1 Identification

- **Product identifier**
  - **Trade name:** BLUEBERRY TYPE FLAVOR, NAT
  - **Article number:** 08.953

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    OliveNation LLC
    50 Terminal St, Bldg 2, 7th Floor,
    Charlestown MA 02129
    USA
    781-989-2033

- **Information department:** Regulatory department
- **Emergency telephone number:**
  During normal opening times: Call Chemtrec Day or Night
  Domestic North America 800.424.9300/International 703.527.3887 (Collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - ![GHS02 Flame]
  - Flam. Liq. 2 H225 Highly flammable liquid and vapor.

  ![GHS07]
  - Skin Irrit. 2 H315 Causes skin irritation.
  - STOT SE 3 H335 May cause respiratory irritation.

  ![GHS02 GHS07]
  - Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements**
  - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**

  ![GHS02 GHS07]

- **Signal word** Danger

(Contd. on page 2)
Trade name: BLUEBERRY TYPE FLAVOR, NAT

- Hazard-determining components of labeling:
  ethyl alcohol
- Hazard statements
  Highly flammable liquid and vapor.
  Causes skin and eye irritation.
  May cause respiratory irritation.
- Precautionary statements
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting/equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wash thoroughly after handling.
  Use only outdoors or in a well-ventilated area.
  Wear protective gloves/protective clothing/eye protection/face protection.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Call a poison center/doctor if you feel unwell.
  Specific treatment (see on this label).
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  Take off contaminated clothing and wash it before reuse.
  In case of fire: Use for extinction: CO2, powder or water spray.
  Store in a well-ventilated place. Keep container tightly closed.
  Store in a well-ventilated place. Keep cool.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  - NFPA ratings (scale 0 - 4)
    Health = 1
    Fire = 3
    Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    Health = 1
    Fire = 3
    Reactivity = 0
Safety Data Sheet
acc. to OSHA HCS

Trade name: BLUEBERRY TYPE FLAVOR, NAT

- 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.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Description</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5  ethyl alcohol</td>
<td>Flam. Liq. 2, H225; Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320</td>
<td>50-100%</td>
</tr>
<tr>
<td>121-33-5 VANILLIN</td>
<td>Acute Tox. 4, H302</td>
<td>2.5-10%</td>
</tr>
</tbody>
</table>

4 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. 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.
  - 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.
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
  **Environmental precautions:**
  Dilute with plenty of water.
  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).
  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.

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: Store in a cool location.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions:
      Keep receptacle tightly sealed.
      Store in cool, dry conditions in well sealed receptacles.
- 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:
    64-17-5 ethyl alcohol
    PEL | Long-term value: 1900 mg/m³, 1000 ppm
## Additional information
The lists that were valid during the creation were used as 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:
- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

#### 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 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 found out by the manufacturer of the protective gloves and has to be observed.

#### Eye protection:

- **Tightly sealed goggles**

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**Trade name:** BLUEBERRY TYPE FLAVOR, NAT

<table>
<thead>
<tr>
<th>REL</th>
<th>Long-term value: 1900 mg/m³, 1000 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV</td>
<td>Short-term value: 1880 mg/m³, 1000 ppm</td>
</tr>
<tr>
<td>121-33-5 VANILLIN</td>
<td></td>
</tr>
<tr>
<td>WEEL</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
</tbody>
</table>
### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Fluid</td>
</tr>
<tr>
<td>Color</td>
<td>According to product specification</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Characteristic</td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>pH-value</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Undetermined</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>78 °C (172.4 °F)</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>17.2 °C (63 °F)</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous)</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Ignition temperature</strong></td>
<td>425 °C (797 °F)</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Auto igniting</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Danger of explosion</strong></td>
<td>Product is not explosive. However, formation of explosive air/vapor mixtures are possible.</td>
</tr>
<tr>
<td><strong>Explosion limits</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>3.5 Vol %</td>
</tr>
<tr>
<td>Upper</td>
<td>15 Vol %</td>
</tr>
<tr>
<td><strong>Vapor pressure at 20 °C (68 °F):</strong></td>
<td>59 hPa (44.3 mm Hg)</td>
</tr>
<tr>
<td><strong>Density at 20 °C (68 °F):</strong></td>
<td>0.88896 g/cm³ (7.41837 lbs/gal)</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with Water:</strong></td>
<td>Fully miscible.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>
Trade name: BLUEBERRY TYPE FLAVOR, NAT

- Solvent content:
  - Organic solvents: 57.2 %
  - Water: 39.0 %
  - VOC content: 57.15 %
    508.0 g/l / 4.24 lb/gl
  - Solids content: 3.1 %
- 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.
    - 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)
    64-17-5 ethyl alcohol
  - NTP (National Toxicology Program)
    None of the ingredients is listed.

(Contd. on page 8)
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.
  - Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
  - DOT, IMDG, IATA: UN1197
- UN proper shipping name
  - DOT
  - IMDG, IATA: Extracts, flavoring, liquid
  - EXTRACTS, FLAVOURING, LIQUID
Trade name: BLUEBERRY TYPE FLAVOR, NAT

- **Transport hazard class(es)**
  - **DOT**
    
    - **Class** 3 Flammable liquids
    - **Label** 3

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

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

- **Environmental hazards:**
  - **Marine pollutant:** No

- **Special precautions for user**
  - **Warning:** Flammable liquids
  - **Danger code (Kemler):** 33
  - **EMS Number:** F-E,S-D
  - **Stowage Category** B

- **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

  - **IMDG**
    
    - **Limited quantities (LQ)** 5L
    - **Excepted quantities (EQ)**
      - Code: E2
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 500 ml

(Contd. on page 10)
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) (Substances not listed):
  All ingredients are listed.

- TSCA new (21st Century Act) (Substances not listed)
  - 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:
  64-17-5 ethyl alcohol

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

- TLV (Threshold Limit Value established by ACGIH)
  64-17-5 ethyl alcohol A3

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

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Trade name: BLUEBERRY TYPE FLAVOR, NAT

- **Hazard pictograms**

  GHS02  GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  ethyl alcohol

- **Hazard statements**
  Highly flammable liquid and vapor.
  Causes skin and eye irritation.
  May cause respiratory irritation.

- **Precautionary statements**
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting/equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wash thoroughly after handling.
  Use only outdoors or in a well-ventilated area.
  Wear protective gloves/protective clothing/eye protection/face protection.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Call a poison center/doctor if you feel unwell.
  Specific treatment (see on this label).
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  Take off contaminated clothing and wash it before reuse.
  In case of fire: Use for extinction: CO2, powder or water spray.
  Store in a well-ventilated place. Keep container tightly closed.
  Store in a well-ventilated place. Keep cool.
  Store locked up.
  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.

- **Relevant phrases**
  H225 Highly flammable liquid and vapor.
  H302 Harmful if swallowed.
  H315 Causes skin irritation.
  H320 Causes eye irritation.
  H335 May cause respiratory irritation.

- **Department issuing SDS:** Regulatory department
- **Contact:** Stacie Obman
- **Date of preparation / last revision** 03/28/2018 / 3
- **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)
  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. 2: Flammable liquids – Category 2
  Acute Tox. 4: Acute toxicity – Category 4
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.