1 Identification

· Product identifier
· Trade name: Carvacrol natural
· Product number: 1554
· CAS Number:
  499-75-2
· EC number:
  207-889-6
· 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: 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
· Hazard-determining components of labeling:
  carvacrol
· 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 if you feel unwell.

(Continued on page 2)
Trade name: Carvacrol natural

(Continuation of page 1)

P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

- HMIS-ratings (scale 0 - 4)
  - HEALTH
  - Health = 1
  - FIRE
  - Fire = 1
  - REACTIVITY
  - 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
  - 499-75-2 carvacrol
- Identification number(s)
  - EC number: 207-889-6

4 First-aid measures

- Description of first aid measures
  - General information:
    Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - 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: Immediately call a 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.
  - (Continued on page 3)
Trade name: Carvacrol natural

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.
- **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**: 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.
    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
Trade name: Carvacrol natural

- **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: Pale yellow to amber
    - Odor: Oregano
    - Odour threshold: Not determined.
  - **pH-value**: Not determined.

- **Change in condition**
  - Melting point/Melting range: 3 °C (37 °F)
  - Boiling point/Boiling range: 237 °C (459 °F)

- **Flammability (solid, gaseous)**: Not applicable.

- **Ignition temperature**: Not determined.

- **Decomposition temperature**: Not determined.

- **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)**: 0.978 g/cm³ (8.161 lbs/gal)

- **Relative density**: Not determined.

- **Vapour 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.
  - Organic solvents: 0.0 %
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:
- LD/LC50 values that are relevant for classification:
  499-75-2 carvacrol
  Oral LD50 810 mg/kg (rat)
- 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.
  - 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.
Trade name: Carvacrol natural

· 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, IMDG, IATA: UN3265
· UN proper shipping name
  · DOT
  · ADR
  · IMDG, IATA: Corrosive liquid, acidic, organic, n.o.s. (carvacrol)
· Transport hazard class(es)
  · DOT
    · Class: 8 Corrosive substances
    · Label: 8
  · ADR, IMDG, IATA
    · Class: 8 Corrosive substances
    · Label: 8
· Packing group
  · DOT, ADR, IMDG, IATA: III
· Environmental hazards:
  · Marine pollutant: No
· Special precautions for user
  · Warning: Corrosive substances
· Danger code (Kemler): 60
### 15 Regulatory information

<table>
<thead>
<tr>
<th>Section</th>
<th>Regulation</th>
<th>Substance status</th>
</tr>
</thead>
<tbody>
<tr>
<td>355</td>
<td>Extremely hazardous substances</td>
<td>Not listed.</td>
</tr>
<tr>
<td>313</td>
<td>Specific toxic chemical listings</td>
<td>Not listed.</td>
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<tr>
<td></td>
<td>TSCA (Toxic Substances Control Act)</td>
<td>Listed.</td>
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<tr>
<td>65</td>
<td>Proposition 65</td>
<td>Not listed.</td>
</tr>
<tr>
<td></td>
<td>Chemicals known to cause cancer</td>
<td>Not listed.</td>
</tr>
<tr>
<td></td>
<td>Chemicals known to cause reproductive toxicity for females</td>
<td>Not listed.</td>
</tr>
<tr>
<td></td>
<td>Chemicals known to cause reproductive toxicity for males</td>
<td>Not listed.</td>
</tr>
<tr>
<td></td>
<td>Chemicals known to cause developmental toxicity</td>
<td>Not listed.</td>
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<tr>
<td></td>
<td>Carcinogenic categories</td>
<td>Not listed.</td>
</tr>
<tr>
<td></td>
<td>EPA (Environmental Protection Agency)</td>
<td>Not listed.</td>
</tr>
</tbody>
</table>
Safety Data Sheet acc. to OSHA HCS

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

Trade name: Carvacrol natural

- 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
  The substance is classified and labeled according to the Globally Harmonized System (GHS).

- 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.

GHS07

- Signal word Warning

- Hazard-determining components of labeling:
  carvacrol

- 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 if you feel unwell.
  P330 Rinse mouth.
  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: 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
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  Acute Tox. 4: Acute toxicity, Hazard Category 4