SAFETY DATA SHEET
according to 29 CFR § 1910.1200

ALUMINUM STEARATE CODE 1032

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : ALUMINUM STEARATE CODE 1032

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

Use of the Substance/Mixture : Manufacture of plastics products
Polymer additive
Stabilizer

1.3 Details of the supplier of the safety data sheet

Company : Baerlocher Production USA LLC
5890 Highland Ridge Drive
45232 Cincinnati

Telephone : Day 330-602-1528, 330-602-1531 or -1530
Telefax : Night 513-207-1620 or 513-604-2327
E-mail address : Hotline.PS@baerlocher.com
Responsible/issuing person : Product Safety Department

1.4 Emergency telephone number (0 - 24 h)

Tel.: 800-424-9300 USA or 703-527-3887

2. Hazards identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Global Harmonized System (GHS)
Not a hazardous substance or mixture according to OSHA
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008
This substance is not classified as dangerous according to Directive 67/548/EEC or 1999/45/EC. WHMIS hazard class – not controlled.

2.2 Label elements

OSHA 29 CFR § 1910.1200

Signal word: Warning
Hazard Statement: May form combustible dust concentrations in air.

Labeling (REGULATION (EC) No 1272/2008)

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

2.3 Hazards not otherwise classified (HNOC)

Health injuries are not known or expected under normal use.
3. Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Common names</th>
<th>Aluminum stearate; Aluminum distearate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>Aluminum salt of C16 - C18 fatty acids</td>
</tr>
</tbody>
</table>

4. First aid measures

4.1 Description of first aid measures

- **If inhaled**: Move to fresh air.
- **In case of skin contact**: Wash off with plenty of water.
- **In case of eye contact**: Rinse with plenty of water.
- **If swallowed**: Clean mouth with water and drink afterwards plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Firefighting measures

5.1 Extinguishing media

- **Suitable extinguishing media**: Water spray, Foam, Carbon dioxide (CO2), Dry chemical, Sand
- **Unsuitable extinguishing media**: High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Smoke and fumes, toxic.

5.3 Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.
6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid dust formation. Remove all sources of ignition.

6.2 Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Use mechanical handling equipment. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking. Avoid formation and buildup of dust.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Store at room temperature in the original container. Keep in a dry place.

8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>General limits for air contaminants (PNOC)</td>
<td>ACGIH TLV</td>
<td>10 mg/m3</td>
<td>total dust</td>
</tr>
<tr>
<td></td>
<td>ACGIH TLV</td>
<td>3 mg/m3</td>
<td>Respirable fraction</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL</td>
<td>15 mg/m3</td>
<td>total dust</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL</td>
<td>5 mg/m3</td>
<td>Respirable fraction</td>
</tr>
<tr>
<td>DNEL</td>
<td>End Use: Workers not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PNEC</td>
<td>not determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Engineering measures
Local exhaust

Personal protective equipment
Respiratory protection : Half mask with a particle filter P2 (EN 143).
                       Necessary, in case of dust formation.
Hand protection       : protective gloves acc. to EN 374, e.g. neoprene
Eye protection        : Safety glasses
Skin and body protection : Long sleeved clothing
Hygiene measures      : When using do not eat or drink.
                       Do not smoke.
                       Wash hands before breaks and at the end of workday.
                       Shower or bathe at the end of working.
                       Keep working clothes separately.

Protective measures   : Static dissipative shoes are recommended for use in
                       environments that may not have sufficient ventilation and
                       engineering controls to prevent incidental releases of airborne
                       concentrations of the combustible dust to present an
                       explosion hazard from static electrical discharge from
                       personnel.

Environmental exposure controls
General advice         : Do not flush into surface water or sanitary sewer system.
                       Avoid subsoil penetration.
9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**: White powder
- **Odor**: slight fatty odor
- **Odor Threshold**: no data available
- **pH**: 7 - 9, 20 °C
- **Melting point/range**: 150-160 °C, Kofler Hot Bar (OECD 102)
- **Flash point**: >> 100 °C
- **Evaporation rate**: no data available
- **Flammability (solid, gas)**: no data available
- **Flammability or explosive limits**: no data available
- **Vapor Pressure**: no data available
- **Vapor Density**: no data available
- **Density**: >1 g/cm3, OECD 109
- **Solubility**: slightly soluble in water
- **Partition coefficient: n-octanol/water**: no data available
- **Auto-ignition temperature**: no data available
- **Decomposition temperature**: Stable under normal storage and handling temperatures
- **Viscosity**: 365 °C, VDE 0165
- **Molecular formula**: Mixture derived from natural products
- **Molecular weight**: 594 (approximate)

9.2 Other information

- **Bulk density**: 290-340 g/L

9.2 Other information

- **Bulk density**: no data available
10. Stability and reactivity

10.1 Reactivity
Stable at normal ambient temperature and pressure.

10.2 Chemical stability
No decomposition if stored normally.

10.3 Possibility of hazardous reactions
Hazardous reactions: Risk of dust explosion.

10.4 Conditions to avoid
Conditions to avoid: Avoid dust formation.
Sources of ignition

10.5 Incompatible materials
Materials to avoid: Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products: No decomposition if used as directed.

11. Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Product</th>
<th>Acute oral toxicity</th>
<th>Acute inhalation toxicity</th>
<th>Acute dermal toxicity</th>
<th>Skin corrosion/irritation</th>
<th>Serious eye damage/eye irritation</th>
<th>Respiratory or skin sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LD50: &gt; 2000 mg/kg, rat, OECD Test Guideline 423, GLP: yes, Based on available data, the classification criteria are not met.</td>
<td>LC50: &gt; 5.15 mg/l, 4 h, rat, dust/mist, OECD Test Guideline 403, GLP: yes, Based on available data, the classification criteria are not met.</td>
<td>Not classified due to lack of data.</td>
<td>reconstructed human epidermis (RhE), Result: not irritating, OECD Test Guideline 431, GLP: yes, Based on available data, the classification criteria are not met.</td>
<td>rabbit, Result: not irritating, OECD Test Guideline 405, GLP: yes, Based on available data, the classification criteria are not met.</td>
<td>LLNA, mouse, Result: not sensitizing, OECD Test Guideline 429, GLP: yes, Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Germ cell mutagenicity

Genotoxicity in vitro : Mutagenicity (Salmonella typhimurium - reverse mutation assay), Bacteria, Result: negative, OECD Test Guideline 471, GLP: yes

: In vitro gene mutation study in mammalian cells, mouse lymphoma cells, Result: negative, OECD Test Guideline 476, GLP: yes

: Read-across (Analogy)

: Mutagenicity (in vitro mammalian cytogenetic test), CHL, Result: negative, OECD Test Guideline 473, GLP: yes, Based on available data, the classification criteria are not met.

Genotoxicity in vivo : Read-across (Analogy)

: In vivo micronucleus test, rat, Oral, 2d, OECD Test Guideline 474, GLP: yes, Result: negative, Based on available data, the classification criteria are not met.

Carcinogenicity

Reproductive toxicity : Read-across (Analogy)

: Two-generation study, rat, NOAEL: 367,1 mg/kg, OECD Test Guideline 416, GLP: yes, Based on available data, the classification criteria are not met.

Teratogenicity : Read-across (Analogy)

: rat, NOAEL: 1.564,7 mg/kg, Based on available data, the classification criteria are not met.

STOT - single exposure : Remarks: Based on available data, the classification criteria are not met.

STOT - repeated exposure : mouse, Oral, Exposure time: 40d, NOAEL: 4.176,5 mg/kg, Based on available data, the classification criteria are not met.

Aspiration toxicity : Based on available data, the classification criteria are not met.

11.2 Other Information

Likely route of exposure : Inhalation, Ingestion, Skin contact.

Carcinogenicity : Not listed in the National Toxicology Program (NTP) Report on carcinogens, not found to be a potential carcinogen by the International Agency for Research on Cancer (IARC) nor by OSHA.

Further information : CMR effects, Carcinogenicity, Mutagenicity, Reproductive toxicity, Hazard assessment, Category 1A, Category 1B, Based on available data, the classification criteria are not met.
12. Ecological information

12.1 Toxicity

Toxicity to fish : LL50: > 100 mg/l, 96 h, Danio rerio (zebra fish), semi-static test, OECD Test Guideline 203, GLP: yes, Value referred to the Water accumulated fraction (WAF).

Toxicity to daphnia and other aquatic invertebrates : EC50: > 100 mg/l, 48 h, Daphnia magna (Water flea), semi-static test, OECD Test Guideline 202, GLP: yes, Value referred to the Water accumulated fraction (WAF).

Toxicity to algae : Read-across (Analogy)

Toxicity to bacteria : NOEC: 42,7 mg/l, 29 d, activated sludge, static test, standardised international/national methodology, GLP: yes

Toxicity to fish (Chronic toxicity) : Read-across (Analogy)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Read-across (Analogy)

NOEC: 0,16 mg/l, 21 d, Daphnia magna (Water flea), semi-static test, standardized international/national methodology, GLP: no

Ecotoxicology Assessment

Acute aquatic toxicity : Based on available data, the classification criteria are not met.

Chronic aquatic toxicity : Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Biodegradability : aerobic, 81,2 %, Result: Readily biodegradable., Exposure time: 28 d, activated sludge, OECD Test Guideline 301 B, GLP: yes

12.3 Bioaccumulative potential

Bioaccumulation : Read-across (Analogy)

Bioconcentration factor (BCF): 36 - 215, Does not bioaccumulate.
12.4 Mobility in soil

Product:
Distribution among environmental compartments: no data available

12.5 Results of PBT and vPvB assessment

Product:
Assessment: Based on available data, the classification criteria are not met.

12.6 Other adverse effects

Product:
Further information: No information available.

13. Disposal considerations

13.1 Waste treatment methods

Product: Consult an expert on the disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Dispose in accordance with local, state and federal regulations.

Contaminated packaging: Empty containers must be handled with care due to product residue.

14. Transport information

14.1 UN number

DOT: Not applicable
TDG (Canada): Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.2 Proper shipping name

DOT: Not dangerous goods
TDG (Canada): Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3 Transport hazard class

DOT: Not dangerous goods
TDG (Canada): Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods
14.4 Packing group
   DOT : Not dangerous goods
   TDG (Canada) : Not dangerous goods
   IMDG : Not dangerous goods
   IATA : Not dangerous goods

14.5 Environmental hazards
   DOT : Not dangerous goods
   TDG (Canada) : Not dangerous goods
   IMDG : Not dangerous goods
   IATA : Not dangerous goods

14.6 Special precautions for user
   See this safety data sheet chapter 6. - 8.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
   Remarks : No transport according to Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

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

Section 313 Supplier Notification (USA)
   This product contains the following toxic chemicals subject to the reporting requirements of section
   313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>wt [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15.2 Chemical Safety Assessment
   A Chemical Safety Assessment is not required for this substance.

15.3 Chemical Inventory
   Europe EINECS : listed
   United States TSCA : listed
   Canada DSL : listed
   Australia AICS : listed
   Japan ENCS : listed
   Korea KECL : listed
   Philippines PICCS : listed
   China IECSC : listed
16. Other information

16.1 HMIS Rating (USA)

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>1</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>E</td>
</tr>
</tbody>
</table>

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.