali Metals Ltd., Plot B-5, Block III, I.D.A, Uppal, Hyderabad – 500 039, India Tel :- +91 40 2756 3002 / 2756 2932 / 2720 1179 / 2720 2298 Fax : + 90 40 2756 2364 / 2720 1454 Website : www.alkalimetals.com Email :- alkalimetals@alkalimetals.com / hyd1_alkali@sancharnet.in

Physical and Chemical Properties :			
Physical state	Clear liquid	Decomposition temp.	Not available
Appearance	Colourless	Autoignition temp.	380 °C
Odor	Not available	Solubility in water	760 mg/ltr in water
pH	Not available	Viscosity	1.03 MPA 20 ⁰
Boiling point	114 °C	Specific gravity/density	1.0050 gms/CC
Freezing / melting point	-50 °C	Molecular Formula	C ₅ H ₉ Cl
Flash Point	15 °C	Molecular Weight	104.57

First aid measures :	
Eyes	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Get medical aid immediately
Skin	Flush with plenty of water while removing contaminated clothing and shoes. Get medical aid immediately.
Ingestion	Get medical aid. Wash mouth out with water.
Inhalation	Remove from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Give medical aid.

Fire fight measures :	
General information	As in case of any fire, use a self-contained breathing apparatus.
Extinguishing media	In case of fire, use water spray, dry chemical, carbon dioxide or chemical foam.

Accidental release measures :	
General information	Use proper personal protective equipment.
Spills/leaks	Vacuum or sweep up material and place in suitable disposal container.

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ALKALI METALS LTD	Material Safety Data Sheet	Page : 02
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Product	Cyclopentylchloride
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Handling & storage :	
Handling	Avoid contact with skin and eyes. Avoid breathing dust, vapor, mist or gas.
Storage	Store in a cool, dry place. Keep containers tightly closed.

Personal protective equipment	
Eyes	Wear chemical goggles and safety glasses.
Skin	Wear appropriate protective gloves to prevent skin exposure.
Clothing	Wear appropriate protective clothing to prevent skin exposure.
Respirators	Wear appropriate respirators where necessary.

Stability & Reactivity	
Chemical stability	Stable under normal temperatures and pressures.
Conditions to avoid	Incompatible materials.
Incompatible with other materials	Strong oxidizing agents.
Hazardous dec. products	Nitrogen oxides, carbon monoxide, carbon dioxide, Hydrogen chloride.

Transport Information :			
	IATA	IMO	RID/ADR
Shipping Name	No information available	No information available	No information available
Hazard Class	3	3.2	--
UN Number	1993	1993	1993
Packing group	II	II	--

Additional Information :

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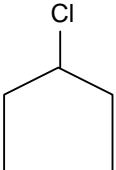
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Manufacturers of Sodium Amide, Sodium Alkoxides, Sodium Hydride, Sodium Azide, Tetrazoles, Amino Pyridines, Pyridine Derivatives, Fine Chemicals, Oleo Chemicals & Oleoresins

SPECIFICATIONS

Product	Cyclopentyl chloride
Synonyms	Chlorocyclopentane
CAS No.	[930-28-9]
UN No.	1993
CLASS	3.2
Pkg. Gr.	II
Hazard	Flammable liquid, N.O.S
Molecular Formula	C ₅ H ₉ Cl
Formula weight	104.58
Structure	

Characteristics	Units	Specifications
Appearance	---	Clear colorless liquid
Moisture content	% w/w	0.5 Max.
Purity by GC	% Area	98 Min.

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