

SAFETY DATA SHEET
SeaSpen® IN Carrageenan

SDS # : 1353-B
Revision date: 2019-05-01
Format: NA
Version 5.080002



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name SeaSpen® IN Carrageenan

Other means of identification

Product Code(s) 1353-B

Synonyms Carrageenan: Chondrus crispus (Carrageenan) extract (INCI name), Carrageenan, Irish moss, Chondrus extract, Seaweed flour, Sulfuric acid, calcium salt, dihydrate: Calcium sulfate, dihydrate: Terra alba, gypsum, native calcium sulfate; Trisodium Phosphate: TSP, duodecahydrate; Dextrose: Glucose, D-glucose

Chemical Family Polysaccharides; Phosphate; Sulfates

Recommended use of the chemical and restrictions on use

Recommended Use: Industrial

Restrictions on Use: See section 16 for more information

Supplier Address

DuPont Nutrition USA, Inc.
974 Centre Road
Wilmington, DE 19805
+ 1 800 255 6837 (General Information)
sds.enablers@dupont.com (E-Mail General Information)

Emergency telephone number

For leak, fire, spill, or accident emergencies, call:
(800) 424-9300 (CHEMTREC - U.S.A. & Canada)
(703) 527-3887 (CHEMTREC - all other countries)

(207) 594-3200 (DuPont Plant - Rockland, ME)
(303) 595-9048 (Medical - U.S. - Call Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|-----------------------------------|------------|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |

GHS Label elements, including precautionary statements**EMERGENCY OVERVIEW****Warning****Hazard Statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Physical Hazards

May form combustible dust concentrations in air

**Precautionary Statements - Prevention**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 - Take off contaminated clothing and wash before reuse

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

May be harmful if swallowed. May be harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical Family**

Polysaccharides; Phosphate; Sulfates .

| Chemical name | CAS-No | Weight % |
|----------------------------|-----------|----------|
| Carrageenan | 9000-07-1 | 30 - 75 |
| Calcium sulfate, anhydrous | 7778-18-9 | - |
| Trisodium Phosphate | 7601-54-9 | 1 - 15 |

* The exact percentage composition has been withheld as a trade secret.

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

| | |
|---|--|
| General Advice | When symptoms persist or in all cases of doubt seek medical advice.*** |
| Eye Contact | Get medical attention if eye irritation develops or persists. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| Skin Contact | If skin irritation occurs: Get medical advice/ attention. IF ON SKIN: Wash with plenty of soap and water. |
| Inhalation | Remove person to fresh air. If breathing is difficult or if discomfort occurs and persists, obtain medical attention. |
| Ingestion | Never give anything by mouth to an unconscious person. Drink plenty of water. Get medical attention if symptoms occur. |
| Most important symptoms and effects, both acute and delayed | Causes serious eye irritation. Causes skin irritation. |
| Indication of immediate medical attention and special treatment needed, if necessary | Aspiration or inhalation of this product could cause chemical pneumonitis. Treatment is symptomatic and supportive. |

5. FIRE-FIGHTING MEASURES

| | |
|--|--|
| Suitable Extinguishing Media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable extinguishing media | None known. |
| Specific Hazards Arising from the Chemical | Avoid dust formation Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |
| Explosion data | |
| Sensitivity to Mechanical Impact | Not sensitive. |
| Sensitivity to Static Discharge | Static electricity might be sufficient to ignite dust clouds. Possibility of ignition will depend on the minimum ignition energy (MIE) and the type of operations undertaken with the material. MIE values are not provided in this SDS. |
| Protective equipment and precautions for firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|---|
| Personal Precautions | Avoid dispersal of dust in the air (i.e., cleaning dust surfaces with compressed air.). Avoid breathing dust. Powder may become slippery when wet. For personal protection see section 8. |
| Other | For further clean-up instructions, call DuPont Emergency Hotline number listed in Section 1 "Product and Company Identification" above.*** |
| Environmental Precautions | See Section 12 for additional Ecological Information. |
| Methods for Containment | 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. |
| Methods for cleaning up | Sweep, vacuum or shovel into suitable containers for disposal. Nonsparking tools should be used. Washdown water is not recommended. Powder may become slippery when wet. |

7. HANDLING AND STORAGE

| | |
|-----------------|---|
| Handling | Handle in accordance with good industrial hygiene and safety practice. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powdered material can build static electricity when subjected to the friction of transfer and mixing operations. Provide adequate |
|-----------------|---|

precautions, such as electrical grounding and bonding, or inert atmosphere. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected.

Storage Store at less than 25 °C, in tightly closed containers. Keep out of direct sunlight. Store in dry environment away from heat and sources of ignition, i.e., steam pipes, radiant heaters, hot air vents or welding sparks. Do not store with strong smelling materials.

Incompatible products Oxidizing agents. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH | Mexico |
|--|-------------------------------|---|---|--------------------------------------|
| Calcium sulfate, anhydrous (7778-18-9) | TWA: 10 mg/m ³ *** | TWA: 15 mg/m ³ TWA: 5 mg/m ³ *** | TWA: 10 mg/m ³ TWA: 5 mg/m ³ *** | Mexico: TWA 10 mg/m ³ *** |
| Chemical name | British Columbia | Quebec | Ontario TWAEV | Alberta |
| Calcium sulfate, anhydrous (7778-18-9) | TWA: 10 mg/m ³ *** | TWA: 10 mg/m ³ TWA: 5 mg/m ³ *** | TWA: 10 mg/m ³ inhalable *** | TWA: 10 mg/m ³ *** |

Appropriate engineering controls

Engineering measures It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in the handling of this product contain explosion relief vents or an explosion suppression or an oxygen-deficient environment. Use only appropriately classified electrical equipment and powered industrial trucks.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses.

Skin and Body Protection Minimize skin contamination by following good industrial hygiene practices.

Hand Protection Wear protective gloves tested to relevant standards (e.g. Europe: EN374, US: F739, AS/NZA: 2161). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity, and specific local conditions. Always seek advice from glove suppliers. Contaminated gloves should be replaced. For prolonged contact, gloves with at least 0.7 mm in thickness and breakthrough time of more than 480 minutes are recommended. For short-term contact, gloves with at least 0.4 mm in thickness and breakthrough time of more than 30 minutes are recommended. Recommended glove material includes butyl rubber, fluorocarbon rubber, nitrile rubber, chloroprene rubber or neoprene.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

General information Protective engineering solutions should be implemented and in use. These recommendations apply to the product as supplied. If the product is used in mixtures, contact an appropriate protective equipment supplier or industrial hygienist for more information.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|-------------------------------------|--------------------------------|
| Appearance | Dry powder Free flowing powder |
| Physical State | Solid |
| Color | No information available |
| Odor | Slight marine |
| Odor threshold | No information available |
| pH | 7.5 - 10.5 |
| Melting point/freezing point | Not applicable |
| Boiling Point/Range | No information available |
| Flash point | Not applicable |
| Evaporation Rate | No information available |
| Flammability (solid, gas) | No information available |
| Flammability Limit in Air | |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Relative density | No information available |
| Specific gravity | No information available |
| Water solubility | 10% maximum (% by weight) |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Viscosity, kinematic | No information available |
| Viscosity, dynamic | No information available |
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Molecular weight | No information available |
| Bulk density | No information available |
| K_{st} | >0 bar m/s |

10. STABILITY AND REACTIVITY

| | |
|---|---|
| Reactivity | Not applicable |
| Chemical Stability | Stable under recommended storage conditions. |
| Possibility of Hazardous Reactions | None under normal processing. |
| Hazardous polymerization | Hazardous polymerization does not occur. |
| Conditions to avoid | Dust formation. Excessive heat. Humid air. Sparks. |
| Incompatible materials | Oxidizing agents. Strong acids. |
| Hazardous Decomposition Products | Burning produces obnoxious and toxic fumes. Sulfur oxides.*** |

11. TOXICOLOGICAL INFORMATION

Product Information

Sensitization Not expected to be sensitizing based on the components.

Component Information

| Chemical name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|-------------------------|---------------------------|----------------------------|
| Carrageenan (9000-07-1) | 5400 mg/kg (Rat) | >2000 mg/kg (Rabbit) | >0.93 mg/l (4h) (Rat)* |
| Calcium sulfate, anhydrous (7778-18-9) | > 3000 mg/kg (Rat)*** | | |
| Trisodium Phosphate (7601-54-9) | > 2000 mg/kg (Rat)*** | > 300 mg/kg (Rabbit)*** | > 2.16 mg/L (Rat) 1 h*** |

* No mortality was observed at the maximum attainable concentration.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity Product does not present a chronic toxicity hazard based on known or supplied information.
Mutagenicity No known mutagenic or teratogenic effects.
Carcinogenicity Contains no ingredient listed as a carcinogen
Reproductive toxicity This product does not contain any known or suspected reproductive hazards.
STOT - single exposure None known.
STOT - repeated exposure None noted in chronic animal studies.
Aspiration hazard Aspiration may cause chemical pneumonitis. Excessive inhalation of dust can mechanically impede respiration.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated. Carrageenan is an extract of seaweeds of the class Rhodophyceae (red seaweeds).

| Chemical name | Toxicity to algae | Toxicity to fish | Toxicity to daphnia and other aquatic invertebrates |
|---|-------------------|--|---|
| Calcium sulfate, anhydrous 7778-18-9 | | 96 h LC50: = 2980 mg/L (Lepomis macrochirus) static 96 h LC50: > 1970 mg/L (Pimephales promelas) static*** | 120 h EC50: = 3200 mg/L (Nitscheria linearis)*** |

Persistence and degradability Expected to biodegrade, based on component information.

Bioaccumulation Bioaccumulation is unlikely.

Mobility No information available.

Other Adverse Effects None known.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT NOT REGULATED

TDG NOT REGULATED

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any

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chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

| | |
|--|-----|
| Acute health hazard | Yes |
| Chronic health hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Trisodium Phosphate 7601-54-9 | 5000 lb*** | | | X*** |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs |
|----------------------------------|--------------------------|------------------------------------|
| Trisodium Phosphate 7601-54-9 | 5000 lb 2270 kg*** | |

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---|------------|---------------|--------------|
| Calcium sulfate, anhydrous 7778-18-9 | X*** | X*** | X*** |
| Trisodium Phosphate 7601-54-9 | X*** | X*** | X*** |

International Inventories

A food, food additive, drug, cosmetic, or device, when manufactured, processed or distributed in commerce for use as a food, food additive, drug, cosmetic, or device is not subject to the notification requirements of 40 CFR 720.

| Chemical name | TSCA (United States) | DSL (Canada) | EINECS/ELINC S (Europe) | ENCS (Japan) | China (IECSC) | KECL (Korea) | PICCS (Philippines) | AICS (Australia) |
|---|----------------------|--------------|-------------------------|--------------|---------------|--------------|---------------------|------------------|
| Carrageenan 9000-07-1 | X*** | X*** | X*** | | X*** | X*** | X*** | X*** |
| Calcium sulfate, anhydrous 7778-18-9 | X*** | X*** | X*** | X*** | X*** | X*** | X*** | X*** |
| Trisodium Phosphate 7601-54-9 | X*** | X*** | X*** | X*** | X*** | X*** | X*** | X*** |

Mexico - Grade Moderate risk, Grade 2

| Chemical name | Carcinogen Status | Mexico |
|----------------------------|-------------------|--------------------------------------|
| Calcium sulfate, anhydrous | | Mexico: TWA 10 mg/m ³ *** |

WHMIS Statement

This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

WHMIS Hazard Class See section 2 for more information

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|------------------------------|
| 16. OTHER INFORMATION |
|------------------------------|

| | | | | |
|-------------|-------------------------|-----------------------|--------------------------|------------------------------|
| NFPA | Health Hazards 2 | Flammability 1 | Instability 0 | Special Hazards - |
| HMIS | Health Hazards 2 | Flammability 1 | Physical hazard 0 | Personal Protection X |

*Indicates a chronic health hazard.

Revision date: 2019-05-01
Reason for revision: *** Indicates updated section***

Disclaimer

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. DuPont Nutrition USA, Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of DuPont Nutrition USA, Inc., DuPont Nutrition USA, Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.***

Prepared By:

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Product Suitability

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End of Safety Data Sheet