SECTION 1: Identification

Product Identifier
Product Name: Satiagum™ CD
Synonyms: Satiagum VPC 430 * Satiagel VPC 512 * Satiagel VPC 508 * Satiagel UTH 18

Recommended Use of the Product and Restriction on Use
Relevant Identified Uses: Texturizing agent used in food products, personal care applications, and pharmaceuticals.
Uses Advised Against: Not determined or not applicable.
Reasons Why Uses Advised Against: Not determined or not applicable.

Manufacturer or Supplier Details
Manufacturer:
United States
Cargill Incorporated
15407 McGinty Rd W
Wayzata, MN 55391
1-800-227-4455

Emergency Telephone Number:
United States
VelocityEHS (formerly ChemTel, Inc)
1-800-255-3924 (North America)
+1-813-248-0585 (International)

SECTION 2: Hazard(s) Identification

GHS Classification:
Combustible Dust

Label elements
Hazard Pictograms: None

Signal Word: Warning

Hazard statements:
Combustible Dust May form combustible dust concentrations in air.

Precautionary Statements:
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
P233 Keep container tightly closed
P240 Ground/bond container and receiving equipment
P302+P352 IF ON SKIN: Wash with plenty of soap and water
P314 Get medical advice/attention if you feel unwell
P403+P233 Store in a well-ventilated place. Keep container tightly closed
P501 Dispose of contents and container in accordance with local, regional, national, and international regulations

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients
Safety Data Sheet


Initial Preparation Date: 06.19.2019

<table>
<thead>
<tr>
<th>Identification</th>
<th>Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Number: 9000-07-1</td>
<td>Carrageenan</td>
<td>100</td>
</tr>
</tbody>
</table>

**Additional Information:**
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**SECTION 4: First Aid Measures**

**Description of First Aid Measures**

**General Notes:**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**After Inhalation:**
Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

**After Skin Contact:**
Wash off with soap and water. Get medical attention if irritation develops and persists.

**After Eye Contact:**
Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

**After Swallowing:**
Rinse mouth. Get medical attention if symptoms occur.

**Most Important Symptoms and Effects, Both Acute and Delayed**

**Acute Symptoms and Effects:**
Dusts may irritate the respiratory tract, skin and eyes.

**Delayed Symptoms and Effects:**
Not determined or not applicable.

**Immediate Medical Attention and Special Treatment**

**Specific Treatment:**
Treat symptomatically.

**Notes for the Doctor:**
Provide general supportive measures and treat symptomatically.

**SECTION 5: Firefighting Measures**

**Extinguishing Media**

**Suitable Extinguishing Media:**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dust.

Avoid high pressure media which could cause the formation of a potentially explosive dust-air mixture.

**Unsuitable Extinguishing Media:**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific Hazards During Fire-Fighting:**
Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health
may be formed. Combustion products may include: carbon oxides.

Special Protective Equipment for Firefighters:
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special precautions:
In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
May form combustible dust concentrations in air.
Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Environmental Precautions:
Avoid discharge into drains, water courses or onto the ground.

Methods and Material for Containment and Cleaning Up:
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.
Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.
Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.
Never return spills to original containers for re-use.

Reference to Other Sections:
For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and Storage

Precautions for Safe Handling:
Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Explosion-proof general and local exhaust ventilation. Avoid contact with eyes, skin, and clothing. Wash hands after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for Safe Storage, Including Any Incompatibilities:
Keep away from heat, sparks and open flame. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Routine housekeeping should be instituted to ensure that
SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

**Occupational Exposure Limit Values:**

<table>
<thead>
<tr>
<th>Country (Legal Basis)</th>
<th>Substance</th>
<th>Identifier</th>
<th>Permissible concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>Dust</td>
<td>N/A</td>
<td>PEL: 5 mg/m³ (Respirable fraction)</td>
</tr>
<tr>
<td></td>
<td>Dust</td>
<td>N/A</td>
<td>PEL: 15 mg/m³ (Total Dust)</td>
</tr>
<tr>
<td></td>
<td>Dust</td>
<td>N/A</td>
<td>TWA: 5 mg/m³ (Respirable fraction)</td>
</tr>
<tr>
<td></td>
<td>Dust</td>
<td>N/A</td>
<td>TWA: 15 mg/m³ (Total Dust)</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Dust</td>
<td>N/A</td>
<td>TWA: 3 mg/m³ (Respirable particles)</td>
</tr>
<tr>
<td></td>
<td>Dust</td>
<td>N/A</td>
<td>TWA: 10 mg/m³ (Inhalable particles)</td>
</tr>
</tbody>
</table>

**Biological Limit Values:**
No biological exposure limits noted for the ingredient(s).

**Information on Monitoring Procedures:**
Not determined or not applicable.

**Appropriate Engineering Controls:**
Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. 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. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

**Personal Protection Equipment**

**Eye and Face Protection:**
Wear safety glasses with side shields (or goggles).

**Skin and Body Protection:**
Hand protection: Wear suitable gloves. Suitable gloves can be recommended by the glove supplier.
Other: Wear suitable protective clothing.
Wear appropriate thermal protective clothing, when necessary.

**Respiratory Protection:**
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

**General Hygienic Measures:**
When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9: Physical and Chemical Properties
**Information on Basic Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Powder: Off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 11 in aqueous solutions</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Decomposition from 200°C.</td>
</tr>
<tr>
<td>Initial boiling point/range</td>
<td>Decomposition before ebullition.</td>
</tr>
<tr>
<td>Flash point (closed cup)</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Combustible dust.</td>
</tr>
<tr>
<td>Upper flammability/explosive limit</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Lower flammability/explosive limit</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Density</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Solubilities</td>
<td>Soluble/ partially soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Auto/Self-ignition temperature</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>Not determined or not available.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not oxidizing</td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and Reactivity**

**Reactivity:**
- The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical Stability:**
- Material is stable under normal conditions.

**Possibility of Hazardous Reactions:**
- No dangerous reaction known under conditions of normal use.

**Conditions to Avoid:**
- Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimize dust generation and accumulation.

**Incompatible Materials:**
- None known.

**Hazardous Decomposition Products:**
- No hazardous decomposition products are known.

**SECTION 11: Toxicological Information**

**Acute Toxicity**
- **Assessment:** Based on available data, the classification criteria are not met.
- **Product Data:** No data available.
Safety Data Sheet

Initial Preparation Date: 06.19.2019

Satiagum™ CD

Substance Data: No data available.

Skin Corrosion/Irritation
Assessment: Based on available data, the classification criteria are not met.

Product Data:
Dust or powder may irritate the skin.

Substance Data: No data available.

Serious Eye Damage/Irritation
Assessment: Based on available data, the classification criteria are not met.

Product Data:
Dust may irritate the eyes.

Substance Data: No data available.

Respiratory or Skin Sensitization
Assessment: Based on available data, the classification criteria are not met.

Product Data:
Respiratory sensitization: Risk of sensitization or allergic reactions among sensitive individuals.
Skin sensitization: May cause allergic skin disorders in sensitive individuals.

Substance Data: No data available.

Carcinogenicity
Assessment: Based on available data, the classification criteria are not met.

Product Data:

<table>
<thead>
<tr>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not classifiable as to carcinogenicity to humans.</td>
</tr>
</tbody>
</table>

Substance Data: No data available.

International Agency for Research on Cancer (IARC):

<table>
<thead>
<tr>
<th>Name</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrageenan</td>
<td>Group 3</td>
</tr>
</tbody>
</table>

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity
Assessment: Based on available data, the classification criteria are not met.

Product Data:
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Substance Data: No data available.

Reproductive Toxicity
Assessment: Based on available data, the classification criteria are not met.

Product Data:
This product is not expected to cause reproductive or developmental effects.

Substance Data: No data available.

Specific Target Organ Toxicity (Single Exposure)
Assessment: Based on available data, the classification criteria are not met.

Product Data:
Satiagum™ CD

Not classified.

Substance Data: No data available.

Specific Target Organ Toxicity (Repeated Exposure)
Assessment: Based on available data, the classification criteria are not met.

Product Data:
Not classified.

Substance Data: No data available.

Aspiration toxicity
Assessment: Based on available data, the classification criteria are not met.

Product Data:
Not an aspiration hazard.

Substance Data: No data available.

Information on Likely Routes of Exposure:
Inhalation: Dust may irritate respiratory system.
Skin Contact: Dust or powder may irritate the skin.
Eye contact: Dust may irritate the eyes.
Ingestion: Not expected to be acutely toxic.

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:
Dusts may irritate the respiratory tract, skin and eyes.

Other Information:
No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity
Assessment:
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product Data: No data available.
Substance Data: No data available.

Chronic (Long-Term) Toxicity
Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.
Substance Data: No data available.

Persistence and Degradability
Product Data:
No data is available on the degradability of any ingredients in the mixture.

Substance Data: No data available.

Bioaccumulative Potential
Product Data:
No data available for this product.

Substance Data: No data available.

Mobility in Soil
Product Data: No data available.
Substance Data: No data available.

Results of PBT and vPvB assessment
Product Data:
PBT assessment: This product does not contain any substances that are assessed to be a PBT.
vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.
**Substance Data:**

- **PBT assessment:** This product does not contain any substances that are assessed to be a PBT.
- **vPvB assessment:** This product does not contain any substances that are assessed to be a vPvB.

**Other Adverse Effects:**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**SECTION 13: Disposal Considerations**

**Disposal Methods:**

Disposal instructions: Dispose of contents/container in accordance with local/regional/national/international regulations. Local disposal regulations: Dispose in accordance with all applicable regulations. Hazardous waste code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company. Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packages:**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**SECTION 14: Transport Information**

**United States Transportation of Dangerous Goods (49 CFR DOT)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN Proper Shipping Name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN Transport Hazard Class(es)</td>
<td>None</td>
</tr>
<tr>
<td>Packing Group</td>
<td>None</td>
</tr>
<tr>
<td>Environmental Hazards</td>
<td>None</td>
</tr>
<tr>
<td>Special Precautions for User</td>
<td>None</td>
</tr>
</tbody>
</table>

**International Maritime Dangerous Goods (IMDG)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN Proper Shipping Name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN Transport Hazard Class(es)</td>
<td>None</td>
</tr>
<tr>
<td>Packing Group</td>
<td>None</td>
</tr>
<tr>
<td>Environmental Hazards</td>
<td>None</td>
</tr>
<tr>
<td>Special Precautions for User</td>
<td>None</td>
</tr>
</tbody>
</table>

**International Air Transport Association Dangerous Goods Regulations (IATA-DGR)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN Proper Shipping Name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>UN Transport Hazard Class(es)</td>
<td>None</td>
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<tr>
<td>Packing Group</td>
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<tr>
<td>Environmental Hazards</td>
<td>None</td>
</tr>
<tr>
<td>Special Precautions for User</td>
<td>None</td>
</tr>
</tbody>
</table>
SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.
Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.
Export Notification under TSCA Section 12(b): None of the ingredients are listed.
SARA Section 302 Extremely Hazardous Substances: None of the ingredients are listed.
SARA Section 313 Toxic Chemicals: None of the ingredients are listed.
CERCLA: None of the ingredients are listed.
RCRA: None of the ingredients are listed.
Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

Massachusetts Right to Know:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000-07-1</td>
<td>Carrageenan</td>
<td></td>
</tr>
</tbody>
</table>

New Jersey Right to Know: None of the ingredients are listed.
New York Right to Know: None of the ingredients are listed.
Pennsylvania Right to Know:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000-07-1</td>
<td>Carrageenan</td>
<td></td>
</tr>
</tbody>
</table>

California Proposition 65: None of the ingredients are listed.

SECTION 16: Other Information

Abbreviations and Acronyms: None

Disclaimer:

The information contained herein is believed to be true and accurate. However, all statements, recommendations or suggestions are made without any guarantee, representation or warranty, express or implied, on our part. Therefore, no warranty is made or to be implied that the information set out in this document is accurate or complete, and we accordingly exclude all liability in connection with the use of this information or the products referred to herein. All such risks are assumed by the purchaser/user. For the avoidance of doubt, however, nothing in this document excludes or limits our liability for death or personal injury caused by our negligence or for fraudulent misrepresentation.

NFPA: 0-2-0
HMIS: 0-2-0

Initial Preparation Date: 06.19.2019

Revision Notes:

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021-12-02</td>
<td>Revision date Version # 03</td>
</tr>
</tbody>
</table>

Additional information:

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

End of Safety Data Sheet