**1 Identification**

- **Product identifier**
  - **Trade name:** Nerol natural
  - **Product number:** 1232
  - **CAS Number:** 106-25-2
  - **EC number:** 203-378-7
- **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.
  - Eye Irrit. 2A H319  Causes serious eye irritation.
  - Skin Sens. 1  H317  May cause an allergic skin reaction.

- **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

· **Signal word** Warning

· **Hazard-determining components of labeling:**
  Nerol

· **Hazard statements**
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H317 May cause an allergic skin reaction.

· **Precautionary statements**
  P261 Avoid breathing dust/fume/gas/mist/vapors/spray
  P280 Wear protective gloves / eye protection / face protection.
  P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  P363 Wash contaminated clothing before reuse.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
  · **NFPA ratings (scale 0 - 4)**
    Health = 2
    Fire = 1
    Reactivity = 0
  · **HMIS-ratings (scale 0 - 4)**
    HEALTH 2 Health = 2
    FIRE 1 Fire = 1
    REACTIVITY 0 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**
  106-25-2 Nerol
Trade name: Nerol natural

Identification number(s)
EC number: 203-378-7

4 First-aid measures

- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- After inhalation:
  Supply fresh air and be sure to call for a doctor.
  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. If symptoms persist, 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 alcohoreistant 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).
  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
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
- 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.

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.
    - 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.
47.0.11

· 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

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: 225-230 °C (437-446 °F)

· Flash point: 108 °C (226.4 °F)

· Flammability (solid, gaseous): Not applicable.

· Decomposition temperature: Not determined.

· Auto igniting: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:
  · Lower: Not determined.
### 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**: Not determined.
    - **on the skin**: No irritant effect.
    - **on the eye**: Irritating effect.
  - **Sensitization**: Sensitization possible through skin contact.
  - **Additional toxicological information**:

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**: Substance is not listed.
  - **NTP (National Toxicology Program)**: 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: Not Regulated
- **Packing group**
  - DOT, ADR, IMDG, IATA: Not Regulated

(Continued on page 8)
### 15 Regulatory information

<table>
<thead>
<tr>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety, health and environmental regulations/legislation specific for the substance or mixture</td>
</tr>
<tr>
<td>Sara</td>
</tr>
<tr>
<td>Section 355 (extremely hazardous substances):</td>
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<tr>
<td>Substance is not listed.</td>
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<tr>
<td>Section 313 (Specific toxic chemical listings):</td>
</tr>
<tr>
<td>Substance is not listed.</td>
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<tr>
<td>TSCA (Toxic Substances Control Act):</td>
</tr>
<tr>
<td>Substance is listed.</td>
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<tr>
<td>Proposition 65</td>
</tr>
<tr>
<td>Chemicals known to cause cancer:</td>
</tr>
<tr>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>

**WARNING:** Consuming this product can expose you to Pulegone, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov/food.

Pulegone CAS-no.89-82-7 (0-0.04% by weight)

<table>
<thead>
<tr>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>Chemicals known to cause reproductive toxicity for females:</td>
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<tr>
<td>Substance is not listed.</td>
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<tr>
<td>Chemicals known to cause reproductive toxicity for males:</td>
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<tr>
<td>Substance is not listed.</td>
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<tr>
<td>Chemicals known to cause developmental toxicity:</td>
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<td>Substance is not listed.</td>
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</tbody>
</table>

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<tr>
<th>Topic</th>
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<tbody>
<tr>
<td>Carcinogenic categories</td>
</tr>
<tr>
<td>EPA (Environmental Protection Agency)</td>
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<tr>
<td>Substance is not listed.</td>
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<tr>
<td>TLV (Threshold Limit Value established by ACGIH)</td>
</tr>
<tr>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>
Trade name: Nerol natural

- **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]

- **Signal word** Warning

- **Hazard-determining components of labeling:**
  Nerol

- **Hazard statements**
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H317 May cause an allergic skin reaction.

- **Precautionary statements**
  P261 Avoid breathing dust/fume/gas/mist/vapors/spray
  P280 Wear protective gloves / eye protection / face protection.
  P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
  P363 Wash contaminated clothing before reuse.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**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** 08/24/2018 / -
- **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

(Continued on page 10)
Trade name: Nerol natural

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
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1

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