1 Identification

- **Product identifier**
  - **Trade name:** Maple Furanone 10% in Triacetin natural
  - **Product number:** 1585
  - **CAS Number:** 698-10-2 / 102-76-1
  - **EINECS Number:** 211-811-6
  - **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**
  - **GHS07**
  - Acute Tox. 4  H302  Harmful if swallowed.

- **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 product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - **GHS07**

- **Signal word** Warning

- **Hazard-determining components of labeling:**
  - 5-Ethyl-3-hydroxy-4-methyl-2(5H)-furanone

- **Hazard statements**
  - H302 Harmful if swallowed.

- **Precautionary statements**
  - P264 Wash thoroughly after handling.
  - P270 Do not eat, drink or smoke when using this product.
  - P301+P312 If swallowed: Call a poison center/doctor/physician if you feel unwell.
  - P330 Rinse mouth.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Continued on page 2)
Trade name: Maple Furanone 10% in Triacetin natural

Classification system:
- NFPA ratings (scale 0 - 4)
  - Health = 0
  - Fire = 1
  - Reactivity = 0

HMIS-ratings (scale 0 - 4)
- Health = 0
- Fire = 1
- Reactivity = 0

Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

Composition/information on ingredients
- Description: Mixture of the substances listed below with nonhazardous additions.
- Dangerous components:
  | 698-10-2 | 5-Ethyl-3-hydroxy-4-methyl-2(5H)-furanone | Acute Tox. 4, H302 | 10.0%

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.

Fire-fighting measures
- Extinguishing media
  - Suitable extinguishing agents:
    CO2, powder or alcoholresistant 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.
6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**: Not required.
- **Environmental precautions**: Dilute with plenty of 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.

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: None.
  - 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:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- 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:
    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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
  - Appearance:
    - Form: Liquid
    - Color: Pale yellow to brown
    - Odor: Maple
    - Odour threshold: Not determined.
  - pH-value: Not determined.

- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: 258 °C (496 °F)

- Flash point: > 110 °C (> 230 °F)

- Flammability (solid, gaseous): Not applicable.

- Ignition temperature: 410 °C (770 °F)

- Decomposition temperature: Not determined.

- Auto igniting: Product is not selfigniting.

- 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): 1.162 g/cm³ (9.697 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.

- Solvent content:
  - Organic solvents: 0.0 %

(Continued on page 5)
### 10 Stability and reactivity

- **Reactivity**
- **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)** None of the ingredients is listed.
  - **NTP (National Toxicology Program)** None of the ingredients is listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)** None of the ingredients is 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:** Generally not hazardous for water
  - **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

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN-Number</strong></td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
</tr>
<tr>
<td><strong>DOT, ADR, ADN, IMDG, IATA</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
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<tr>
<td><strong>Transport hazard class(es)</strong></td>
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<tr>
<td><strong>Class</strong></td>
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<tr>
<td><strong>Packing group</strong></td>
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<tr>
<td><strong>DOT, ADR, IMDG, IATA</strong></td>
<td>Not Regulated</td>
</tr>
<tr>
<td><strong>Environmental hazards:</strong></td>
<td></td>
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<tr>
<td><strong>Marine pollutant</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Special precautions for user</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Transport/Additional information:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>UN &quot;Model Regulation&quot;</strong></td>
<td>-</td>
</tr>
</tbody>
</table>

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - **Section 355 (extremely hazardous substances):**
      - None of the ingredients is listed.
    - **Section 313 (Specific toxic chemical listings):**
      - None of the ingredients is listed.
  - **TSCA (Toxic Substances Control Act):**
    - All ingredients are listed.
  - **Proposition 65**
    - **Chemicals known to cause cancer:**
      - None of the ingredients is listed.
### Safety Data Sheet

**acc. to OSHA HCS**

Printing date 06/25/2015  
Reviewed on 06/25/2015

**Trade name:** Maple Furanone 10% in Triacetin natural

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#### Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

#### Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

#### Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

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#### Carcinogenic categories

- **EPA (Environmental Protection Agency)**  
  None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**  
  None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**  
  None of the ingredients is listed.

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#### GHS label elements

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  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.

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  - 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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#### 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.

- **Relevant phrases**  
  H302 Harmful if swallowed.

- **Department issuing SDS:** Product safety department

- **Contact:** Sidney Arfa

- **Date of preparation / last revision** 06/25/2015 / -
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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
Acute Tox. 4: Acute toxicity, Hazard Category 4