

MATERIAL SAFETY DATA SHEET

CYCLO PENTYL BROMIDE

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Cyclopentyl bromide, 98%

Bromocyclopentane

Company Identification:

Alkali Metals Ltd.,

Plot B-5, Block III, IDA Uppal

Hyderabad, India - 500 039

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SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	%	EINECS#
137-43-9	Cyclopentyl bromide	98%	205-294-6

Risk Phrases: 10

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance:- clear colourless liquid.

Target Organs:- None.

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:- Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin:- Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:-If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately. Do NOT induce vomiting. Allow the victim to rinse his mouth and then to drink 2-4 cupfuls of water, and seek medical advice.

Inhalation:- Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:- Treat symptomatically and supportively.

SECTION 5 - FIRE FIGHTING MEASURES

General Information:- As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Flammable Liquid.

Extinguishing Media:- Use agent most appropriate to extinguish fire.

Autoignition Temperature:- Not available.

Flash Point:- 35 deg C (95.00 deg F)

NFPA Rating:- Not published.

Explosion Limits, Lower:- Not available.

Upper:- Not available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information:- Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:- Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Clean up spills immediately, observing precautions in the Protective Equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:- Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Avoid contact with heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:- Keep away from heat, sparks, and flame. Flammables-area.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:- Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits			
Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Cyclopentyl bromide , 98%	none listed	none listed	none listed

OSHA Vacated PELs:- Cyclopentyl bromide, 98%:No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:- Wear chemical goggles. Wear safety glasses and chemical goggles if splashing is possible.

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

Clothing:- Wear appropriate protective clothing to minimize contact with skin.

Respirators:- A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Wear a NIOSH/MSHA-approved (or equivalent) full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Not available.
Appearance	:	clear, colorless
Odor	:	None reported.
PH	:	Not available.
Vapor Pressure	:	Not available.
Vapor Density	:	Not available.
Evaporation Rate	:	Not available.
Viscosity	:	Not available.
Boiling Point	:	137 - 139 deg C @ 760.00mm Hg
Freezing/Melting Point	:	Not available.
Decomposition Temperature	:	Not available.
Solubility	:	insoluble
Specific Gravity/Density	:	1.3900g/cm3
Molecular Formula	:	C5H9Br
Molecular Weight	:	149.03

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:- Stable under normal temperatures and pressures.

Conditions to Avoid:- Incompatible materials, strong oxidants.

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

Hazardous Decomposition Products:- Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, hydrogen bromide.

Hazardous Polymerization:- Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:- CAS# 137-43-9 unlisted.

LD50/LC50:- Not available.

Carcinogenicity:- Cyclopentyl bromide, 98% - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:- Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

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

RCRA D-Series Maximum Concentration of Contaminants:- None listed.

RCRA D-Series Chronic Toxicity Reference Levels:- None listed.

RCRA F-Series:- None listed.

RCRA P-Series:- None listed.

RCRA U-Series:- None listed.

Not listed as a material banned from land disposal according to RCRA.

SECTION 14 - TRANSPORT INFORMATION

US DOT

Shipping Name:- FLAMMABLE LIQUIDS, N.O.S. (CYCLOPENTYL BROMIDE) Hazard Class: 3 UN Number: UN1993 Packing Group: III

IMO

Shipping Name: FLAMMABLE LIQUID, N.O.S. Hazard Class: 3.3 UN Number: 1993 Packing Group: III

IATA

Shipping Name: FLAMMABLE LIQUID, N.O.S.* Hazard Class: 3 UN Number: 1993 Packing Group: III

RID/ADR

Shipping Name: FLAMMABLE LIQUID, N.O.S. Dangerous Goods Code: 3(31C) UN Number: 1993

Canadian TDG No information available.

SECTION 15 - REGULATORY INFORMATION

US FEDERAL

TSCA CAS# 137-43-9 is listed on the TSCA inventory.

Health & Safety Reporting List: None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules:- None of the chemicals in this product are under a Chemical Test Rule.

Section 12b:- None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule:- None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ):- None of the chemicals in this material have an RQ.

Section 302 (TPQ):- None of the chemicals in this product have a TPQ.

Section 313:- No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

Cyclopentyl bromide, 98% is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases:- R 10 Flammable.

Safety Phrases: S 16 Keep away from sources of ignition - No smoking. WGK (Water Danger/Protection)

CAS# 137-43-9: Canada

None of the chemicals in this product are listed on the DSL/NDL list.

WHMIS: Not available.

CAS# 137-43-9 is not listed on Canada's Ingredient Disclosure List. Exposure Limits

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 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 has been advised of the possibility of such damages.