**SECTION 1: IDENTIFICATION**

1.1. **Product Identifier**

Product Form: Mixture

Product Name: CRANBERRY POWDER 90MX

Synonyms: Cranberry Solids, Cranberry Extract Powder, Cranberry Extract Dried, Genus/species – *Vaccinium macrocarpon*

1.2. **Intended Use of the Product**

Use of the Substance/Mixture: Food Product

1.3. **Name, Address, and Telephone of the Responsible Party**

Company:
Ocean Spray Cranberries, Inc.
1 Ocean Spray Dr.
Lakeville, MA 02349 USA
T: +1 508-946-1000

http://www.oceanspray.com/

1.4. **Emergency Telephone Number**

Emergency Number : +1 508-946-1000

**SECTION 2: HAZARDS IDENTIFICATION**

2.1. **Classification of the Substance or Mixture**

GHS-US Classification

Comb. Dust H232

Full text of hazard classes and H-statements: see section 16

2.2. **Label Elements**

GHS-US Labelling

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : H232 - May form combustible dust concentrations in air.

2.3. **Other Hazards**

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. **Unknown Acute Toxicity (GHS-US)**

No data available

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

3.1. **Substance**

Not applicable

3.2. **Mixture**

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Vaccinium macrocarpon</em>, extract</td>
<td>(CAS No) 91770-88-6</td>
<td>50.052 - 75.078</td>
<td>Not classified</td>
</tr>
<tr>
<td>Extractives and their physically modified derivatives such as tinctures, concrete, absolutes, essential oils, oleoresins, terpenes, terpene-free fractions, distillates, residues, etc., obtained from <em>vaccinium macrocarpon</em>, ericaceae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyclohexanecarboxylic acid, 1,3,4,5-tetrahydroxy-: [1R-(1.alpha.,3.alpha.,4.alpha.,5.beta.)]-</td>
<td>(CAS No) 77-95-2</td>
<td>7.932 - 11.898</td>
<td>Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>Magnesium hydroxide</td>
<td>(CAS No) 1309-42-8</td>
<td>2 - 10</td>
<td>Not classified</td>
</tr>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>2.2 - 6.8</td>
<td>Not classified</td>
</tr>
<tr>
<td>Phosphoric acid, calcium salt (2:3)</td>
<td>(CAS No) 7758-87-4</td>
<td>0.1 - 2</td>
<td>Not classified</td>
</tr>
<tr>
<td>Citric acid</td>
<td>(CAS No) 77-92-9</td>
<td>0.48 - 0.72</td>
<td>Comb. Dust, H232 Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>Malic acid</td>
<td>(CAS No) 6915-15-7</td>
<td>0.336 - 0.504</td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

Full text of H-Phrases: see section 16
SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures Inhalation: Using proper respiratory protection, move the exposed person to fresh air at once. Encourage exposed person to cough, spit out, and blow nose to remove dust. Immediately call a poison center, physician, or emergency medical service.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/Injuries After Inhalation: Dust may be harmful or cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: This product is intended for food use. Ingestion is not expected to be harmful.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Combustible Dust.

Explosion Hazard: Dust explosion hazard in air.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Risk of dust explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid prolonged contact with eyes, skin and clothing. Avoid breathing dust. Avoid generating dust. Remove ignition sources. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).


6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Avoid generation of dust during clean-up of spills.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Contact competent authorities after a spill. Use explosion proof vacuum during cleanup, with appropriate filter. Do not mix with other materials. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Use only non-sparking tools.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.
SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Accumulation and dispersion of dust with an ignition source can cause a combustible dust explosion. Keep dust levels to a minimum and follow applicable regulations.

Other information: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing dust. Avoid creating or spreading dust. Keep away from heat, sparks, open flames, hot surfaces. – No smoking.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Avoid creating or spreading dust. Use explosion-proof electrical, ventilating, lighting equipment. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Products: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Food Product

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.


Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State: Solid
Appearance: Dark rose powder
Odor: Berry, fruity
Odor Threshold: No data available
pH: 3.9 - 4.25
Evaporation Rate: No data available
CRANBERRY POWDER 90MX
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Melting Point : No data available
Freezing Point : No data available
Boiling Point : No data available
Flash Point : No data available
Auto-ignition Temperature : No data available
Decomposition Temperature : No data available
Flammability (solid, gas) : No data available
Vapor Pressure : No data available
Relative Vapor Density at 20°C : No data available
Relative Density : No data available
Specific Gravity : 0.45 g/cm³
Solubility : Water: 90 %
Partition Coefficient: N-Octanol/Water : No data available
Viscosity : Free flowing powder

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY
10.1. Reactivity: Hazardous reactions will not occur under normal conditions.
10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).
10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition.
10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers.
10.6. Hazardous Decomposition Products: Not available

SECTION 11: TOXICOLOGICAL INFORMATION
11.1. Information on Toxicological Effects
Acute Toxicity: Not classified

Citric acid (77-92-9)

<table>
<thead>
<tr>
<th>LD50 Oral Rat</th>
<th>5400 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Dermal Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>ATE (Oral)</td>
<td>5,400.00 mg/kg body weight</td>
</tr>
</tbody>
</table>

Magnesium hydroxide (1309-42-8)

| LD50 Oral Rat         | 8500 mg/kg |
| ATE (Oral)            | 8,500.00 mg/kg body weight |

Phosphoric acid, calcium salt (2:3) (7758-87-4)

| Additional information | This compound is listed by the FDA as generally recognized as safe (GRAS) and may be used as a food additive, for both human food and ruminant feed, according to prescribed conditions |

Skin Corrosion/Irritation: Not classified
pH: 3.9 - 4.25
Serious Eye Damage/Irritation: Not classified
pH: 3.9 - 4.25
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: Dust may be harmful or cause irritation.
Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.
Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.
Symptoms/Injuries After Ingestion: This product is intended for food use. Ingestion is not expected to be harmful.
SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecology - General: Not classified.

Citric acid (77-92-9)
LC50 Fish 1 1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

12.2. Persistence and Degradability

<table>
<thead>
<tr>
<th>CRANBERRY POWDER 90MX</th>
<th>Persistence and Degradability</th>
<th>Not established.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid (77-92-9)</td>
<td>Persistence and Degradability</td>
<td>Readily biodegradable in water.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative Potential

<table>
<thead>
<tr>
<th>CRANBERRY POWDER 90MX</th>
<th>Bioaccumulative Potential</th>
<th>Not established.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid (77-92-9)</td>
<td>Log Pow</td>
<td>-1.72 (at 20 °C)</td>
</tr>
</tbody>
</table>

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods
Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations
Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Citric acid (77-92-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Malic acid (6915-15-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Magnesium hydroxide (1309-42-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Phosphoric acid, calcium salt (2:3) (7758-87-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations Neither this product nor its chemical components appear on any US state lists.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date: Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Comb. Dust</th>
<th>Combustible Dust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>H232</td>
<td>May form combustible dust concentrations in air</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)