1 Identification

- **Product identifier**
  - **Trade name:** Nonanoic Acid natural
  - **Product number:** 1419
  - **CAS Number:** 112-05-0
  - **EC number:** 203-931-2
  - **Index number:** 607-197-00-8
- **Application of the substance / the mixture** Food flavorings
- **Details of the supplier of the safety data sheet**
  DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. Advanced Biotech makes NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the Advanced Biotech product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of an Advanced Biotech product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Advanced Biotech product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.
- **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 Classification(s) Identification

- **Classification of the substance or mixture**
  - **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).
Trade name: Nonanoic Acid natural

- **Hazard pictograms**
  - GHS07

- **Signal word** Warning
- **Hazard statements**
  - H315 Causes skin irritation.

- **Precautionary statements**
  - P260 Do not breathe dust/fume/gas/mist/vapors/spray.
  - P264 Wash thoroughly after handling.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P302+P352 If on skin: Wash with plenty of water.
  - P332+P313 If skin irritation occurs: Get medical advice/attention.
  - P362+P364 Take off contaminated clothing and wash it before reuse.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 1
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 1
    - 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**
  - 112-05-0 nonanoic acid
- **Identification number(s)**
  - EC number: 203-931-2
  - Index number: 607-197-00-8

### 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.
- **After swallowing:** If symptoms persist consult doctor.
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.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). 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**

<table>
<thead>
<tr>
<th>PAC</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-1</td>
<td>13 mg/m³</td>
</tr>
<tr>
<td>PAC-2</td>
<td>140 mg/m³</td>
</tr>
<tr>
<td>PAC-3</td>
<td>840 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
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:
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
  - 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.
- 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

<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>Liquid</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 determined.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>12 °C (53.6 °F)</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>254 °C (489.2 °F)</td>
</tr>
<tr>
<td>Flash point</td>
<td>114 °C (237.2 °F)</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>405 °C (761 °F)</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto igniting</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Danger of explosion</td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1.2 Vol %</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapor pressure at 20 °C (68 °F):</td>
<td>0.039 hPa (0 mm Hg)</td>
</tr>
<tr>
<td>Density at 20 °C (68 °F):</td>
<td>0.91 g/cm³ (7.59395 lbs/gal)</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water</td>
<td>Not miscible or difficult to mix.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>VOC content</td>
<td>0.00 %</td>
</tr>
<tr>
<td></td>
<td>0.0 g/l / 0.00 lb/gal</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No further relevant information available.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td></td>
</tr>
<tr>
<td>Thermal decomposition / conditions to be avoided:</td>
<td>No decomposition if used according to specifications.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No dangerous reactions known.</td>
</tr>
</tbody>
</table>
Trade name: Nonanoic Acid natural

- **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**:
    - **CAS**: 112-05-0 nonanoic acid
    - Oral LD50 15,000 mg/kg (mouse)
  - **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**:
      - Water hazard class 1 (Assessment by list): slightly hazardous for water
      - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
    - **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 UN3265

- UN proper shipping name
  DOT 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (nonanoic acid)
  ADR 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (nonanoic acid)
  IMDG, IATA CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (nonanoic acid)

- Transport hazard class(es)
  DOT, IMDG, IATA

  - Class 8 Corrosive substances
  - Label 8

  - ADR

  - Class 8 Corrosive substances

- Packing group
  DOT, ADR, IMDG, IATA III

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  - Warning: Corrosive substances
  - Acids
  - Segregation groups A
  - Stowage Category SW2 Clear of living quarters.
  - Stowage Code

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
### 15 Regulatory information

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

#### Sara

- **Proposition 65**
  - **Chemicals known to cause cancer:** Substance is not listed.
  - **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
  - **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
  - **Chemicals known to cause developmental toxicity:** Substance is not listed.

#### 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.
Trade name: Nonanoic Acid natural

- **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**
  ![GHS07]

  - **Signal word** Warning
  - **Hazard statements**
    H315 Causes skin irritation.
  - **Precautionary statements**
    P260 Do not breathe dust/fume/gas/mist/vapors/spray.
    P264 Wash thoroughly after handling.
    P280 Wear protective gloves/protective clothing/eye protection/face protection.
    P302+P352 If on skin: Wash with plenty of water.
    P332+P313 If skin irritation occurs: Get medical advice/attention.
    P362+P364 Take off contaminated clothing and wash it before reuse.

- **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** 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)
  LC50: Lethal concentration, 50 percent
  LD50: 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
  Skin Irrit. 2: Skin corrosion/irritation – Category 2