# 1 Identification

- **Product identifier**
  - **Trade name:** Gamma Heptalactone Racemic Natural
  - **Product number:** 1670
  - **CAS Number:** 105-21-5
  - **EC number:** 203-279-9
- **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
    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 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

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3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description
  - 105-21-5 gamma-Heptalactone
- Identification number(s)
  - EC number: 203-279-9

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.
- 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 alcohohiresistant 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: Not required.
- 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).
- 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: None.
- Specific end use(s): No further relevant information available.

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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: 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**: Goggles recommended during refilling.

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: Undetermined.
  - Boiling point/Boiling range: 61-62 °C (141.8-143.6 °F) (@ 2 mm Hg)

- Flash point: >110 °C (>230 °F)

- Flammability (solid, gaseous): Not applicable.

- Decomposition temperature: Not determined.
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· Auto igniting: Not determined.
· Danger of explosion: Product does not present an explosion hazard.
· Explosion limits:
  Lower: Not determined.
  Upper: Not determined.
· Vapor pressure: Not determined.
· Density at 20 °C (68 °F): 0.999 g/cm³ (8.33666 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.
· 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:
· 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.
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- 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 2 (Assessment by list): hazardous for water
    Do not allow product to reach ground water, water course or sewage system.
    Danger to drinking water if even small quantities leak into the ground.
  - 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, ADN, IMDG, IATA: Not Regulated
- UN proper shipping name
  - DOT, ADR, ADN, IMDG, IATA: Not Regulated
- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA:
    - Class: Not Regulated
- Packing group
  - DOT, ADR, IMDG, IATA: Not Regulated
- Environmental hazards:
  - Not applicable.
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| · **Special precautions for user** | Not applicable. |
| · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable. |
| · **Transport/Additional information** | Not dangerous according to the above specifications. |
| · **UN "Model Regulation"** | Not Regulated |

### 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.
  - **TSCA new (21st Century Act): (Substances not listed)**
    - CAS: 105-21-5 gamma-Heptalactone
  - **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).

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Trade name: Gamma Heptalactone Racemic Natural

- **Hazard pictograms**
  - GHS07

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

- **Precautionary statements**
  - P264 Wash thoroughly after handling.
  - P280 Wear protective gloves.
  - 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.
  - 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)
  - 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