

Material Safety Data Sheet Cyclopentanone

SECTION 1.1 – PRODUCT IDENTIFICATION

Product Name : Cyclopentanone
Molecular Formula : C₅H₈O
Molecular Weight : 84.12 g/mole
CAS No. : 120-92-3

SECTION: 1.2 – COMPANY IDENTIFICATION

Company Name: Indenta Chemicals (India) Pvt. Ltd.

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SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS#	% by Weight
Cyclopentanone	120-92-3	100

SECTION 3: HAZARD IDENTIFICATION

3.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquid, Category 3, H226

Eye irritation, Category 2, H319

Skin irritation, Category 2, H315

3.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



Pictogram

Signal word

Warning

Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Indenta Chemicals (India) Pvt. Ltd.

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Precautionary statements**Prevention**

P210 Keep away from heat.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3.3 Other hazards

None known.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures**After inhalation:**

Fresh air.

In case of skin contact:

Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact:

Rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing:

Immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects, Nausea, Dizziness, Drowsiness, Convulsions Drying-out effect resulting in rough and chapped skin.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: FIRE AND EXPLOSION DATA

5.1 Extinguishing media**Suitable extinguishing media**

Water, Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

5.3 Advice for firefighters**Special protective equipment for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Observe label precautions.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection Safety glasses

Hand protection

Full contact:

Glove material:	butyl-rubber
Glove thickness:	0.7 mm
Break through time:	> 480 min

Splash contact:

Glove material:	Viton (R)
Glove thickness:	0.70 mm
Break through time:	> 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact),

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves

Other protective equipment

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

Risk of explosion.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	aromatic
Odour Threshold	No information available.
pH	Not applicable

Melting point	-58 °C
Boiling point/boiling range	131 °C at 1,013 hPa
Flash point	27 °C Method: c.c.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	1.6 %(V)
Upper explosion limit	10.8 %(V)
Vapour pressure	107 hPa at 60 °C 11.5 hPa at 20 °C
Relative vapour density	2.3
Density	0.95 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	9.18 g/l at 25 °C
Partition coefficient: noctanol/water	log Pow: 0.24 (calculated) (IUCLID) Bioaccumulation is not expected.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	1.29 mPa.s at 20 °C
Explosive properties	Not classified as explosive.

Oxidizing properties	none
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9.2 Other data

Ignition temperature	445 °C
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Bulk density	Not applicable
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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Vapour/air-mixtures are explosive at intense warming.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Exothermic reaction with:

Oxidizing agents, polymerisation initiators, Strong bases, acids

Risk of explosion with:

Nitric acid, hydrogen peroxide, hydrazine and derivatives, hydroxylamine

10.4 Conditions to avoid

Heating.

10.5 Incompatible materials

various plastics

10.6 Hazardous decomposition products

no information available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects**Acute oral toxicity**

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Risk of aspiration upon vomiting., Pulmonary failure possible after aspiration of vomit.

Acute inhalation toxicity

Symptoms: Possible damages:, mucosal irritations, Lung oedema, Symptoms may be delayed.

Acute dermal toxicity

LD50 Rabbit: > 5,000 mg/kg (IUCLID)

Skin irritation

Causes skin irritation.

Drying-out effect resulting in rough and chapped skin.

Eye irritation

Rabbit

Result: Severe irritations

OECD Test Guideline 405 Causes serious eye irritation.

Sensitisation

Patch test: human

Result: negative

(IUCLID)

Germ cell mutagenicity*Genotoxicity in vitro*

Ames test

Result: negative

(IUCLID)

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Systemic effects:

After absorption:

Dizziness, Drowsiness, Convulsions Damage to:

Liver, Kidney

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**Toxicity to fish LC50 *Leuciscus idus* (Golden orfe): 2,950 mg/l; 48 h (IUCLID)Toxicity to daphnia EC50 *Daphnia magna* (Water flea): 1,435 mg/l;
and other aquatic 24 h (IUCLID)
invertebratesToxicity to bacteria EC5 *Pseudomonas putida*: 175
mg/l; 16 h (IUCLID)**12.2 Persistence and degradability**Biodegradability 95.4 %; 5 d
(IUCLID)
Readily eliminated from water**12.3 Bioaccumulative potential**Partition coefficient: n-octanol/water log
Pow:
0.24(calculated)
(IUCLID) Bioaccumulation is not expected.**12.4 Mobility in soil**

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Additional ecological information

When discharged properly, no impairments in the function of adapted biological wastewater treatment plants are to be expected.

Discharge into the environment must be avoided.

SECTION 13: DISPOSAL CONSIDERATION

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1 UN number	UN 2245
14.2 Proper shipping name	CYCLOPENTANONE
14.3 Class	3
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes

Tunnel restriction code D/E
Inland waterway transport (ADN) Not relevant

Air transport (IATA)

14.1 UN number	UN 2245
14.2 Proper shipping name	CYCLOPENTANONE
14.3 Class	3
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no

Sea transport (IMDG)

14.1 UN number	UN 2245
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14.2 Proper shipping name CYCLOPENTANONE

14.3 Class 3

14.4 Packing group III

14.5 Environmentally hazardous --

14.6 Special precautions for user yes

EmS F-E S-D

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Relevant.

SECTION 15: OTHER REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National legislation

Storage class 3

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: ADDITIONAL INFORMATION

This information is provided for documentation purposes only.

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