

**CALCIUM L-THREONATE**

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND THE COMPANY UNDERTAKING

Chemical Name:	Calcium L-threonate
Product Code:	MC09466
Synonyms:	L-Threonic acid calcium salt (2R, 3S)-2,3,4-Trihydroxybutyric acid hemicalcium salt
Recommended uses:	For R&D purposes
Supplier:	Carbosynth Ltd, 8&9 Old Station Business Park, Compton, Berkshire, RG20 6NE, UK.
Emergency contact numbers:	Telephone: +44 (0)1635 578 444 Fax: +44 (0)1635 579 444 Mobile: +44 (0)7887 998 634

2. HAZARDS IDENTIFICATION

**Classification:**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008 or GHS.

Not a hazardous substance or mixture according to EC-Directives 67/548/EEC or 1999/45/EC.

**Labelling and precautionary statements:**

The product does not need to be labelled in accordance with EC directives or respective national laws.

**Hazard statement(s):** - Not required.

**Precautionary statement(s):** - Not required.

**Hazard symbol(s):** - Not required.

**R-phrase(s):** - Not required.

**S-phrase(s):** S22 Do not breathe dust.  
S24/25 Avoid contact with skin and eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Formula:	Molecular weight:	CAS Number:	EINECS Number:
C <sub>8</sub> H <sub>14</sub> CaO <sub>10</sub>	310.27	70753-61-6	-
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4. FIRST AID MEASURES

Eye contact: Immediately flush eye with copious amounts of water for at

## CALCIUM L-THREONATE

Skin contact:	least 15 minutes. Get medical aid immediately. Get medical aid. Immediately wash skin with soap and copious amounts of water for at least 15 minutes. Wash contaminated clothing before reuse.
Inhalation:	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Get medical aid.
Ingestion:	Never give anything by mouth to an unconscious person. Wash out mouth with water provided person is conscious. Call a physician.
Notes to Physician:	Treat symptomatically and supportively.

### 5. FIRE-FIGHTING MEASURES

Personal precautions:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
Extinguishing media:	In case of fire use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.
Special hazards arising from the substance or mixture:	Carbon monoxide, carbon dioxide, calcium oxides.

### 6. ACCIDENTAL RELEASE MEASURES

General Information:	Use proper personal protective equipment as indicated in Section 8.
Personal precautions:	Wear self-contained breathing apparatus, eye protection and gloves. Keep personal hygiene. Avoid contact with skin and eyes. Avoid dust formation. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation. Do not let product enter the drains.
Environmental precautions:	Vacuum or sweep up and place the material in appropriate container for disposal and dispose of as hazardous waste. Avoid dust formation. Ventilate area, clean up spills and wash spill site after material pickup is complete, observing precautions in the Protective Equipment section.
Spills/Leaks:	

### 7. HANDLING AND STORAGE

Handling:	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Storage:	Store in a cool, dry, well-ventilated area. Keep container tightly closed.

**CALCIUM L-THREONATE**

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Contains no substances with occupational exposure limit values.

**Personal protection equipment:**

Eye protection:	Wear appropriate protective safety glasses with side-shields conforming to EN166, chemical safety goggles or face-shield (min. 8-inch) as described by OSHA's eye and face protection regulations. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin protection:	Wear appropriate protective gloves to prevent skin exposure, as defined in EU Directive 89/686/EEC and the standard EN 374 derived from it.
Body protection:	Appropriate protective clothing, overalls.
Respiratory protection:	Where risk assessment indicates air-purifying respirators are required use a dust mask type N95 (US) or type P1 (EN 143) respirator. Respirators and components must tested and approved under appropriate government standards - NIOSH (US) or CEN (EU).
Hygiene measures:	Use good working practices. Wash hands and face thoroughly after handling.

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9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance:	White to off-white solid.
Odour:	Data not available/does not apply.
Odour threshold:	Data not available/does not apply.
pH:	Data not available/does not apply.
Melting point:	> 300 °C.
Boiling point:	Data not available/does not apply.
Flash point:	Data not available/does not apply.
Evaporation rate:	Data not available/does not apply.
Flammability:	Data not available/does not apply.
Flammability or explosive limits:	Data not available/does not apply.
Vapor pressure:	Data not available/does not apply.
Vapor density:	Data not available/does not apply.
Density:	Data not available/does not apply.
Solubility:	Data not available/does not apply.
Partition coefficient: n-octanol/water	Data not available/does not apply.
Auto-ignition temperature:	Data not available/does not apply.
Decomposition temperature:	Data not available/does not apply.
Viscosity:	Data not available/does not apply.

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10. STABILITY AND REACTIVITY

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## CALCIUM L-THREONATE

Chemical stability:	Stable under recommended storage conditions.
Conditions to avoid:	Data not available.
Incompatibilities with other materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon monoxide, carbon dioxide, calcium oxides.
Hazardous polymerization:	Will not occur.

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11. TOXICOLOGICAL INFORMATION

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<b>RTCS #:</b>	Data not available.
<b>Acute toxicity:</b>	Data not available.
<b>Skin corrosion/irritation:</b>	Data not available.
<b>Serious eye damage/eye irritation:</b>	Data not available.
<b>Respiratory or skin sensitization:</b>	Data not available.
<b>Germ cell mutagenicity:</b>	Data not available.
<b>Carcinogenicity: IARC:</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>Reproductive toxicity:</b>	Data not available.
<b>Specific target organ toxicity - single exposure:</b>	Data not available.
<b>Specific target organ toxicity - repeated exposure:</b>	Data not available.
<b>Aspiration hazard:</b>	Data not available.
<b>Signs and symptoms of exposure:</b>	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
<b>Potential health effects:</b>	
Eye:	May cause eye irritation.
Skin:	May be harmful by skin absorption.
	May cause skin irritation.
Ingestion:	May be harmful if swallowed.
Inhalation:	May be harmful if inhaled.
	May cause respiratory tract irritation.
Chronic:	No information found.

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12. ECOLOGICAL INFORMATION

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Data not available.

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13. DISPOSAL CONSIDERATIONS

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Dispose of in a manner consistent with federal, state, and local regulations. Contact a licensed professional waste disposal service to dispose of this material.

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14. TRANSPORT INFORMATION

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**ADR/RID**

Not classified as hazardous for transport.

**IMDG**

Not classified as hazardous for transport.

**IATA**

Not classified as hazardous for transport.

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15. REGULATORY INFORMATION

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This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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16. ADDITIONAL INFORMATION

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Further information on PPE:

European Standard & performance category markings:

EN143 -	Particulates filter.
EN166 -	Standard applicable to all types of personal eye protectors.
EN374 -	Protects hands against chemicals and/or microorganisms.

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.