1 Identification

- Product identifier
- Trade name: Smoke Flavor SMK360 Natural
- Product number: 1773
- Application of the substance / the mixture: Food flavorings

Details of the supplier of the safety data sheet
DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. Advanced Biotech makes NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the Advanced Biotech product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of an Advanced Biotech product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Advanced Biotech product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

- 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

GHS07
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.

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

- Hazard pictograms

GHS07

- Signal word: Warning
- Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.

(Continued on page 2)
Trade name: Smoke Flavor SMK360 Natural

· Precautionary statements
  
  P264 Wash thoroughly after handling.
  P280 Wear protective gloves / eye protection / face protection.
  P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P337+P313 If eye irritation persists: Get medical advice/attention.

· Classification system:
  · NFPA ratings (scale 0 - 4)
    
    Health = 2
    Fire = 1
    Reactivity = 0
  
  · HMIS-ratings (scale 0 - 4)
    
    HEALTH
    FIRE
    REACTIVITY
    2 1 0
    Health = 2
    Fire = 1
    Reactivity = 0

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

3 Composition/information on ingredients

· Chemical characterization: Mixtures
  
  · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 64-19-7 Acetic acid</th>
<th>12-18%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3, H226; Skin Corr. 1A, H314; Acute Tox. 4, H312</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 8030-97-5 Pyroligneous Acid</th>
<th>5-8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3, H226</td>
<td></td>
</tr>
</tbody>
</table>

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. If symptoms persist, consult a doctor.
  · After swallowing: If symptoms persist consult doctor.
  · Information for doctor:
    
    Most important symptoms and effects, both acute and delayed
    No further relevant information available.
Trade name: Smoke Flavor SMK360 Natural

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  - CO2, powder or alcoholresistant foam.
  - CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant 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: 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).
- 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: | CAS: 64-19-7 | Acetic acid | 5 ppm |
  | PAC-2: | CAS: 64-19-7 | Acetic acid | 35 ppm |
  | PAC-3: | CAS: 64-19-7 | Acetic acid | 250 ppm |

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.
  - Please refer to product specification for product storage requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep receptacle tightly sealed.
Trade name: Smoke Flavor SMK360 Natural

- **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 following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit. At this time, the remaining constituent has no known exposure limits.

<table>
<thead>
<tr>
<th>CAS: 64-19-7 Acetic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
</tr>
<tr>
<td>REL</td>
</tr>
<tr>
<td>Long-term value: 25 mg/m³, 10 ppm</td>
</tr>
<tr>
<td>TLV</td>
</tr>
<tr>
<td>Long-term value: 25 mg/m³, 10 ppm</td>
</tr>
</tbody>
</table>

- **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. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes. Avoid contact with the eyes and skin.
  - **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. 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.
  - **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.

(Continued on page 5)
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: | Undetermined |
| Flash point: | >110 °C (>230 °F) |
| Flammability (solid, gaseous): | Not applicable |
| Ignition temperature: | 485 °C (905 °F) |
| Decomposition temperature: | Not determined |
| Auto igniting: | Product is not selfigniting |
| Danger of explosion: | Product does not present an explosion hazard |
| Explosion limits: |
| Lower: | 4 Vol % |
| Upper: | 17 Vol % |
| Vapor pressure at 20 °C (68 °F): | 23 hPa (17.3 mm Hg) |
| Density at 20 °C (68 °F): | 1.11 g/cm³ (9.26295 lbs/gal) |
| Relative density: | Not determined |
| Vapor 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 |
| Solvent content: |
| Organic solvents: | 12-18 % |
Trade name: Smoke Flavor SMK360 Natural

(Continuation of page 5)

| Water:     | 49.5 % |
| Solids content: | 24.5-33.5 % |

VOC content: 12-18 %
199.8 g/l / 1.67 lb/gal

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:
  - LD/LC50 values that are relevant for classification:
    ATE (Acute Toxicity Estimate)
    Oral LD50 18,389-27,583 mg/kg (rat)
    Dermal LD50 5,889-8,833 mg/kg (rabbit)
  
  CAS: 64-19-7 Acetic acid
    Oral LD50 3,310 mg/kg (rat)
    Dermal LD50 1,060 mg/kg (rabbit)

- Primary irritant effect:
  - on the skin: No irritant effect.
  - on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Irritant

- 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.

(Continued on page 7)
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, IMDG, IATA
  - UN2790
- UN proper shipping name
  - DOT
  - ADR
  - IMDG, IATA
  - Acetic acid solution
  - 2790 ACETIC ACID SOLUTION
  - ACETIC ACID SOLUTION
- Transport hazard class(es)
  - DOT, IMDG, IATA
  - Class 8 Corrosive substances
### Safety Data Sheet

**Trade name:** Smoke Flavor SMK360 Natural

| · Label | 8 |
| · ADR |  |
| · Class | 8 (C3) Corrosive substances |
| · Packing group | 8 |
| · DOT, ADR, IMDG, IATA | III |
| · Environmental hazards: | Not applicable. |

- **Special precautions for user:** Warning: Corrosive substances
- **Danger code (Kemler):** 80
- **EMS Number:** F-A,S-B
- **Segregation groups:** Acids
- **Stowage Category:** A
- **Stowage Code:** SW2 Clear of living quarters.

- **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: 5 L
  - On cargo aircraft only: 60 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 2790 ACETIC ACID SOLUTION, 8, III

### 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.
Trade name: Smoke Flavor SMK360 Natural

- **TSCA (Toxic Substances Control Act):**
  All ingredients are listed.

- **TSCA new (21st Century Act):** (Substances not listed)
  CAS: 8030-97-5 Pyroligneous Acid

- **Proposition 65**
  - **Chemicals known to cause cancer:**
    None of the ingredients is listed.
  - **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.

- **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.

- **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 statements**
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.

- **Precautionary statements**
  P264 Wash thoroughly after handling.
  P280 Wear protective gloves / eye protection / face protection.
  P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P332+P313 If skin irritation occurs: Get medical advice/attention.
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P337+P313 If eye irritation persists: Get medical advice/attention.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Continued on page 10)
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.

- **Relevant phrases**
  - H226 Flammable liquid and vapor.
  - H312 Harmful in contact with skin.
  - H314 Causes severe skin burns and eye damage.

- **Department issuing SDS:** Product Safety Department

- **Contact:**
  - Product Safety Department
  - productsafety@adv-bio.com

- **Date of preparation / last revision:** 02/12/2019 / -

- **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
  - 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)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - 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
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Corr. 1A: Skin corrosion/irritation – Category 1A
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A