# Safety Data Sheet
acc. to OSHA HCS

Printing date 08/24/2018       Reviewed on 03/31/2018

## 1 Identification

- **Product identifier**
  - **Trade name**: Butyl Lactate natural
  - **Product number**: 1028
  - **CAS Number**: 138-22-7
  - **EC number**: 205-316-4
- **Application of the substance / the mixture**: Food flavorings
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier**: Advanced Biotech
    - 10 Taft Road
    - Totowa, NJ 07512 USA
  - **Information department**: Product Safety Department
    - productsafety@adv-bio.com
  - **Emergency telephone number**:
    - 1(800)535-5053 (Info Trac)
    - 1(352)323-3500 (International)
    - During normal business hours: 1(973)339-6242

## 2 Hazard(s) identification

- **Classification of the substance or mixture**
  - Flam. Liq. 4 H227 Combustible liquid.
- **Label elements** Harmful in contact with skin or if inhaled.
- **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 substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**: Not Applicable
- **Signal word**: Warning
- **Hazard statements**
  - H227 Combustible liquid.
- **Precautionary statements**
  - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - P231 Handle under inert gas.
  - P280 Wear protective gloves / eye protection / face protection.
Trade name: Butyl Lactate natural

Classification system:

- **NFPA ratings (scale 0 - 4)**
  - Health = 0
  - Fire = 2
  - Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**
  - Health = 0
  - Fire = 2
  - Reactivity = 0

Other hazards

Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description
  - 138-22-7 butyl lactate
- Identification number(s)
  - EC number: 205-316-4

4 First-aid measures

- Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- 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, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Trade name: Butyl Lactate natural

(Continuation of page 2)

· Special hazards arising from the substance or mixture No further relevant information available.
· Advice for firefighters
· Protective equipment: No special measures required.
· 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
  Wear protective equipment. Keep unprotected persons away.
· Environmental precautions: Prevent seepage into sewage system, workpits and cellars.
· Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  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:
    Substance is not listed.
  · PAC-2:
    Substance is not listed.
  · PAC-3:
    Substance is not listed.

7 Handling and storage

· Handling:
  · Precautions for safe handling No special precautions are necessary if used correctly.
  · Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
· Conditions for safe storage, including any incompatibilities
  · Storage:
    · Requirements to be met by storerooms and receptacles: No special 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:
    - CAS: 138-22-7 butyl lactate
      - REL | Long-term value: 25 mg/m³, 5 ppm
      - TLV | Long-term value: 30 mg/m³, 5 ppm
- 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: Wash hands before breaks and at the end of work.
    - Breathing equipment: Not required.
  - 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.

- 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.

- Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Color: According to product specification
      - Odor: According to product specification
      - Odor threshold: Not determined.
    - pH-value: Not determined.
  - Change in condition
    - Melting point/Melting range: -28 °C (-18.4 °F)
### Trade name: Butyl Lactate natural

**Boiling point/Boiling range:** 185-187 °C (365-368.6 °F)

- **Flash point:** 63 °C (145.4 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 294 °C (561.2 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Not determined.
- **Danger of explosion:** Not determined.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapor pressure at 20 °C (68 °F):** 0.53 hPa (0.4 mm Hg)
- **Density at 20 °C (68 °F):** 0.98 g/cm³ (8.1781 lbs/gal)
- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- **VOC content:** 0.00 %
  - 0.0 g/l / 0.00 lb/gal
- **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:
    - Primary irritant effect:
      - on the skin: No irritant effect.
      - on the eye: No irritating effect.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information:

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    Substance is not listed.
  - NTP (National Toxicology Program)
    Substance is not listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    Substance is not 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: Generally not hazardous for water
    - 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

<table>
<thead>
<tr>
<th>Details</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Class</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>No</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td>Not dangerous according to the above specifications.</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>Not Regulated</td>
</tr>
</tbody>
</table>

### 15 Regulatory information

<table>
<thead>
<tr>
<th>Details</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety, health and environmental regulations/legislation specific for the substance or mixture</td>
<td></td>
</tr>
<tr>
<td>Sara</td>
<td></td>
</tr>
<tr>
<td>Section 355 (extremely hazardous substances):</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Section 313 (Specific toxic chemical listings):</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>TSCA (Toxic Substances Control Act):</td>
<td>Substance is listed.</td>
</tr>
<tr>
<td>Proposition 65</td>
<td></td>
</tr>
<tr>
<td>Chemicals known to cause cancer:</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Chemicals known to cause reproductive toxicity for females:</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Chemicals known to cause reproductive toxicity for males:</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>Chemicals known to cause developmental toxicity:</td>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>
Trade name: Butyl Lactate natural

- **Carcinogenic categories**
  - EPA (Environmental Protection Agency)
    Substance is not listed.
  - TLV (Threshold Limit Value established by ACGIH)
    Substance is not listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    Substance is not 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 substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** Not Applicable

- **Signal word** Warning

- **Hazard statements**
  H227 Combustible liquid.

- **Precautionary statements**
  P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  P231 Handle under inert gas.
  P280 Wear protective gloves / eye protection / face protection.
  P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
  P403+P235 Store in a well-ventilated place. Keep cool.
  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.

- **Department issuing SDS**: Product Safety Department
- **Contact**
  Product Safety Department
  productsafety@adv-bio.com
- **Date of preparation / last revision** 08/24/2018 / -
- **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
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - VOC: Volatile Organic Compounds (USA, EU)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
**Trade name: Butyl Lactate natural**

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