1 Identification

· Product identifier
  · Trade name: Cocoa Extract natural
  · Product number: 6005
  · CAS Number: 84649-99-0
  · EC number: 283-480-6
· Application of the substance / the mixture: Food flavorings

2 Hazard(s) identification

· Classification of the substance or mixture
  GHS02 Flame
  Flam. Liq. 3 H226 Flammable liquid and vapor.

· 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
  GHS02

· Signal word: Warning
Trade name: Cocoa Extract natural

- **Hazard statements**
  - H226 Flammable liquid and vapor.

- **Precautionary statements**
  - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - P241 Use explosion-proof electrical/ventilating/lighting/equipment.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - 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 = 3
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - HEALTH Health = 0
    - FIRE Fire = 3
    - 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**
  - 84649-99-0 Cocoa Extract
- **Identification number(s)**
- **EC number:** 283-480-6

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **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.

- 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:
  
  Prevent seepage into sewage system, workpits and cellars.
  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).
  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.
    Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities

- Storage:
  
  - Requirements to be met by storerooms and receptacles:
    No special requirements.
    Please refer to product specification for product storage requirements.
  
  - Information about storage in one common storage facility: Not required.
48.1.23

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:
    Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.
  - Breathing equipment: Not required.
  - 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.

(Continued on page 5)
· Change in condition
  Melting point/Melting range: Undetermined.
  Boiling point/Boiling range: Undetermined.

· Flash point: <29 °C (<84.2 °F)
· Flammability (solid, gaseous): Not applicable.
· Decomposition temperature: Not determined.
· Auto igniting: Not determined.
· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:
  Lower: Not determined.
  Upper: Not determined.

· Vapor pressure: Not determined.
· Density at 20 °C (68 °F): 0.985 g/cm³ (8.21983 lbs/gal)
· Relative density Not determined.
· Vapor 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.
  VOC content: 0.00 %
  0.0 g/l / 0.00 lb/gal
· Other information No further relevant information available.

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.
Safety Data Sheet
acc. to OSHA HCS

Trade name: Cocoa Extract natural

- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:

<table>
<thead>
<tr>
<th>Carcinogenic categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC (International Agency for Research on Cancer)</td>
</tr>
<tr>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>NTP (National Toxicology Program)</td>
</tr>
<tr>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
</tr>
<tr>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>

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: 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

- UN-Number
  - DOT, ADR, IMDG, IATA
  - UN1197

- UN proper shipping name
  - DOT
  - ADR
  - IMDG, IATA
  - Extracts, flavoring, liquid
  - 1197 EXTRACTS, FLAVOURING, LIQUID
  - EXTRACTS, FLAVOURING, LIQUID
### Transport hazard class(es)

- **DOT, IMDG, IATA**
  - Class
    - 3 Flammable liquids
  - Label
    - 3
- **ADR**
  - Class
    - 3 Flammable liquids

### Packing group

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

### Environmental hazards:

- **Marine pollutant:** No

### Special precautions for user

- **Stowage Category:** A
  - Warning: Flammable liquids

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

- Not applicable.

### Transport/Additional information:

#### DOT

- **Quantity limitations:**
  - On passenger aircraft/rail: 60 L
  - On cargo aircraft only: 220 L

#### ADR

- **Excepted quantities (EQ):**
  - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

#### IMDG

- **Limited quantities (LQ):**
  - 5L
- **Excepted quantities (EQ):**
  - Code: E1
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 1000 ml

### UN "Model Regulation":

- UN 1197 EXTRACTS, FLAVOURING, LIQUID, 3, III

(Continued on page 8)
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 not listed.
    · TSCA new (21st Century Act): (Substances not listed)
      CAS: 84649-99-0 Cocoa Extract
  · 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
    GHS02
  · Signal word Warning
  · Hazard statements
    H226 Flammable liquid and vapor.
  · Precautionary statements
    P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
    P241 Use explosion-proof electrical/ventilating/lighting/equipment.
Trade name: Cocoa Extract natural

(Continuation of page 8)

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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 02/11/2019 / -
· 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
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit
  Flam. Liq. 3: Flammable liquids – Category 3