

Cyclopentane

Safety Data Sheet

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This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with the material, as well as describing potential risks to the consumer and the environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material. This Safety Data Sheet is prepared in accordance with formatting described in the Regulation (EU) No 453/2010, and described in CLP Regulation (EC) No 1272/2008.

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Common name	Cyclopentane
Chemical class	Highly Flammable alicyclic hydrocarbon
REACH registration	This substance is derived from natural gas condensate and meets the criteria for exemption from REACH registration under Annex V.

1.2 Relevant identified uses of the substances or mixture and of the company/undertaking

Solvent, adhesives

1.3 Details of the supplier of the safety data sheet

Manufacturer	South Hampton Resources, Inc. 7752 FM 418 West Silsbee, Texas 77656 USA Tel: + 1 409-385-8300 E mail: customerservice@southhamptonr.com
EU Only Representative	TSGE Concordia House, St James Business Park, Grimbald Crag Court, Knaresborough, North Yorkshire, HG5 8QB, United Kingdom Tel: +44 (0) 1423 799 633 Fax: +44 (0) 1423 797 804

1.4 Emergency telephone number

In case of emergency	Tel. +1 703 527 3887 (CHEMTREC)
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Section 2. Hazards Identification

2.1 Classification of the mixture

Classification under CHIP:	[F+], R11; [Xn], R20, R48, R51/53, R62, R65; R66; R67
Classification under CLP:	Aquatic Chronic 2. Toxic to aquatic life with long lasting effects. Asp. Tox. 1. May be fatal if swallowed and enters airways. Flam. Liq. 2. Flammable liquid and vapour. Repr. 2. Suspected of damaging the unborn child. STOT SE 3. May cause respiratory irritation.

Physicochemical hazards: The product is extremely flammable. Store away from all sources of ignition. Highly flammable vapours which are heavier than air may accumulate in low areas and/or spread along ground away from handling site.

Human health: In high concentrations, vapours and aerosol mists have a narcotic effect and may cause dizziness, disorientation, headache, excitation, drowsiness, uncoordination, anesthesia, respiratory and cardiac effects. Extreme overexposure may cause further Central Nervous System depression, unconsciousness, and respiratory arrest. Ingesting the product may also cause hemorrhaging of mucous membranes, diarrhea, or aspiration of the liquid resulting in chemical pneumonitis.

Environment: This product contains substances which are harmful to aquatic organisms or which may cause long term effects to the aquatic environment.

Please see Section 16 for full text of each classification.

2.2 Label elements

Regulation (EC) No 1272/2008:



Signal Word: **Danger**

Hazard Statements

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure
EUH066 Repeated exposure may cause skin dryness or cracking
H320 Causes eye irritation

Precautionary statements:

P201 Obtain special instructions before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P243 Take precautionary measures against static discharge.
P273+P202 Avoid release to the environment. Do not handle until all safety precautions have been read and understood
P280 Wear protective gloves and clothing, eye protection and face protection.
P301+P310+P331 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
P304+P340+P313 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention
P370+P378 In case of fire: Use dry chemical, foam or carbon dioxide for extinction
P403+P235+P233 Store in a well-ventilated place. Keep cool. Keep container tightly closed

2.3 Other hazards

PBT:	No information available yet.
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Section 3. Composition

Name	CAS Number	EINECS Number	% Composition	Classification according to CHIP	Classification according to CLP
Cyclopentane	287-92-3	206-016-6	70 – 72.4%	[F] R11; [-] R52/53	Flam. Liq. 2: H225; Aquatic Chronic 3:

					H412
2, 2 Dimethyl Butane	75-83-2	200-906-8	23.1 - 29.6 %	[F] R11; [Xn] R20; [Xn] R48; [N] R51/53; [Xn] R62; [Xn] R65; [-] R67	Flam. Liq. 2, H225; Asp. Tox. 1, H304; STOT SE 3, H336; Aquatic chronic 2, H411
Pentane	109-66-0	203-692-4	0.5 - 1.7%	[F+] R12; [N] R51/53; [Xn] R65; [-] R66; [-] R67	Flam. Liq.1, H225; Asp. Tox 1, H304; STOT SE 3, H336; Aquatic Chronic 2, H 411, EUH066
Isopentane	78-78-4	201-142-8	0.0 – 0.1 %	F+: R12; Xn: R65; -: R66; -: R67; N: R51/53	Flam. Liq. 1; H224 Aquatic Acute 2; H401 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411

See section 16 for full description of the text of each classification.

Section 4. First Aid Measures

4.1 Description of first aid measures

Inhalation

Remove from exposure. If breathing is difficult, give oxygen and seek medical attention.

Skin contact

If this product comes into contact with skin, flush skin with water for at least 15 minutes. If illness or adverse symptoms develop, seek medical attention.

Accidental eye contact

If this product comes in contact with the eyes, flush with running water for at least 15 minutes. If illness or adverse symptoms develop, seek medical attention.

Ingestion

Do not induce vomiting. Get medical attention immediately. A physician may, at his discretion, perform gastric lavage using a cuffed endotracheal tube.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: Overexposure may cause dizziness, disorientation, headache, excitation, drowsiness, uncoordination, anesthesia, respiratory and cardiac effects. Extreme overexposure may cause further Central Nervous System depression, unconsciousness, and respiratory arrest.

Ingestion: Ingestion may cause Central Nervous System depression, hemorrhaging of mucous membranes, diarrhea, or aspiration of the liquid resulting in chemical pneumonitis.

4.3 Indication of any immediate attention and special treatment needed

If ingested, seek medical attention immediately. If product comes in contact with either the skin or the eyes immediately flush with water for at least 15 minutes.

Section 5. Firefighting Measures

5.1 Extinguishing media

SMALL FIRE: Dry chemical, CO₂, water spray or regular foam.

LARGE FIRE: Water spray, fog or regular foam. Do not use straight streams. Move containers from fire area if you can do it without risk.

5.2 Special hazards arising from the substance or mixture

FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

5.3 Advice for fire-fighters

ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. (ERG, 2016)

Wear positive pressure Self-Contained Breathing Apparatus.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

If outside, do not approach from downwind. If outside keep bystanders upwind and away from danger point.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk.

6.2 Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Vapor-suppressing foam may be used to reduce vapours. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean, non-sparking tools to collect absorbed material.

6.3 Method for cleaning up

Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Transfer to disposal drums using non-sparking equipment.

6.4 Reference to other sections

Refer to section 8 of SDS for personal protection details.

Section 7. Handling and Storage

7.1 Precautions for safe handling

Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Eliminate all sources of ignition. Avoid vapours.

7.2 Condition for safe storage, including any incompatibilities

Store in cool, well ventilated area. Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids. Keep away from sources of ignition. Highly flammable.

7.3 Specific end use(s)

No further details

Section 8. Exposure Controls/Personal Protection

8.1 Control parameters

Substance	Control Parameters	Value	Source, Type
Cyclopentane	600 ppm	TWA	ACGIH (TLV)
Pentane	600 ppm	TWA	ACGIH (TLV)
Isopentane	600 ppm	TWA	ACGIH (TLV)
2, 2 Dimethyl Butane	500 ppm	TWA	ACGIH (TLV)

8.2 Exposure controls

Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids. General mechanical ventilation may be sufficient to keep product vapour concentrations within specified time-weighted TLV ranges. If general ventilation proves inadequate to maintain safe vapour concentrations, supplemental local exhaust may be required. Other special precautions such as respiratory masks or environmental containment devices may be required in extreme cases.

Respiratory protection

Self-contained breathing apparatus must be available in case of emergency. When entry into or exit from concentrations of unknown exposure, use NIOSH/MSHA approved self-contained breathing apparatus.

Hand protection

Impermeable gloves. Avoid unnecessary skin contamination with the material.

Eye protection

Safety glasses with side-shields or Face-shield.

Skin protection

Impermeable protective clothing. Avoid unnecessary skin contamination with the material

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Chemical Formula:

C₅H₁₀

Physical State: Liquid

Appearance: Colorless Liquid

Odor: Gasoline-like odor

Odor Threshold: Not available

pH: Not available

Evaporation Rate: Not available

Flash Point: less than -40 °F

Lower Explosive Limit (LEL): 1.1 % (approx.)

Upper Explosive Limit (UEL): 8.7 % (approx.)

Auto ignition Temperature: 682 °F

Melting Point: -137 °F

Vapor Pressure: 400 mm Hg at 88.0 °F

Vapor Density (Relative to Air): data unavailable

Specific Gravity: 0.7204 – 0.7223

IBP and Boiling Point Range: 48.2 – 50.3 °C (118.8- 122.5 °F)

Molecular Weight: 70.1

Water Solubility: Insoluble

IDLH: data unavailable

9.2 Other information

No further details

Section 10. Stability and Reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions are not expected.

10.4 Conditions to avoid

Do not expose to air.

10.5 Incompatible materials

Strong oxidising agents. Oxygen.

10.6 Hazardous decomposition products

Oxides of Carbon

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity: Harmful when inhaled in high concentrations or ingested.

Irritation: Exposure to the liquid or prolonged overexposure to high vapour may cause slight eye irritation including pain, inflammation of the iris and mucous membranes, redness and tearing.

Corrosivity: Not corrosive

Sensitisation: Not known to be a sensitizer

Repeated dose toxicity: Prolonged or repeated contact with the liquid may cause defatting resulting in drying, redness and possibly blistering. Prolonged overexposure to the high vapour concentrations may cause slight mucous membrane irritation. Ingestion may cause Central Nervous System Depression, haemorrhaging of mucous membranes, diarrhoea or aspiration of the liquid resulting in chemical pneumonitis. Overexposure may cause dizziness, disorientation, headache, excitation, drowsiness, uncoordination, anaesthesia, respiratory and cardiac effects. Extreme overexposure may cause further Central Nervous System depression, unconsciousness and respiratory arrest.

Carcinogenicity: Not expected to be carcinogenic.

Mutagenicity: Not expected to be mutagenic

Toxicity for reproduction: Possible risk of impaired fertility.

Route of exposure: Inhalation and Ingestion

Symptoms related to the physical, chemical and toxicological characteristics: dizziness, disorientation, headache, excitation, drowsiness, uncoordination, anaesthesia, respiratory and cardiac effects

Section 12. Ecological Information

12.1 Toxicity

Cyclopentane is classified as toxic to aquatic organisms and likely to cause long term effects in the environment.

12.2 Persistence and degradability

Not biodegradable.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

No further details

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal operations - Transfer to a suitable container and arrange for collection by specialised disposal company. Keep out of water sources and sewers. Absorb in dry, inert material (sand, clay, sawdust etc). Protect from ignition. Transfer to disposal drums using non-sparking equipment. Notify responsible body if spill is greater than 100 lbs (kilograms).

Disposal of packaging - Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility.

Please follow all local, regional, national and international laws.

Section 14. Transport Information

14.1 UN number

1146

14.2 UN proper shipping name

Cyclopentane

14.3 Transport hazard class(es)

3

14.4 Packing group

II

14.5 Environmental hazards

Environmentally Hazardous Substance
Marine Pollutant - No

14.6 Special precautions for user

Keep away from sources of heat and ignition.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable to packaged goods

Section 15. Regulatory Information

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

No further information

15.2 Chemical safety assessment

A chemical safety assessment has not been conducted.

Section 16. Other Information

Other information

Hazard Ratings:

NFPA:

Health:	1
Fire:	3
Reactivity:	0
Specific Hazard:	None

HMIS:

Health:	1
Flammability:	3
Reactivity:	0

This safety data sheet is prepared in accordance with Regulation (EC) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

*Section 1: It is explained that the test substance is exempt from REACH registration.

*Section 2: The label according to DSD has been removed since substances are now labelled according to CLP only.

Risk phrases used in Section 3

R11 Highly Flammable
R20 Harmful by inhalation.
R48 Danger of serious damage to health by prolonged exposure.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R52/53 Harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment
R62 Possible risk of impaired fertility.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure
EUH066 Repeated exposure may cause skin dryness or cracking

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.