1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND THE COMPANY UNDERTAKING

Chemical Name: L(-)-Thiazolidine-4-carboxylic acid
Product Code: FT15918
Synonyms: -
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

Toxic if swallowed. Irritating to eyes, respiratory system and skin.

Classification:
Acute toxicity, inhalation (Category 4)
Acute toxicity, dermal (Category 4)
Acute toxicity, oral (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3)

Labelling and precautionary statements:
Pictogram:

Signal word: Danger.

Hazard statement(s):
H301 Toxic if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled
H335 May cause respiratory irritation.

Precautionary statement(s):
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES:  
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Hazard symbol(s):**
- **T** Toxic.  
- **Xi** Irritant.

**R-phrase(s):**
- R25  
  Toxic if swallowed.  
- R20/21/22  
  Harmful by inhalation, in contact with skin and if swallowed  
- R36/37/38  
  Irritating to eyes, respiratory system and skin.

**S-phrase(s):**
- S22  
  Do not breathe dust.  
- S36/37/39  
  Wear suitable protective clothing, gloves and eye/face protection.  
- S45  
  In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).  
- S46  
  If swallowed, seek medical advice immediately and show this container or label.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Molecular Formula</th>
<th>Molecular weight</th>
<th>CAS Number</th>
<th>EINECS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>C₄H₇NO₂S</td>
<td>133.17</td>
<td>34592-47-7</td>
<td>252-106-3</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Eye contact:** Immediately flush eye with copious amounts of water for at least 15 minutes. Get medical aid immediately.

**Skin contact:** In case of contact remove contaminated clothing and immediately wash affected areas with copious quantities of water and soap for at least 15 minutes. Get medical aid immediately. 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:** Do NOT induce vomiting unless advised to do so by a physician or Poison Control Center. 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 powder, carbon.
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dioxide, or alcohol-resistant foam.
Special hazards arising from the substance or mixture: Carbon oxides, nitrogen oxides (NOx), sulphur 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. Prevent the formation of dusts and mists. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental precautions: Do not let product enter the drains. Prevent further leakage or spillage if safe to do so.
Spills/Leaks: Sweep up and place the material in appropriate container for disposal without creating dust and dispose of as hazardous waste. Ventilate area, clean up spills and wash spill site after material pickup is complete, observing precautions in the Protective Equipment section.

7. HANDLING AND STORAGE

Handling: Wear appropriate protective clothing - see Section 8. Wash hands thoroughly after handling. Use only under a chemical fume hood. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. No smoking, eating or drinking around this material.
Storage: Store in a cool, dry, well-ventilated area. Keep container tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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
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Body protection: Standard EN 374 derived from it.
Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hygiene measures: Use good working practices. Wash hands and face thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

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: Data not available/does not apply.
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.
Relative 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.

10. STABILITY AND REACTIVITY

Chemical stability: Stable under recommended storage conditions.
Conditions to avoid: Data not available.
Incompatibilities with other materials: Strong oxidizing agents.
Hazardous decomposition products: Carbon oxides, nitrogen oxides (NOx), sulphur oxides.
Hazardous polymerization: Data not available.

11. TOXICOLOGICAL INFORMATION

RTCS #: XJ5425500.
Acute toxicity: LD50 Oral: mouse: 210 mg/kg.
Skin corrosion/irritation: Moderate skin irritant.

Serious eye damage/eye irritation: Moderate eye irritant.

Respiratory or skin sensitization: Data not available.

Germ cell mutagenicity: Data not available.

Carcinogenicity: IARC: 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.

Reproductive toxicity: Data not available.

Specific target organ toxicity - single exposure: Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure: Data not available.

Aspiration hazard: Data not available.

Signs and symptoms of exposure: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Target organs: Data not available.

Potential health effects:
Eye: Causes serious eye irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Ingestion: Toxic if swallowed.
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Chronic: No information found.

12. ECOLOGICAL INFORMATION

Toxicity
Data not available.

Persistence and degradability
Data not available.

Bioaccumulative potential
Data not available.

Mobility in soil
Data not available.

Results of PBT and vPvB assessment
13. DISPOSAL CONSIDERATIONS

Observe all federal, state and local environmental regulations. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contact a licensed professional waste disposal service to dispose of this material.

14. TRANSPORT INFORMATION

This product is classified as hazardous for transport.

**ADR/RID**
- Proper Shipping Name: TOXIC SOLID, ORGANIC, N.O.S. (L(-)-Thiazolidine-4-carboxylic acid)
- UN Number: 2811
- Class: 6.1
- Packing Group: III
- Environmental hazards: No.

**IMDG**
- Proper Shipping Name: TOXIC SOLID, ORGANIC, N.O.S. (L(-)-Thiazolidine-4-carboxylic acid)
- UN Number: 2811
- Class: 6.1
- Packing Group: III
- Marine pollutant: No.

**IATA**
- Proper Shipping Name: TOXIC SOLID, ORGANIC, N.O.S. (L(-)-Thiazolidine-4-carboxylic acid)
- UN Number: 2811
- Class: 6.1
- Packing Group: III
- Environmental hazards: No.

15. REGULATORY INFORMATION

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

16. ADDITIONAL INFORMATION

Further information on PPE:
- European Standard & performance category markings:
  - EN143 - Particulates filter.
  - EN166 - Standard applicable to all types of personal eye protectors.

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Revision Number: 0
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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.