

**MATERIAL SAFETY DATA SHEET (MSDS)****1. CHEMICAL IDENTITY****CYCLOPENTANE**

Chemical Name	Cyclopentane	Trade name	Cyclopentene
Synonyms	Pentamethylene	Chemical classification	Cycloparaffin, Naphthene
Formula	C ₅ H ₁₀	CAS Number	287-92-3
UN number	1146	UN Hazard class	3
Hazchem code (EAC)	3YE		
REGULATED IDENTIFICATION		Hazardous ingredients	CAS No.
Shipping Name	Flammable liquid	Cyclopentane	287-92-3
Shipping code/ Label	1146/3		
Hazardous waste Id No.	Not pertinent		

Uses: Solvent, Fuel

2. PHYSICAL AND CHEMICAL DATA

Boiling point/ Range °C	49.3	Physical state	Liquid	Appearance	Colourless
Melting/ Freezing Point °C	-94.4	Vapour Pressure(at 20° C) mm Hg	400	Odour	Like gasoline, mild, sweet
Vapour Density (Air =1)	2.42	Solubility in water (at 30°C)	Insoluble	Other Information	
Specific gravity (at 20 °C) (water =1)	0.745	pH	Not pertinent	Soluble in common organic solvents	

3. FIRE AND EXPLOSION HAZARD DATA

Flash point ° C (CC) (OC)	-37*	Flammability LFL % v UFL % v	1.1 8.7	TDG Flammability	3
Explosion sensitivity to impact	No	Explosion sensitivity to static electricity	Yes	Autoignition Temperature °C	380
Combustible Material	Yes	Explosive Material	No	Hazardous Polymerization	No
Flammable Material	Yes	Oxidiser	No	Corrosive Material	No
Pyrophoric Material	No	Organic Peroxide	No	Other information :	
Hazardous Combustion Products	CO in case of oxygen deficiency.				

4. REACTIVITY DATA

Chemical stability	Stable under normal conditions
Incompatibility with other Materials	None
Reactivity	A very dangerous fire hazard when exposed to heat or flame, can react with oxidizers.
Hazardous Reaction Products	when heated to decomposition it emits acids smoke and fumes.

5. HEALTH HAZARD DATA

Route of entry	Absorption through skin, Inhalation and Ingestion			
Effect of exposure/ Symptoms	Irritation of eyes and skin. Dizziness, nausea, vomiting, unconsciousness. Inhalation may cause lung irritation and pulmonary oedema. Central Nerve System (CNS) excitement followed by depression. Ingestion harmful.			
Emergency treatment	Flush eyes with plenty of water for at least 10 minutes. Remove contaminated clothing. Wash affected skin with soap and water. if inhaled, remove victim to fresh air. Give artificial respiration, if breathing has stopped. If ingested, have victim drink water or milk. Do not induce vomiting. Obtain medical attention immediately.			
Permissible Exposure Limit	TLV-TWA (ACGIH)	600 ppm. 1720 mg/m ³	STEL(ACGIH)	DNA
TDLo imp-rat: DNA	IDLH	DNA	Odour threshold	DNA
NFPA Hazard signals	Health 1	Flammability 3	Reactivity 0	Special -



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6. PREVENTIVE MEASURES

CYCLOPENTANE

PERSONAL PROTECTIVE MATERIAL	Use PVC or rubber gloves, gum-boots, goggles/faceshield and overalls. Use breathing apparatus if required.
HANDLING AND STORAGE PRECAUTIONS	Store in cool, clean, ventilated, fireproof storage area. keep away from heat, sparks, open flame and incompatible materials (strong oxidising agents)

7. EMERGENCY AND FIRST AID MEASURES

FIRE (Class of fire : B)	
Fire extinguish media	Foam or dry agent (CO ₂ , dry chemical powder)
Special Procedures	None
Unusual Hazards	None
EXPOSURE	
First Aid Measures	Eye : Flush eyes with plenty of water for atleast 10 minutes. Skin : Remove contaminated clothing and wash affected skin with soap and water. Inhalation : Remove victim to fresh air. If not breathing, give artificial respiration. Ingestion : If conscious, have victim drink water or milk. Do not induce vomiting. Obtain medical attention immediately.
Antidotes/ Dosages	None specific. Treat symptomatically.
SPILLS	
Steps to be taken	Contain spillage. Absorb in sand or earth for disposal. Eliminate all sources of ignition. Use personal protective equipment. Cordon off the area. stay upwind.
Waste Disposal Method	Let the spillage go to drips pit or chemical sewer. Flush small spillages with plenty of water. sand or earth with absorbed liquid should be incinerated or buried in an approved landfill site.

8. ADDITIONAL INFORMATION/ REFERENCES

ECOLOGICAL INFORMATION	
Ecotoxicity	Aquatic toxicity : 100 ppm/96h/Coho salmon/no effect/artificial sea water
Persistence	DNA
OTHER INFORMATION	No food-chain concentration potential
REFERENCES (FOR OBTAINING MORE INFORMATION)	
1. Hazardous chemicals Data Book: G Weiss: Noyes Data corp USA	2. Hand book of environmental data: Karen Verschueren: van Nostrand Reinhold Co., USA

9. MANUFACTURER/SUPPLIER/ CONSUMER'S DATA

Haldia Petrochemicals Limited, Durgachak, Haldia, Purba Medinipur, WB- 721 602	Contact person in Emergency	Emergency leader
PH: (03224) 274400/007	Local Bodies Involved	The Additional District Magistrate
Fax: (03224) 274420	Standard Packing	
	Tremcard details/ Ref	
	Others	-

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