1 Identification

- **Product identifier**
- **Trade name:** Caproic acid natural
- **Product number:** 1192
- **CAS Number:** 142-62-1
- **EC number:** 205-550-7
- **Application of the substance / the mixture** Food flavorings

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS06 Skull and crossbones
  - Acute Tox. 3 H311 Toxic in contact with skin.
  - GHS05 Corrosion
  - Skin Corr. 1B H314 Causes severe skin burns and eye damage.
  - Eye Dam. 1 H318 Causes serious eye damage.

- **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 substance is classified and labeled according to the Globally Harmonized System (GHS).
Trade name: Caproic acid natural

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- **Hazard pictograms**
  
  ![GHS05](image1) ![GHS06](image2)

- **Signal word** 
  Danger

- **Hazard-determining components of labeling:**
  hexanoic acid

- **Hazard statements**
  H311 Toxic in contact with skin.
  H314 Causes severe skin burns and eye damage.

- **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).
  P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    
    ![NFPA](image3)
    Health = 3
    Fire = 1
    Reactivity = 0
  
  - **HMIS-ratings (scale 0 - 4)**
    
    ![HMIS](image4)
    Health = *3
    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**
    
    142-62-1 hexanoic acid
  - **Identification number(s)**
    
    EC number: 205-550-7

---

(Continued on page 3)
4 First-aid measures

· Description of first aid measures

· General information:
  Immediately remove any clothing soiled by the product.
  In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation: In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.

· 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:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  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:
  2.2 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.
    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.
      Store protective clothing separately.
      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.

- **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:**
  Tightly sealed goggles

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### 9 Physical and chemical properties

#### General Information

- **Appearance:**
  - **Form:** Fluid
  - **Color:** According to product specification
  - **Odor:** According to product specification
  - **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Melting point/Melting range:** -3 °C (26.6 °F)
- **Boiling point/Boiling range:** 205 °C (401 °F)

- **Flash point:** 102 °C (215.6 °F)

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

- **Ignition temperature:** 380 °C (716 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Not determined.

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

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Vapor pressure at 20 °C (68 °F):** <0.01 hPa (>0 mm Hg)

- **Density at 20 °C (68 °F):** 0.923 g/cm³ (7.70244 lbs/gal)

- **Relative density**
  - Not determined.

- **Vapor density**
  - Not determined.

- **Evaporation rate**
  - Not determined.
Trade name: Caproic acid natural

| · 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:
· LD/LC50 values that are relevant for classification:

  ATE (Acute Toxicity Estimate)
  Oral LD50 3,000 mg/kg (rat)
  Dermal LD50 630 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:
· Carcinogenic categories

  IARC (International Agency for Research on Cancer) Substance is not listed.

  NTP (National Toxicology Program) Substance is not listed.
Trade name: Caproic acid natural

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.
    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 UN2829
- UN proper shipping name
  - DOT Caproic acid
  - ADR 2829 CAPROIC ACID
  - IMDG, IATA CAPROIC ACID
- Transport hazard class(es)
  - DOT, IMDG, IATA
  - Class 8 Corrosive substances
Trade name: Caproic acid natural

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<th>· Label</th>
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<td>· Marine pollutant:</td>
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<td>· Special precautions for user</td>
<td>Warning: Corrosive substances</td>
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<td>· Danger code (Kemler):</td>
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<td>· EMS Number:</td>
<td>F-A,S-B</td>
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<td>· Stowage Category</td>
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<td>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
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<td>· Transport/Additional information:</td>
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<td>· DOT</td>
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<td>· Quantity limitations</td>
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<td>On cargo aircraft only: 60 L</td>
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<td></td>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
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<tr>
<td>· UN &quot;Model Regulation&quot;:</td>
<td>UN 2829 CAPROIC ACID, 8, III</td>
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### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara
  - 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.
Safety Data Sheet
acc. to OSHA HCS

Printing date 02/11/2019
Reviewed on 02/08/2019

Trade name: Caproic acid natural

(Continuation of page 8)

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

GHS05  GHS06

Signal word Danger

Hazard-determining components of labeling:

hexanoic acid

Hazard statements

H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.

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).
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Continued on page 10)
Safety Data Sheet  
acc. to OSHA HCS

Trade name: Caproic acid natural

- **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 / 1
- **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  
  Acute Tox. 3: Acute toxicity – Category 3  
  Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
  Eye Dam. 1: Serious eye damage/eye irritation – Category 1