1 Identification

- Product identifier
- Trade name: 2-Tridecanone natural
- Product number: 1476
- CAS Number: 593-08-8
- EC number: 209-784-0
- 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
  The substance is not classified according to the Globally Harmonized System (GHS).

- 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.
- Hazard pictograms: Not Applicable
- Signal word: Not Applicable
- Hazard statements: Not Applicable
- 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.

(Continued on page 2)
Trade name: 2-Tridecanone natural

### 3 Composition/information on ingredients
- Chemical characterization: Substances
- **CAS No. Description**
  - 593-08-8 Methyl Undecyl Ketone
- **Identification number(s)**
  - EC number: 209-784-0

### 4 First-aid measures
- **Description of first aid measures**
  - **General information:** No special measures required.
  - **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, 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.
    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:**
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  Pick up mechanically.
- **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.
Trade name: 2-Tridecanone natural

7 Handling and storage

· Handling:
  · Precautions for safe handling: No special measures required.
  · 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.

7.5 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:
      The usual precautionary measures for handling chemicals should be followed.
    · 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.

· 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: Not required.

9 Physical and chemical properties

· Information on basic physical and chemical properties
  · General Information
    · Appearance:
      · Form: Solid
      · Color: Whitish
      · Odor: Waxy
      · Odour threshold: Not determined.

    · pH-value: Not applicable.
Trade name: 2-Tridecanone natural

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:
  When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- 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.
- Ecotoxicological effects:
  - Remark: Very toxic for fish
- Additional ecological information:
  - General notes:
    Water hazard class 2 (Self-assessment): 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.
    Also poisonous for fish and plankton in water bodies.
    Very toxic for aquatic organisms
  - 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: Smaller quantities can be disposed of with household waste.
# 14 Transport information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-Number</td>
<td>UN3077</td>
</tr>
<tr>
<td>DOT</td>
<td>Environmentally hazardous substances, solid, n.o.s.</td>
</tr>
<tr>
<td>ADR</td>
<td>3077 Environmentally hazardous substances, solid, n.o.s.</td>
</tr>
<tr>
<td>IMDG</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT</td>
</tr>
<tr>
<td>IATA</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.</td>
</tr>
</tbody>
</table>

- **Transport hazard class(es)**
  - DOT, ADR, IMDG, IATA

  - **Class**: 9 Miscellaneous dangerous substances and articles

- **Packing group**
  - DOT, ADR, IMDG, IATA

  - **Group**: III

- **Environmental hazards**
  - **Marine pollutant**: Yes
    - Symbol (fish and tree)
  - **Special marking (ADR)**: Symbol (fish and tree)
  - **Special marking (IATA)**: Symbol (fish and tree)

- **Special precautions for user**
  - **Warning**: Miscellaneous dangerous substances and articles

- **EMS Number**: F-A,S-F

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - **Not applicable**.

- **Transport/Additional information**
  - **Remarks**: Special marking with the symbol (fish and tree).

  - **ADR**
    - **Excepted quantities (EQ)**
      - **Code**: E1
      - **Maximum net quantity per inner packaging**: 30 g
      - **Maximum net quantity per outer packaging**: 1000 g
Trade name: 2-Tridecanone natural

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.
  - 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 Not Applicable
  - Hazard pictograms
    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.
  - Signal word Not Applicable
  - Hazard statements Not Applicable
  - 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
Trade name: 2-Tridecanone natural

· 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
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)