# 1 Identification

- **Product identifier**
  - Trade name: Butter Acids Type natural
- **Product number:** 1318
- **CAS Number:** 91745-88-9/85536-25-0
- **EINECS Number:** 287-506-7
- **Application of the substance / the mixture** Food flavorings

## Details of the supplier of the safety data sheet

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- **Manufacturer/Supplier:**
  
  Advanced Biotech
  10 Taft Road
  Totowa, NJ 07512 USA

- **Information department:**
  Product Safety Department
  productsafety@adv-bio.com

- **Emergency telephone number:**
  - Infotrac: 1-800-535-5053 (Domestic) & 1-352-323-3500 (International)
  - During normal business hours: 1-973-339-6242

# 2 Hazard(s) identification

- **Classification of the substance or mixture**

  ![GHS05 Corrosion](image)

  - Skin Corr. 1B  H314  Causes severe skin burns and eye damage.
  - Eye Dam. 1  H318  Causes serious eye damage.

  ![GHS07](image)

  - STOT SE 3  H335  May cause respiratory irritation.

## Label elements

- **GHS label elements**
  
  Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.

  The product is classified and labeled according to the Globally Harmonized System (GHS).

(Continued on page 2)
Safety Data Sheet
acc. to OSHA HCS

Printing date 08/15/2019
Reviewed on 08/15/2019

Trade name: Butter Acids Type natural

· Hazard pictograms

GHS05  GHS07

· Signal word Danger

· Hazard-determining components of labeling:
Lauric acid
hexanoic acid
Oleic Acid
butyric acid

· Hazard statements
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

· Precautionary statements
P260 Do not breathe/dust/fume/gas/mist/vapors/spray.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a poison center/doctor.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
· NFPA ratings (scale 0 - 4)

Health = 3
Fire = 1
Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTH  HEALTH = *3
FIRE      Fire = 1
REACTIVITY Reactivity = 0

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

· 3 Composition/information on ingredients

· Chemical characterization: Mixtures
· Description: Mixture of the substances listed below with nonhazardous additions.
Trade name: Butter Acids Type natural

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAS: 112-80-1</strong> Oleic Acid</td>
</tr>
<tr>
<td>Skin Irr. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335</td>
</tr>
<tr>
<td>25-30%</td>
</tr>
<tr>
<td><strong>CAS: 143-07-7</strong> Lauric acid</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td>3-5%</td>
</tr>
<tr>
<td><strong>CAS: 334-48-5</strong> decanoic acid</td>
</tr>
<tr>
<td>Skin Irr. 2, H315</td>
</tr>
<tr>
<td>3-5%</td>
</tr>
<tr>
<td><strong>CAS: 107-92-4</strong> butyric acid</td>
</tr>
<tr>
<td>Skin Irrit. 1B, H314; Acute Tox. 4, H302; Flamm. Liq. 4, H227</td>
</tr>
<tr>
<td>1-3%</td>
</tr>
<tr>
<td><strong>CAS: 124-07-2</strong> caprylic acid</td>
</tr>
<tr>
<td>Skin Irrit. 1A, H314</td>
</tr>
<tr>
<td>1-3%</td>
</tr>
<tr>
<td><strong>CAS: 142-62-1</strong> hexanoic acid</td>
</tr>
<tr>
<td>Acute Tox. 3, H311; Skin Irrit. 1B, H314; Eye Dam. 1, H318</td>
</tr>
<tr>
<td>1-3%</td>
</tr>
</tbody>
</table>

4 First-aid measures

- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately rinse with water.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed
    No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed
    No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    CO2, powder or alcoholresistant foam.
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
    Use fire fighting measures that suit the environment.
  - Special hazards arising from the substance or mixture
    During heating or in case of fire poisonous gases are produced.
  - Advice for firefighters
  - Protective equipment: Mouth respiratory protective device.
  - Additional information
    Cool endangered receptacles with water spray.
    Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Mount respiratory protective device.
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Protective Action Criteria for Chemicals

PAC-1:

<table>
<thead>
<tr>
<th>CAS</th>
<th>Chemical</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>57-10-3</td>
<td>Palmitic acid</td>
<td>0.19 mg/m³</td>
</tr>
<tr>
<td>112-80-1</td>
<td>Oleic Acid</td>
<td>220 mg/m³</td>
</tr>
<tr>
<td>57-11-4</td>
<td>Stearic Acid</td>
<td>14 mg/m³</td>
</tr>
<tr>
<td>544-63-8</td>
<td>Myristic acid</td>
<td>0.14 mg/m³</td>
</tr>
<tr>
<td>107-92-6</td>
<td>butyric acid</td>
<td>1.4 ppm</td>
</tr>
<tr>
<td>124-07-2</td>
<td>caprylic acid</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td>142-62-1</td>
<td>hexanoic acid</td>
<td>2.2 mg/m³</td>
</tr>
</tbody>
</table>

PAC-2:

<table>
<thead>
<tr>
<th>CAS</th>
<th>Chemical</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>57-10-3</td>
<td>Palmitic acid</td>
<td>2.1 mg/m³</td>
</tr>
<tr>
<td>112-80-1</td>
<td>Oleic Acid</td>
<td>2,400 mg/m³</td>
</tr>
<tr>
<td>57-11-4</td>
<td>Stearic Acid</td>
<td>150 mg/m³</td>
</tr>
<tr>
<td>544-63-8</td>
<td>Myristic acid</td>
<td>1.6 mg/m³</td>
</tr>
<tr>
<td>107-92-6</td>
<td>butyric acid</td>
<td>16 ppm</td>
</tr>
<tr>
<td>124-07-2</td>
<td>caprylic acid</td>
<td>330 mg/m³</td>
</tr>
<tr>
<td>142-62-1</td>
<td>hexanoic acid</td>
<td>24 mg/m³</td>
</tr>
</tbody>
</table>

PAC-3:

<table>
<thead>
<tr>
<th>CAS</th>
<th>Chemical</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>57-10-3</td>
<td>Palmitic acid</td>
<td>12 mg/m³</td>
</tr>
<tr>
<td>112-80-1</td>
<td>Oleic Acid</td>
<td>15,000 mg/m³</td>
</tr>
<tr>
<td>57-11-4</td>
<td>Stearic Acid</td>
<td>910 mg/m³</td>
</tr>
<tr>
<td>544-63-8</td>
<td>Myristic acid</td>
<td>9.3 mg/m³</td>
</tr>
<tr>
<td>107-92-6</td>
<td>butyric acid</td>
<td>110 ppm</td>
</tr>
<tr>
<td>124-07-2</td>
<td>caprylic acid</td>
<td>2,000 mg/m³</td>
</tr>
<tr>
<td>142-62-1</td>
<td>hexanoic acid</td>
<td>140 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and storage

Handling:

Precautions for safe handling
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:
Keep respiratory protective device available.
Trade name: Butter Acids Type natural

- Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles:
  No special requirements.
  Please refer to product specification for product storage requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as a basis.
- Exposure controls
- Personal protective equipment:
  General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing.
  Wash hands before breaks and at the end of work.
  Avoid contact with the eyes.
  Avoid contact with the eyes and skin.
  Breathing equipment:
  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
  Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material
The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed.
### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>According to product specification</td>
</tr>
<tr>
<td>Odor</td>
<td>According to product specification</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>pH-value</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>&gt;110 °C (&gt;230 °F)</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous)</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>395 °C (743 °F)</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Auto igniting</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Danger of explosion</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with</strong></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Insoluble.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water)</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Solvent content</strong></td>
<td></td>
</tr>
<tr>
<td>VOC content</td>
<td>0.00 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

(Continued on page 7)
Trade name: Butter Acids Type natural

| Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
    - **LD/LC50 values that are relevant for classification:**
      - **ATE (Acute Toxicity Estimate)**
        - Oral LD50 40,000-120,000 mg/kg (rat)
        - Dermal LD50 21,000-63,000 mg/kg (rabbit)
      - **CAS: 124-07-2 caprylic acid**
        - Oral LD50 10,080 mg/kg (rat)
        - Dermal LD50 >5,000 mg/kg (rabbit)
      - **CAS: 142-62-1 hexanoic acid**
        - Oral LD50 3,000 mg/kg (rat)
        - Dermal LD50 630 mg/kg (rabbit)
  - **Primary irritant effect:**
    - **on the skin:** No irritant effect.
    - **on the eye:** Strong irritant with the danger of severe eye injury.
  - **Sensitization:** No sensitizing effects known.
  - **Additional toxicological information:**
    - The product shows the following dangers according to internally approved calculation methods for preparations:
      - Irritant
  - **Carcinogenic categories**
    - **IARC (International Agency for Research on Cancer)**
      - None of the ingredients is listed.
    - **NTP (National Toxicology Program)**
      - None of the ingredients is listed.
    - **OSHA-Ca (Occupational Safety & Health Administration)**
      - None of the ingredients is listed.
12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
    Must not reach bodies of water or drainage ditch undiluted or unneutralized.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA: UN1759
- UN proper shipping name
  - DOT: Corrosive solids, n.o.s. (Butyric acid, Caproic acid)
  - ADR: 1759 CORROSIVE SOLID, N.O.S. (BUTYRIC ACID, CAPROIC ACID)
  - IMDG, IATA: CORROSIVE SOLID, N.O.S. (BUTYRIC ACID, CAPROIC ACID)
- Transport hazard class(es)
  - DOT
    - Class: 8 Corrosive substances
Trade name: Butter Acids Type natural

- **Label**: 8
- **ADR, IMDG, IATA**
  - **Class**: 8 Corrosive substances
  - **Label**: 8
- **Packing group**: III
  - **DOT, ADR, IMDG, IATA**: Not applicable.
- **Environmental hazards**: No
- **Marine pollutant**: No
- **Special precautions for user**: Warning: Corrosive substances
  - **EMS Number**: F-A,S-B
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**: Not applicable.
- **Transport/Additional information**:
  - **ADR**
    - **Excepted quantities (EQ)**: Code: E1
      - Maximum net quantity per inner packaging: 30 g
      - Maximum net quantity per outer packaging: 1000 g
  - **UN "Model Regulation"**: UN 1759 CORROSIVE SOLID, N.O.S. (BUTYRIC ACID, CAPROIC ACID), 8, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - **Section 355 (extremely hazardous substances)**: None of the ingredients is listed.
    - **Section 313 (Specific toxic chemical listings)**: None of the ingredients is listed.
    - **TSCA (Toxic Substances Control Act)**: All components have the value ACTIVE.
  - **Hazardous Air Pollutants**: None of the ingredients is listed.
  - **Proposition 65**
    - **Chemicals known to cause cancer**: None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for females**: None of the ingredients is listed.
Trade name: Butter Acids Type natural

| · Chemicals known to cause reproductive toxicity for males: | None of the ingredients is listed. |
| · Chemicals known to cause developmental toxicity: | None of the ingredients is listed. |

| · Carcinogenic categories |
| · EPA (Environmental Protection Agency) | None of the ingredients is listed. |
| · TLV (Threshold Limit Value established by ACGIH) | None of the ingredients is listed. |
| · NIOSH-Ca (National Institute for Occupational Safety and Health) | None of the ingredients is listed. |

| · GHS label elements |
| Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible. The product is classified and labeled according to the Globally Harmonized System (GHS). |
| Hazard pictograms |
| ![GHS05](image) ![GHS07](image) |

| · Signal word Danger |
| · Hazard-determining components of labeling: |
| Lauric acid |
| hexanoic acid |
| Oleic Acid |
| butyric acid |

| · Hazard statements |
| H314 Causes severe skin burns and eye damage. |
| H335 May cause respiratory irritation. |

| · Precautionary statements |
| P260 Do not breathe/dust/fume/gas/mist/vapors/spray. |
| P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 Immediately call a poison center/doctor. |
| P321 Specific treatment (see on this label). |
| P405 Store locked up. |
| P501 Dispose of contents/container in accordance with local/regional/national/international regulations. |

| · Chemical safety assessment: A Chemical Safety Assessment has not been carried out. |

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
Relevant phrases
H227 Combustible liquid.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Department issuing SDS: Product Safety Department
Contact:
Product Safety Department
productsafety@adv-bio.com

Date of preparation / last revision 08/15/2019 / -

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
VOC: Volatile Organic Compounds (USA, EU)
LD50: Lethal concentration, 50 percent
LCS0: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 4: Flammable liquids – Category 4
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.