1 Identification

· Product identifier

· Trade name: Pyruvic Acid natural
  · Product number: 1070
  · CAS Number:
    127-17-3
  · EC number:
    204-824-3

· 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

2 Hazard(s) identification

· Classification of the substance or mixture

  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).

· Hazard pictograms

  GHS05

· Signal word Danger

· Hazard-determining components of labeling:
  pyruvic acid
## Hazard statements
- H227 Combustible liquid.
- H314 Causes severe skin burns and eye damage.

## Precautionary statements
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P260 Do not breathe/dust/fume/gas/mist/vapors/spray.
- P303+P361+P353 IF ON SKIN (or hair): Remove/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.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## Classification system:
- NFPA ratings (scale 0 - 4)
  - Health = 3
  - Fire = 2
  - Reactivity = 0
- HMIS-ratings (scale 0 - 4)
  - Health = 3
  - 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
  - 127-17-3 pyruvic acid
- Identification number(s)
- EC number: 204-824-3

## 4 First-aid measures
- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- 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: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
41.1.10

· 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 or extinguishing powder. Fight larger fires with alcohol resistant foam.
· 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:
  Dilute with plenty of water.
  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.

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.
· Information about storage in one common storage facility:
  Not required.
· Further information about storage conditions:
  Keep receptacle tightly sealed.
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 and skin.
  - **Breathing equipment**: Not required.
  - **Protection of hands**:

    [Image of protective gloves]

    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**:

      [Image of goggles]

      Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance**:
  - **Form**: Liquid

(Continued on page 5)
### 41.1.10

- **Color:** Colorless to pale yellow
- **Odor:** Sour
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - **Melting point/Melting range:** 11.8 °C (53 °F)
  - **Boiling point/Boiling range:** 164 °C (327 °F)
- **Flash point:** 82 °C (180 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:**
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Not determined.
  - **Danger of explosion:** Not determined.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapor pressure:** Not determined.
- **Density at 20 °C (68 °F):** 1.27 g/cm³ (10.598 lbs/gal)
- **Relative density**
  - Not determined.
- **Vapour density**
  - Not determined.
- **Evaporation rate**
  - Not determined.
- **Solubility in / Miscibility with Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **Dynamic:** Not determined.
  - **Kinematic:** Not determined.
  - **Organic solvents:** 0.0 %
  - **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.
Trade name: Pyruvic Acid natural

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
  - on the skin: Caustic effect on skin and mucous membranes.
  - on the eye: Strong caustic effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
  Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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 (Self-assessment): 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.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
- DOT, ADR, IMDG, IATA: UN3265

- UN proper shipping name
- DOT: Corrosive liquid, acidic, organic, n.o.s. (pyruvic acid)
- ADR: 3265 Corrosive liquid, acidic, organic, n.o.s. (pyruvic acid)
- IMDG, IATA: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (pyruvic acid)

- Transport hazard class(es)

  - DOT
    - Class: 8 Corrosive substances
    - Label: 8

  - ADR
    - Class: 8 (C3) Corrosive substances
    - Label: 8

  - IMDG, IATA
    - Class: 8 Corrosive substances
## 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.
### Trade name: Pyruvic Acid natural

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<th>· Proposition 65</th>
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- **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**: 03/18/2016 / -
- **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)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 4: Flammable liquids, Hazard Category 4
  - Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
  - Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1