1 Identification

· Product identifier

· Trade name: Lactic Acid Natural

· Product number: 1240

· CAS Number:
  50-21-5

· EC number:
  200-018-0

· Application of the substance / the mixture: Food flavorings

2 Hazard(s) identification

· Classification of the substance or mixture

  GHS05 Corrosion

  Eye Dam. 1 H318 Causes serious eye damage.

  GHS07

  Skin Irrit. 2 H315 Causes skin irritation.

· 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

GHS05

· Signal word Danger

· Hazard-determining components of labeling:
  Lactic acid

· Hazard statements
  H315 Causes skin irritation.
  H318 Causes serious eye damage.

· Precautionary statements
  P280 Wear protective gloves / eye protection / face protection.
  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).
  P362+P338 If skin irritation occurs: Get medical advice/attention.

· 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: Substances

· CAS No. Description
  50-21-5 Lactic acid

· Identification number(s)
  · EC number: 200-018-0

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 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: No special measures required.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
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

No special measures required.

### 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:

Not required.

#### 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:** 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 breakthrough time has to be determined by the manufacturer of the protective gloves and has to be observed.

#### Eye protection:

#### Tightly sealed goggles
9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>· General Information</td>
</tr>
<tr>
<td>· Appearance:</td>
</tr>
<tr>
<td>· Form: Liquid</td>
</tr>
<tr>
<td>· Color: According to product specification</td>
</tr>
<tr>
<td>· Odor: According to product specification</td>
</tr>
<tr>
<td>· Odor threshold: Not determined.</td>
</tr>
<tr>
<td>· pH-value: Not determined.</td>
</tr>
<tr>
<td>· Change in condition</td>
</tr>
<tr>
<td>· Melting point/Melting range: Undetermined.</td>
</tr>
<tr>
<td>· Boiling point/Boiling range: 122 °C (251.6 °F) (@ 15 mm Hg)</td>
</tr>
<tr>
<td>· Flash point: &gt;110 °C (&gt;230 °F)</td>
</tr>
<tr>
<td>· Flammability (solid, gaseous): Not applicable.</td>
</tr>
<tr>
<td>· Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>· Auto igniting: Not determined.</td>
</tr>
<tr>
<td>· Danger of explosion: Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>· Explosion limits:</td>
</tr>
<tr>
<td>· Lower: Not determined.</td>
</tr>
<tr>
<td>· Upper: Not determined.</td>
</tr>
<tr>
<td>· Vapor pressure: Not determined.</td>
</tr>
<tr>
<td>· Density at 20 °C (68 °F): 1.205 g/cm³ (10.05573 lbs/gal)</td>
</tr>
<tr>
<td>· Relative density Not determined.</td>
</tr>
<tr>
<td>· Vapor density Not determined.</td>
</tr>
<tr>
<td>· Evaporation rate Not determined.</td>
</tr>
<tr>
<td>· Solubility in / Miscibility with Water: Not miscible or difficult to mix.</td>
</tr>
<tr>
<td>· Partition coefficient (n-octanol/water): Not determined.</td>
</tr>
<tr>
<td>· Viscosity:</td>
</tr>
<tr>
<td>· Dynamic: Not determined.</td>
</tr>
<tr>
<td>· Kinematic: Not determined.</td>
</tr>
<tr>
<td>· VOC content: 0.00 % 0.0 g/l / 0.00 lb/gal</td>
</tr>
<tr>
<td>· Other information No further relevant information available.</td>
</tr>
</tbody>
</table>

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. |
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - 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:

- 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:
      Not hazardous for water.
      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.
Safety Data Sheet  
acc. to OSHA HCS

Printing date 02/11/2019  
Reviewed on 12/11/2018

Trade name: Lactic Acid Natural

(Continuation of page 6)

### 14 Transport information

<table>
<thead>
<tr>
<th></th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
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</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable.</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>
<td>Not applicable.</td>
</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
</tbody>
</table>

### 15 Regulatory information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety, health and environmental regulations/legislation specific for the substance or mixture</td>
<td>Sara</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>
<tr>
<td>Carcinogenic categories</td>
<td></td>
</tr>
<tr>
<td>EPA (Environmental Protection Agency)</td>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>

(Continued on page 8)
Trade name: Lactic Acid Natural

- **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**
  ![GHS05]

  - **Signal word** Danger
  - **Hazard-determining components of labeling:**
    Lactic acid
  - **Hazard statements**
    H315 Causes skin irritation.
    H318 Causes serious eye damage.
  - **Precautionary statements**
    P280 Wear protective gloves / eye protection / face protection.
    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).
    P362+P364 Take off contaminated clothing and wash it before reuse.
    P332+P313 If skin irritation occurs: Get medical advice/attention.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**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** 02/11/2019 / -
- **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
  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)
48.1.23

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
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1