

## SAFETY DATA SHEET

Revision Date 29-March-2024

Revision Number 3

### 1. Identification

**Product Name** (1S)-(-)-Camphanic acid

**Cat No. :** L16098

**CAS-No** 13429-83-9

**Synonyms** 3-Oxa-2-oxobornane-4-carbonyl chloride; Camphanic acid chloride, (1S)-(-)-

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

##### Company

##### **Importer/Distributor**

Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

##### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11

Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99

**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

**WHMIS 2015 Classification** Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

|   |            |
|---|------------|
| <b>Skin Corrosion/Irritation</b>                        | Category 2 |
| <b>Serious Eye Damage/Eye Irritation</b>                | Category 2 |
| <b>Specific target organ toxicity (single exposure)</b> | Category 3 |
| Target Organs - Respiratory system.                     |            |

#### Label Elements

##### **Signal Word**

Warning

##### **Hazard Statements**

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation

**Precautionary Statements****Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Use only outdoors or in a well-ventilated area  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF ON SKIN: Wash with plenty of soap and water  
IF INHALED: Remove person to fresh air and keep comfortable for breathing  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Call a POISON CENTER/ doctor if you feel unwell  
Take off contaminated clothing and wash it before reuse

**Storage**

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

**Disposal**

Dispose of contents/container to an approved waste disposal plant

### 3. Composition/Information on Ingredients

| Component  | CAS-No     | Weight % |
|--|------------|----------|
| 4,7,7-Trimethyl(2-oxabicyclo[2.2.1]hept-1-yl)carboxylic acid | 13429-83-9 | 99       |

### 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 soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention. |
| <b>Inhalation</b>   | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.   |
| <b>Ingestion</b>  | Clean mouth with water. Get medical attention.   |
| <b>Most important symptoms/effects<br/>Notes to Physician</b> | No information available.<br>Treat symptomatically   |

### 5. Fire-fighting measures

|                                       |  |
|---------------------------------------|--|
| <b>Suitable Extinguishing Media</b>   | Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam. |
| <b>Unsuitable Extinguishing Media</b> | No information available   |
| <b>Flash Point<br/>Method -</b>       | No information available<br>No information available                         |

|   |                          |
|---|--------------------------|
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition.

**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. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

**Health**  
2

**Flammability**  
0

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                  |   |
|----------------------------------|---|
| <b>Personal Precautions</b>      | Ensure adequate ventilation. Use personal protective equipment as required. |
| <b>Environmental Precautions</b> | See Section 12 for additional Ecological Information.                       |

|   |  |
|---|--|
| <b>Methods for Containment and Clean Up</b> | Sweep up and shovel into suitable containers for disposal. Do not let this chemical enter the environment. |
|---|--|

## 7. Handling and storage

|                 |  |
|-----------------|--|
| <b>Handling</b> | Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.   |
| <b>Storage.</b> | Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials. Strong oxidizing agents. Strong bases. Strong reducing agents. |

## 8. Exposure controls / personal protection

|                            |  |
|----------------------------|--|
| <b>Exposure Guidelines</b> | This product does not contain any hazardous materials with occupational exposure limit established by the region specific regulatory bodies. |
|----------------------------|--|

|                             |   |
|-----------------------------|---|
| <b>Engineering Measures</b> | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.<br>Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source |
|-----------------------------|---|

**Personal protective equipment**

|                        |                   |
|------------------------|-------------------|
| <b>Eye Protection</b>  | Goggles           |
| <b>Hand Protection</b> | Protective gloves |

| Glove material | Breakthrough time                 | Glove thickness | Glove comments         |
|----------------|-----------------------------------|-----------------|------------------------|
| Natural rubber | See manufacturers recommendations |                 | Splash protection only |
| Butyl rubber   |                                   |                 |                        |
| Nitrile rubber |                                   |                 |                        |
| Neoprene       |                                   |                 |                        |

PVC

-

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**

No protective equipment is needed under normal use conditions.

**Environmental exposure controls**

No information available.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

|   |                                 |
|---|---------------------------------|
| <b>Physical State</b>                         | Powder Solid                    |
| <b>Appearance</b>                             | Beige                           |
| <b>Odor</b>                                   | Odorless                        |
| <b>Odor Threshold</b>                         | No information available        |
| <b>pH</b>                                     | No information available        |
| <b>Melting Point/Range</b>                    | 197 - 203 °C / 386.6 - 397.4 °F |
| <b>Boiling Point/Range</b>                    | No information available        |
| <b>Flash Point</b>                            | No information available        |
| <b>Evaporation Rate</b>                       | Not applicable                  |
| <b>Flammability (solid,gas)</b>               | No information available        |
| <b>Flammability or explosive limits</b>       |                                 |
| Upper   | No data available               |
| Lower   | No data available               |
| <b>Vapor Pressure</b>                         | No information available        |
| <b>Vapor Density</b>                          | Not applicable                  |
| <b>Specific Gravity</b>                       | No information available        |
| <b>Solubility</b>                             | No information available        |
| <b>Partition coefficient; n-octanol/water</b> | No data available               |
| <b>Autoignition Temperature</b>               | No information available        |
| <b>Decomposition Temperature</b>              | No information available        |
| <b>Viscosity</b>                              | Not applicable                  |
| <b>Molecular Formula</b>                      | C10 H14 O4                      |
| <b>Molecular Weight</b>                       | 198.22                          |

## 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.  |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong bases, Strong reducing agents |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )       |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                      |

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

**Component Information**

**Toxicologically Synergistic** No information available

**Products**

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

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component  | CAS-No     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--|------------|------------|------------|------------|------------|------------|
| 4,7,7-Trimethyl(2-oxabicyclo[2.2.1]hept-1-yl)carboxylic acid | 13429-83-9 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

## 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

|                 |               |
|-----------------|---------------|
| <b>DOT</b>      | Not regulated |
| <b>TDG</b>      | Not regulated |
| <b>IATA</b>     | Not regulated |
| <b>IMDG/IMO</b> | Not regulated |

## 15. Regulatory information

### International Inventories

| Component  | CAS-No     | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS    | ELINCS | NLP |
|--|------------|-----|------|------|---|-----------|--------|-----|
| 4,7,7-Trimethyl(2-oxabicyclo[2.2.1]hept-1-yl)carboxylic acid | 13429-83-9 | -   | -    | -    | -   | 236-552-6 | -      | -   |

| Component  | CAS-No     | IECSC | KECL | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|--|------------|-------|------|------|------|------|------|-------|-------|
| 4,7,7-Trimethyl(2-oxabicyclo[2.2.1]hept-1-yl)carboxylic acid | 13429-83-9 | -     | -    | -    | -    | X    | -    | X     | X     |

#### Legend:

X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

### Other International Regulations

Authorisation/Restrictions according to EU REACH

Not applicable

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

| Component  | CAS-No     | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--|------------|----------------|------------------------------|---------------------------|--|
| 4,7,7-Trimethyl(2-oxabicyclo[2.2.1]hept-1-yl)carboxylic acid | 13429-83-9 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

| Component  | CAS-No     | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--|------------|---|--|----------------------------|------------------------------------|
| 4,7,7-Trimethyl(2-oxabicyclo[2.2.1]hept-1-yl)carboxylic acid | 13429-83-9 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

## 16. Other information

Prepared By

Product Safety Department  
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www.thermofisher.com

|                         |  |
|-------------------------|--|
| <b>Revision Date</b>    | 29-March-2024                                      |
| <b>Print Date</b>       | 29-March-2024                                      |
| <b>Revision Summary</b> | New emergency telephone response service provider. |

**Disclaimer**

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**End of SDS**