SAFETY DATA SHEET
CALCIUM STEAROYL LACTYLATE (CSL)

Revision Date: September 2019          Previous date: May 2014          Print Date: September 2019

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product information

Commercial Product Name
NIACET Calcium Stearoyl Lactylate (CSL)
Chemical Formula C_{42}H_{70}O_{6}Ca

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture
Food Additive - emulsifier
Recommended restrictions on use
Reserved for industrial and professional use

1.3 Details of the supplier of the safety data sheet

Niacet Corporation
400 47th Street
Niagara Falls, NY
14304 U.S.A.
Telephone +1 716-285-1474 Telefax +1 716-285-1497
niacetcsr@niacet.com

1.4 Emergency telephone number

For Niacet Corporation, Niagara Falls, U.S.A. products:
Chemtrec: +1 (800) 424 9300, +1 (703) 527-3887

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to OSHA Hazards
Not classified as a hazardous substance or mixture

2.2 Label elements

Labeling according to GHS Label elements, including precautionary statements

2.3 Other hazards

Not a hazardous substance or mixture
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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name: Calcium Stearoyl Lactylate
Formula: C42H70O8Ca
Synonyms: Octadecanoic Acid, 2-(carboxyethoxy)-1-methyl-2-oxoethyl ester, Calcium salt
CAS-No. 5793-94-2
EC-No. 227-335-7

4. FIRST AID MEASURES

4.1 Description of first aid measures

General
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact
Wash area with soap and water. Get medical attention if irritation persists

Eye Contact
Flush thoroughly with plenty of water for at least 15 minutes and consult a physician

Ingestion
Wash mouth out with water. Get medical attention

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treatment : No information available.

5. FIREFIGHTING MEASURES – NOT FLAMMABLE OR COMBUSTABLE

5.1 Extinguishing media
Appropriate media for surrounding fire

5.2 Specific hazards arising from the substance or mixture
Hazardous decomposition products formed under fire conditions. – Carbon Monoxide

5.3 Special protective actions for fire-fighters
Wear self contained breathing apparatus and protective clothing

5.4 Further Information
Avoid dispersion of dust

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear suitable protective clothing including a respirator or dust mask.

6.2 Environmental precautions
Sweep up spillage and collect for disposal. Wash down area with large quantities of water.

6.3 Methods and materials for containment and cleaning up
Material is biodegradable. Dispose of in accordance with applicable Federal, State and local regulations.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Dust in high concentration may cause irritation of eyes, nose and throat. Handle with reasonable care.

7.2 Conditions for safe storage, including any incompatibilities
Hygroscopic, keep container closed. Keep cool <80° F (26°C).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Limit Values
Contains no substances with occupational exposure limit values.

8.2.1 Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. In case of insufficient ventilation, wear suitable respiratory equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

8.2.2 Individual protection measures, such as personal protective equipment

Hand protection
Plastic or rubber gloves optional.

Eye protection
Eye protection should always be worn when working with chemicals. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Appropriate work apparel.

Respiratory protection
Material should be handled in a manner that does not produce airborne particles. If dust is a problem, a dust mask or respirator is recommended. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene Measures
Wash with soap and water.
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information (appearance, odor)

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Powder / Flakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Cream Colored</td>
</tr>
<tr>
<td>Odor</td>
<td>Sweetish/Slight</td>
</tr>
</tbody>
</table>

Important health safety and environmental information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>222°C by Tag Closed Cup</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>42-52°C – lit.</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
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<tr>
<td>Specific Gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Slight</td>
</tr>
<tr>
<td>Partition coefficient: noctanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
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<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.
10.2 Chemical stability
   Stable under recommended storage conditions

10.3 Possibility of hazardous reactions
   Hazardous reactions : Hazardous polymerization will not occur

10.4 Conditions to avoid
   Conditions to avoid : Temperatures <80º F (26ºC)

10.5 Incompatible materials
   Materials to avoid: Strong oxidizing agents

10.6 Hazardous decomposition products
   Hazardous decomposition products formed under fire conditions. – Carbon Monoxide
   Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
   Sodium Stearoyl Lactylate is a non-toxic food additive permitted for direct addition to food for human consumption as listed in 21 CFR 172.846

Information on the likely routes of exposure
   Inhalation: Can cause respiratory irritation
   Ingestion: If swallowed in large quantity, can cause irritation
   Skin contact: Prolonged skin contact may cause irritation
   Eye contact: Can cause irritation

   Signs and Symptoms of Exposure
   Dust in high concentration may cause irritation of eyes, nose and throat.

   Acute toxicity: No data available
   Irritation and corrosion: No data available
   Sensitization: Respiratory or Skin - No data available

Long term toxicity
   Carcinogenicity: IARC: No
                        NTP: No
                        OSHA: No
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Reproductive: No Data Available
Specific Target Organ: No Data Available. (single exposure; Globally Harmonized System)
                 No Data Available (repeated exposure; Globally Harmonized System)
Aspiration Hazard: No Data Available

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity effects
Aquatic toxicity
No data available
Toxicity to other organisms
No data available

12.2 Persistence and degradability
Biological degradability: Material is biodegradable
Readily biodegradable: No Data Available

12.3 Bioaccumulative potential
No Data Available

12.4. Mobility in soil
No Data Available

12.5. Results of PBT and vPvB assessment
No Data Available

12.6 Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product Material is biodegradable. Dispose of in accordance with federal, state and local regulations
Contaminated Packaging Dispose of as unused product in accordance with federal, state and local regulations

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14. TRANSPORT INFORMATION

14.1 UN number
Not classified as dangerous goods

DOT (US) Not classified as dangerous in the meaning of transport regulations
IMDG Not classified as dangerous in the meaning of transport regulations
IATA Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION

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

OSHA Hazards: None
SARA Title III, Section 302 None
TSCA Inventory: Yes (all ingredients)

Massachusetts Right To Know Component: Calcium Stearoyl Lactylate CAS-No. 5793-94-2
Pennsylvania Right to Know Component: Calcium Stearoyl Lactylate CAS-No. 5793-94-2
New Jersey Right To Know Component: Calcium Stearoyl Lactylate CAS-No. 5793-94-2

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulation: None known.

15.2 Chemical Safety Assessment
Not applicable

16. OTHER INFORMATION

Training advice
Read the safety data sheet before using the product.

Further information
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 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.
Sources of key data used to compile the Safety Data Sheet
Regulations, databases, literature, own tests.
Additions, Deletions, Revisions