

**SECTION 1: Identification****1.1. Identification**

Product form	: Substance
Substance name	: 4-Heptanone
Chemical name	: 4-Heptanone
CAS-No.	: 123-19-3
Product code	: (US) W0834
Formula	: C7H14O
Synonyms	: Di-n-propyl ketone / Heptan-4-one / Dipropyl ketone

**1.2. Recommended use and restrictions on use**

No additional information available

**1.3. Supplier**

Synerzine  
5340 Hwy 42 S  
Ellenwood, Georgia 30294 - USA  
T 404-524-6744 - F 404-577-1651  
[info@synerzine.com](mailto:info@synerzine.com) - [www.synerzine.com](http://www.synerzine.com)

**1.4. Emergency telephone number**

Emergency number : Infotrac 1-800-535-5053 (Contract# 102471) Dial +1-352-323-3500 when outside the US

**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS-US classification**

Flammable liquids Category 3	H226	Flammable liquid and vapour
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled

Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements****GHS-US labeling**

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapour  
H332 - Harmful if inhaled

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking, heat, hot surfaces, open flames, sparks  
P233 - Keep container tightly closed.  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof electrical, lighting, ventilating equipment  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P312 - Call a doctor, a POISON CENTER if you feel unwell  
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2), dry sand to extinguish.

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P403+P235 - Store in a well-ventilated place. Keep cool.

P501 - Dispose of contents/container to an approved waste disposal plant

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Name	Product identifier	%	GHS-US classification
4-Heptanone	(CAS-No.) 123-19-3	97 - 100	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

No additional information available

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : Flammable liquid and vapour.
- Reactivity : Flammable liquid and vapour.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust, fume, gas, mist, spray, vapors.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust, gas, fume, mist, spray, vapors.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

4-Heptanone (123-19-3)		
ACGIH	Local name	Dipropyl ketone
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	URT irr
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	235 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (ppm)	50 ppm

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Appearance : A clear, colorless liquid.  
Color : Colorless  
Odor : fruity, cheesy, sweet, tutti-frutti, cognac and pineapple nuances  
Odor threshold : No data available  
pH : No data available  
Melting point : Not applicable

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Freezing point	: No data available
Boiling point	: 144 °C
Flash point	: 120 °F TCC
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 0.81 - 0.82 g/cm <sup>3</sup>
Molecular mass	: 114.19 g/mol
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapour.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

4-Heptanone (123-19-3)	
LD50 oral rat	4 ml/kg
LD50 dermal rabbit	5.66 ml/kg
LC50 inhalation rat (ppm)	2690 ppm (Exposure time: 6 h)
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

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Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Additional information : Flammable vapors may accumulate in the container.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2710 Dipropyl ketone, 3, III

UN-No.(DOT) : UN2710

Proper Shipping Name (DOT) : Dipropyl ketone

Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 242

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DOT Special Provisions (49 CFR 172.102)	: B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number	: 128
Other information	: No supplementary information available.

### Transportation of Dangerous Goods

#### Transport by sea

Transport document description (IMDG)	: UN 2710 DIPROPYL KETONE, 3, III (49°C c.c.)
UN-No. (IMDG)	: 2710
Proper Shipping Name (IMDG)	: DIPROPYL KETONE
Class (IMDG)	: 3 - Flammable liquids
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 L

#### Air transport

Transport document description (IATA)	: UN 2710 Dipropyl ketone, 3, III
UN-No. (IATA)	: 2710
Proper Shipping Name (IATA)	: Dipropyl ketone
Class (IATA)	: 3 - Flammable Liquids
Packing group (IATA)	: III - Minor Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 4-Heptanone (123-19-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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### 15.2. International regulations

#### CANADA

#### 4-Heptanone (123-19-3)

Listed on the Canadian DSL (Domestic Substances List)

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### EU-Regulations

#### 4-Heptanone (123-19-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### National regulations

#### 4-Heptanone (123-19-3)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

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Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

#### 4-Heptanone (123-19-3)

State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
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#### 4-Heptanone (123-19-3)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

Full text of H-phrases:

H226	Flammable liquid and vapour
H332	Harmful if inhaled

NFPA health hazard

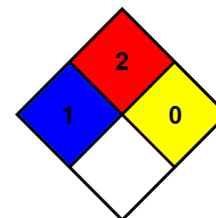
: 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*