1 Identification

- **Product identifier**
  - **Trade name:** Trans-2-Octenal natural
  - **Product number:** 1569
  - **CAS Number:** 2548-87-0
  - **EC number:** 219-833-8

- **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
    - 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**
  - Flam. Liq. 4 H227 Combustible liquid.

- **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** Not Applicable

- **Signal word** Warning

- **Hazard statements**
  - H227 Combustible liquid.

- **Precautionary statements**
  - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - P280 Wear protective gloves / eye protection / face protection.
  - P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.

(Continued on page 2)
Trade name: Trans-2-Octenal natural

P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
- NFPA ratings (scale 0 - 4)
  - Health = 0
  - Fire = 2
  - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - HEALTH
  - FIRE
  - REACTIVITY

- 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
  2548-87-0 trans-2-Octenal
- Identification number(s)
- EC number: 219-833-8

4 First-aid measures

- Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- 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, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture
  No further relevant information available.
Safety Data Sheet  
acc. to OSHA HCS

Printed: 08/24/2018  
Reviewed: 03/31/2018

**Trade name:** Trans-2-Octenal natural

- **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:** 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.

### 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:**
  
  Keep ignition sources away - Do not smoke.
  
- **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.
Safety Data Sheet  
acc. to OSHA HCS

Trade name: Trans-2-Octenal natural

- **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:** Wash hands before breaks and at the end of work.
  - Breathing equipment: Not required.
  - Protection of hands:

  ![Protective gloves](image)

  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:** 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: 84-86 °C (183.2-186.8 °F) (@ 19 mm)

- Flash point: 65 °C (149 °F)

- Flammability (solid, gaseous): Not applicable.

- Decomposition temperature: 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**
- **on the skin**: No irritant effect.
- **on the eye**: No irritating effect.
- **Sensitization**: No sensitizing effects known.
47.0.11 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.
  - 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.
  - 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
Safety Data Sheet  
acc. to OSHA HCS

Trade name: Trans-2-Octenal natural

- UN proper shipping name
  - DOT, ADR, ADN, IMDG, IATA: Not Regulated
- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA: Not Regulated
- Class
  - DOT, ADR, IMDG, IATA: Not Regulated
- Packing group
  - DOT, ADR, IMDG, IATA: Not Regulated
- Environmental hazards:
  - Marine pollutant: No
- 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: 2548-87-0 trans-2-Octenal
  - 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
Not Applicable

### Signal word
Warning

### Hazard statements
- **H227** Combustible liquid.

### Precautionary statements
- **P210** Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- **P280** Wear protective gloves / eye protection / face protection.
- **P370+P378** In case of fire: Use for extinction: CO2, powder or water spray.
- **P403+P235** Store in a well-ventilated place. Keep cool.
- **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.

## 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
- **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
### Trade name: Trans-2-Octenal natural

<table>
<thead>
<tr>
<th>OSHA</th>
<th>TLV: Threshold Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PEL: Permissible Exposure Limit</td>
</tr>
<tr>
<td></td>
<td>REL: Recommended Exposure Limit</td>
</tr>
<tr>
<td></td>
<td>Flam. Liq. 4: Flammable liquids – Category 4</td>
</tr>
</tbody>
</table>

(Continuation of page 8)