

## SAFETY DATA SHEET

Creation Date 16-Jan-2009

Revision Date 23-Jan-2018

Revision Number 4

### 1. Identification

**Product Name** Cyclopentane

**Cat No. :** AC397430000; AC397430010; AC397430050

**CAS-No** 287-92-3  
**Synonyms** Pentamethylene

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number**  
CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

**Classification**  
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system, Central nervous system (CNS).	
Aspiration Toxicity	Category 1

#### **Label Elements**

**Signal Word**  
Danger

**Hazard Statements**  
Highly flammable liquid and vapor  
May be fatal if swallowed and enters airways  
May cause respiratory irritation  
May cause drowsiness or dizziness

**Precautionary Statements****Prevention**

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

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician if you feel unwell

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Do NOT induce vomiting

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage**

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

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Harmful to aquatic life with long lasting effects

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Cyclopentane	287-92-3	>95

### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration. Risk of serious damage to the lungs (by aspiration).
<b>Ingestion</b>	Do NOT induce vomiting. Get medical attention. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.

<b>Most important symptoms and effects</b>	Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use: Foam. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Water mist may be used to cool closed containers.
<b>Unsuitable Extinguishing Media</b>	Do not use a solid water stream as it may scatter and spread fire
<b>Flash Point</b>	-7 °C / 19.4 °F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	361 °C / 681.8 °F
<b>Explosion Limits</b>	
<b>Upper</b>	8.70%
<b>Lower</b>	1.50%
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Extremely flammable.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### Protective Equipment and Precautions for Firefighters

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

### NFPA

Health	Flammability	Instability	Physical hazards
1	3	0	N/A

## 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.
<b>Environmental Precautions</b>	Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

## 7. Handling and storage

<b>Handling</b>	Wear personal protective equipment/face protection. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat, sparks and flame.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Cyclopentane	TWA: 600 ppm	(Vacated) TWA: 600 ppm (Vacated) TWA: 1720 mg/m <sup>3</sup>	TWA: 600 ppm TWA: 1720 mg/m <sup>3</sup>	TWA: 600 ppm

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

### Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment.

### Personal Protective Equipment

#### Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Strong hydrocarbon-like
Odor Threshold	No information available
pH	Not applicable
Melting Point/Range	-94 °C / -137.2 °F
Boiling Point/Range	50 °C / 122 °F @ 760 mmHg
Flash Point	-7 °C / 19.4 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	8.70%
Lower	1.50%
Vapor Pressure	360 mbar @ 20 °C
Vapor Density	2.42
Specific Gravity	0.745
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	361 °C / 681.8 °F
Decomposition Temperature	No information available
Viscosity	0.44 mPa.s at 20 °C
Molecular Formula	C5 H10
Molecular Weight	70.15

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cyclopentane	LD50 = 11400 mg/kg ( Rat )	Not listed	LC50 = 106 mg/L, vapour ( Rat )

**Toxicologically Synergistic Products** No information available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Irritation</b>	No information available
<b>Sensitization</b>	No information available
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Cyclopentane	287-92-3	Not listed	Not listed	Not listed	Not listed	Not listed

<b>Mutagenic Effects</b>	No information available
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	Respiratory system Central nervous system (CNS)
<b>STOT - repeated exposure</b>	None known
<b>Aspiration hazard</b>	Category 1
<b>Symptoms / effects, both acute and delayed</b>	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following

substances which are hazardous for the environment. Contains a substance which is: Harmful to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Cyclopentane	Not listed	Not listed	Not listed	EC50: = 10.5 mg/L, 48h (Daphnia magna)

**Persistence and Degradability** Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its volatility.

Component	log Pow
Cyclopentane	2.05

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

UN-No UN1146  
 Proper Shipping Name CYCLOPENTANE  
 Hazard Class 3  
 Packing Group II

#### TDG

UN-No UN1146  
 Proper Shipping Name CYCLOPENTANE  
 Hazard Class 3  
 Packing Group II

#### IATA

UN-No UN1146  
 Proper Shipping Name Cyclopentane  
 Hazard Class 3  
 Packing Group II

#### IMDG/IMO

UN-No UN1146  
 Proper Shipping Name Cyclopentane  
 Hazard Class 3  
 Packing Group II

### 15. Regulatory information

#### United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Cyclopentane	287-92-3	X	ACTIVE	-

#### **Legend:**

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export Not applicable

#### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Cyclopentane	287-92-3	X	-	206-016-6	X	X	X	X	KE-09297

**U.S. Federal Regulations**

<b>SARA 313</b>	Not applicable
<b>SARA 311/312 Hazard Categories</b>	See section 2 for more information
<b>CWA (Clean Water Act)</b>	Not applicable
<b>Clean Air Act</b>	Not applicable
<b>OSHA - Occupational Safety and Health Administration</b>	Not applicable
<b>CERCLA</b>	Not applicable
<b>California Proposition 65</b>	This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Cyclopentane	X	X	X	-	X

**U.S. Department of Transportation**

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** Serious risk, Grade 3

## 16. Other information

<b>Prepared By</b>	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
<b>Creation Date</b>	16-Jan-2009
<b>Revision Date</b>	23-Jan-2018
<b>Print Date</b>	23-Jan-2018
<b>Revision Summary</b>	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). SDS sections updated. 2. 3. 5. 9. 11. 15.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**