## 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**
  - **Manufacturer/Supplier:** Advanced Biotech
    - 10 Taft Road
    - Totowa, NJ 07512 USA
  - **Information department:** Product safety department
    - sarfa@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

## Hazard(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).
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.
P311 Specific treatment (see on this label).
P313 If skin irritation occurs: Get medical advice/attention.

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.

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

First-aid measures

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.
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- **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.
- **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.
- **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**
  - **PAC-1:**
    13 mg/m³
  - **PAC-2:**
    140 mg/m³
7 Handling and storage

- Handling:
  - Precautions for safe handling
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
  - Information about protection against explosions and fires:
    - Keep respiratory protective device available.
- 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: None.
  - 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:
    - 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.

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- **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.

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**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:** 12 °C (53.6 °F)
  - **Boiling point/Boiling range:** 254 °C (489.2 °F)

- **Flash point:** 114 °C (237.2 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 405 °C (761 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Not determined.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** 1.2 Vol %
  - **Upper:** Not determined.

- **Vapor pressure at 20 °C (68 °F):** 0.039 hPa (0 mm Hg)

- **Density at 20 °C (68 °F):** 0.91 g/cm³ (7.59395 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.

(Continued on page 6)
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:
      - 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.
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· 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 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**

### Class
- **Class 8 Corrosive substances**

- **ADR, IMDG, IATA**

### Class
- **Class 8 Corrosive substances**

### Packing group
- **DOT, ADR, IMDG, IATA**
- **Packing group III**

### Environmental hazards:
- **Marine pollutant:** No

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

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

### Transport/Additional information:

- **DOT**
  - **Quantity limitations**
    - On passenger aircraft/rail: 5 L
    - On cargo aircraft only: 60 L

- **ADR**
  - **Excepted quantities (EQ)**
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

- **IMDG**
  - **Limited quantities (LQ)**
    - 5L
  - **Excepted quantities (EQ)**
    - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

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15 Regulatory information
- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Section 355 (extremely hazardous substances):
  Substance is not listed.
- Section 313 (Specific toxic chemical listings):
  Substance is not listed.
- TSCA (Toxic Substances Control Act):
  Substance is listed.
- 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.
- 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
Safety Data Sheet
acc. to OSHA HCS

Trade name: Nonanoic Acid natural

· 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.
  P321 Specific treatment (see on this label).
  P332+P313 If skin irritation occurs: Get medical advice/attention.
· 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: Sidney Arfa
· Date of preparation / last revision 04/03/2018 / -
· 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)
  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