1. Identification

Product Name: (+/-)-Camphor-10-sulfonic acid  
Cat No. : A12620  
CAS-No: 5872-08-2  
Synonyms: No information available  
Recommended Use: Laboratory chemicals.  
Uses advised against: Food, drug, pesticide or biocidal product use.

Company  
Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
Email: tech@alfa.com  
www.alfa.com

Emergency Telephone Number  
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification

Classification  
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Label Elements</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 1 B</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Signal Word: Danger

Hazard Statements  
Causes severe skin burns and eye damage
Precautionary Statements

Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Response
Immediately call a POISON CENTER or doctor/physician

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage
Store locked up

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicyclo[2.2.1]heptane-1-methanesulfonic acid, 7,7-dimethyl-2-oxo-, (+-)-</td>
<td>5872-08-2</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation
Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.

Ingestion
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician immediately. If possible drink milk afterwards.

Most important symptoms and effects
Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician
Treat symptomatically
5. Fire-fighting measures

Suitable Extinguishing Media

Unsuitable Extinguishing Media
No information available

Flash Point
No information available

Autoignition Temperature
Not applicable

Explosion Limits
Upper
No data available
Lower
No data available

Sensitive to Mechanical Impact
No information available

Sensitive to Static Discharge
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 (CO₂). Sulfur oxides.

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.

NFPA

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment as required. See Section 12 for additional Ecological Information.

Environmental Precautions
Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Handling
Avoid contact with skin and eyes. Do not breathe dust. Handle product only in closed system or provide appropriate exhaust ventilation.

Storage
Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment
Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Beige</td>
</tr>
<tr>
<td>Odor</td>
<td>Strong</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>195 °C / 383 °F</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability or explosive limits Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C10 H16 O4 S</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>232.29</td>
</tr>
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</table>

10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive Hazard</td>
<td>None known, based on information available</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable under normal conditions. Hygroscopic.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Exposure to moist air or water.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Strong oxidizing agents, Strong bases</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon monoxide (CO), Carbon dioxide (CO2), Sulfur oxides</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>No information available</td>
</tr>
<tr>
<td>Hazardous Reactions</td>
<td>None under normal processing.</td>
</tr>
</tbody>
</table>

11. Toxicological information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>No acute toxicity information is available for this product</td>
</tr>
<tr>
<td>Component Information</td>
<td>No information available</td>
</tr>
<tr>
<td>Toxicologically Synergistic Products</td>
<td>No information available</td>
</tr>
<tr>
<td>Delayed and immediate effects as well as chronic effects from short and long-term exposure</td>
<td>No information available</td>
</tr>
<tr>
<td>Irritation</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Sensitization
No information available

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/-(+/-)-Camphor-10-sulfonic acid</td>
<td>5872-08-2</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
No information available

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
None known

STOT - repeated exposure
None known

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

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
Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation
No information available.

Mobility
Will likely be mobile in the environment due to its water solubility.

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

DOT
- UN-No: UN3261
- Hazard Class: 8
- Packing Group: II

TDG
- UN-No: UN3261
- Hazard Class: 8
- Packing Group: II

IATA
- UN-No: UN3261
- Proper Shipping Name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.*
### Regulatory information

#### United States of America Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicyclo[2.2.1]heptane-1-methanesulfonic acid, 7,7-dimethyl-2-oxo-, (+/-)-</td>
<td>5872-08-2</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
</tbody>
</table>

**Legend:**
- TSCA - Toxic Substances Control Act, (40 CFR Part 710)
- X - Listed
- '-' - Not Listed

- **TSCA 12(b) - Notices of Export** Not applicable

#### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicyclo[2.2.1]heptane-1-methanesulfonic acid, 7,7-dimethyl-2-oxo-, (+/-)-</td>
<td>5872-08-2</td>
<td>X</td>
<td>-</td>
<td>227-527-0</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

#### U.S. Federal Regulations

- **SARA 313** Not applicable
- **SARA 311/312 Hazard Categories** See section 2 for more information
- **CWA (Clean Water Act)** Not applicable
- **Clean Air Act** Not applicable
- **OSHA - Occupational Safety and Health Administration** Not applicable
- **CERCLA** Not applicable
- **California Proposition 65** This product does not contain any Proposition 65 chemicals.
- **U.S. State Right-to-Know Regulations** Not applicable

#### U.S. Department of Transportation

- **Reportable Quantity (RQ):** N
- **DOT Marine Pollutant** N
- **DOT Severe Marine Pollutant** N

#### U.S. Department of Homeland Security

This product does not contain any DHS chemicals.
16. Other information

Prepared By
Health, Safety and Environmental Department
Email: tech@alfa.com
www.alfa.com

Creation Date 16-Nov-2010
Revision Date 14-Feb-2020
Print Date 14-Feb-2020
Revision Summary SDS authoring systems update, replaces ChemGes SDS No. 5872-08-2.

Disclaimer
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.

End of SDS