

SAFETY DATA SHEET

Format	GHS-OSHA
Version	1
Valid through	15-10-23

1.- PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifiers

- a) Product Name **CARRA™ Sol PGU 5435 F**
The product consists of carrageenan.
- b) Other means of identification Product code: PFCSPGU5435F
- c) Synonyms Carrageenan: Irish Moss, Chondrus crypsus

1.2 Recommended use of the chemical and restrictions on use

- a) Recommended use Food stuffs
- b) Restrictions on use Food additive
Guidelines on use are given by the U.S. Code of Federal Regulations (21 CFR) and the European Union (EU) Directives, Japan Food Additive Codex and Food and Nutrition Paper of FAO.

1.3 Manufacturer Address

- Manufacturer Extractos Naturales Gelymar, S.A.
- Headquarters Av. Pedro de Valdivia Norte 129
C.P. 520274, Providencia, Santiago
Phone: +56 (2) 29898000
- Manufacturing Site Puerto Montt Camino a Pargua Km 25
C.P. 753-0120, Puerto Montt, Chile
Phone: +56 (2) 2353 100

Distributor : None

1.4 Emergency telephone number

Risk Prevention
Manufacturing Site Puerto Montt
Phone: +56 (2) 2353 116

Distributed by:

Univar Solutions USA Inc.
3075 Highland Pkwy Ste 200
Downers Grove, IL 60515
Telephone: 1-855-429-2661
Emergency phone number:
CHEMTREC 1-800-424-9300

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2.- Hazards identification

2.1 Classification of the substance or mixture according to Regulatory Status

2.1.1 29 CFR 1910.1200 Appendix A

This mixture and its components, are not included in the list of hazardous chemicals of

Standard CFR 29,
Part Number 1900,
Part title: Occupational Safety and Health Standards
Subpart H
Subpart title: Hazardous materials
Standard number 1910.119 Appendix A
Title: List of Highly Hazardous Chemicals, Toxics and Reactives
Group source: e-CFR

In spite of this, the present Safety Data Sheet has been done in agreement with the 29 CFR 1900.1200 regulation, United States Department of Labor, in the spirit of delivering information of the risk and safety measures to protect the workers in the occupational place.

2.1.2 Classification according to OSHA

This mixture and its components, is classified as hazardous substances by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.2. Potential health hazards

2.2.1 Swallowed

The mixture and its components, has NOT been classified as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Unintentional ingestion should not be a cause for concern. However, could be gastrointestinal tract discomfort, nausea and vomiting.

Polysaccharides are not substantially absorbed from the gastrointestinal tract but may produce a laxative effect.
Larger doses may produce intestinal obstruction or stomach concretions.
Large quantities of the substituted polysaccharide, (as with other bulk laxatives), may temporarily increase flatulence.
Oesophageal obstruction, by swelling, may occur if the material is swallowed dry.

2.2.2 Eye

Direct contact with the eye may cause transient discomfort characterized by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. The material may produce foreign body irritation in certain individuals.

2.2.3 Skin

The material does not cause skin irritation following contact (classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
- Open cuts, abraded or irritated skin should not be exposed to this material. It may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

2.2.4 Inhaled

The mixture and its components are not considered as a hazard due to their non-volatile nature

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The material does not produce adverse health effects or irritation of the respiratory tract in situations of short exposure (as classified using animal models), but long exposure could cause respiratory problems. Good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

2.2.5 Chronic health effects

There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray.

2.2.5 Chronic health effects

The components of this mixture are not considered as carcinogens by IARC and OSHA.

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray.

2.3 Physical Hazards

This product can form clouds of powder that in enough concentration and in the presence of an ignition source may explode.

Prevent leakage of powder and its contact with water. This mixture is slippery and may cause accidents in the working place.

2.3 Label elements and precautionary statements

Regarding the risk of explosion.

2.3.1 Hazard Pictograms

None, because the mixture and its components are not explosives by themselves

2.3.2 Signal word

- Warning

2.3.3 Hazard Statement

- Can form clouds of powder that may explode in fire

2.3.4 Supplemental Hazard Statements

- There is not

2.3.5 Precaution statements

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking

2.3.6 Additional information

- None

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3. Composition/Information on ingredient CS PGU 5435 F

Chemical Name	CAS No.	Synonyms
Carrageenan	9064-57-7	Irish Moss, Chondrous cryspus

4. Emergency and First aid procedures

4.1 Description of necessary measures according to the different routes of exposure

4.1.1 Swallowed (Ingestion)

Rinse mouth out with water.

Never attempt to induce vomiting unless directed to do so by medical personnel.

Never give anything to drink to an unconscious person, even if he is fully conscious.

If large quantities of this material are swallowed, call a physician immediately.

Loosen tight clothing such as a collar, tie, belt or waistband.

4.1.2 Eye

If this product comes in contact with eyes:

Wash out immediately with water. Rinse with plenty of water for a prolonged period whilst keeping the eyes wide open.

If irritation continues, seek medical attention.

Removal of contact lenses after an eye injury should only be undertaken by skilled medical personnel.

4.1.3 Skin

If skin or hair contact occurs:

Flush skin and hair with running water (and soap if available).

Seek medical attention in event of irritation.

4.1.4 Inhaled

If dust is inhaled, remove from contaminated area.

Encourage patient to blow nose to ensure clear passage of breathing.

If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

Treat symptomatically

4.2 Most important symptoms and effects, both acute and delayed.

Most Important symptoms and effects, both acute and effects, both acute and delayer: Difficulty breathing. Cough.

4.3 Indication of any immediate medical attention and special treatment needed

No data available. Treat symptomatically.

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5. Fire-fighting measures

5.1 Suitable and unsuitable extinguishing media.

5.1.1 Suitable

- Water spray or fog to avoid accumulation and dispersion of dust, reducing in this way the explosion potential.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Important: Wet product is slippery

5.1.2 Unsuitable

Strong water jet.

5.2 General fire hazards :

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.

Static electricity and sparks might be sufficient to ignite dust clouds. The possibility of ignition depends on the minimum ignition temperature that for carrageenan is 430 °C

5.3 Special protective equipment and precaution for fire-fighters.

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment

- Glasses:
- Chemical goggles.
- Gloves:
- Breathing apparatus: MSHA/NIOSH or equivalent

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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 use:

- Wear respiratory protection.
- Avoid dust formation.
- Avoid breathing dust
- Ensure adequate ventilation.
- Avoid contact with eyes and skin

6.2 Environmental precautions

- Prevent further leakage or spillage.
- Do not let product enter drains.

6.3 Methods for containment

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- Avoid the formation of dust deposits because the removal of dust can form clouds of powder.
- This powder in the air can explode

6.4 Methods and cleaning up

- Pick up and arrange disposal without creating dust.
- Sweep up and shovel. Keep in suitable, closed containers for disposal.
- Only if it is necessary wash with water following recovery, but notice that wet product is slippery.

7. Handling and storage

7.1 Precautions for safe 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.

7.2 Conditions for safe storage, including any incompatibilities.

7.2.1 Condition for safe storage

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.
- This material is hygroscopic

7.2.2 Incompatibilities

- Oxidizing agents
- Strong Acids

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8. Exposure controls personal protection

8.1 Control parameters e.g. occupational exposure limit values or biological limit values

Derived No Effect Level (DNEL)	:	Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction. Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace. Powder handling equipment such as dust collectors, dryers, blenders, mills, local exhaust ventilation and material transport systems involved in the handling of this product require additional protection measures such as explosion relief vents, or an explosion suppression or an oxygen-deficient environment. Use only appropriately classified electrical equipment and powered industrial trucks.
Personal protective equipment	:	
Eye/Face Protection	:	Safety glasses Safety glasses with side shields or chemical goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166. Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.
Hand protection	:	Protective gloves
Skin and Body protection	:	Minimize skin contamination by following good industrial hygiene practices.
Respiratory Protection	:	If in spite of local exhaust an adverse concentration of the substance in air could occur If exposure to dust causes irritation or local nuisance or in case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection must be provided in agreement with current local regulations taking into account the exposure limits. References: OSHA's 29 CFR 1910.134, ANSI Z88.2 and European Standard EN 149/2001
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 a suitable protective equipment supplier or industrial hygienist for more information.
Environmental exposure controls	:	See Section 12 for additional Ecological Information.

Information about occupational exposure limits

Component /Ingredient	Regulatory Limits		Recommended Limits	
	OSHA PEL	Cal / OSHA PEL	ACGIH / TLV	NIOSH
CS PGU 5435 F	Not data available	Not data available	Not data available	Short-term exposure limit TWA 10 mg / m3 June 2003, Russia.

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9. Physical and chemical properties

9.1 Characteristics of hazardous chemicals

Characteristic	CS PGU 5435 F
• Appearance	Form: Fine Powder. Colour dark beige to white
• Odour	Weak
• Odour Threshold	No data available
• pH	8- 11
• Melting point/freezing point	83° C
• Initial boiling point and boiling range	No data available
• Flash point	Not applicable. Not flammable solid.
• Evaporation rate	No data available
• Flammability (solid, gas)	93°C for iota carrageenan. Other types higher temperature
• Upper/lower flammability or explosive limits	There aren't more information
• Vapour pressure	No data available
• Vapour density	No data available
• Relative density	No data available
• Water solubility	Partially soluble: ca.5 g/1000ml, 25°C (77°F).
• Partition coefficient: octanol/water	No data available
• Autoignition temperature	380 – 420°C
• Decomposition temperature	Low temperature, @ 885°C, immediately after the merger.
• Viscosity	1.5% Carrageenan dispersion at 75°C : > 5 cps
• Explosive properties	Non explosive substance, but clouds of dust can explode in presence of fire.
• Oxidizing properties	Non oxidizing material according to EC criteria.

9.2 Physical hazards including the potential for fire, explosion and reactivity

Both ingredients can form clouds of dust that in the presence of ignition source can explode.

10. Stability and Reactivity

Characteristic	CS PGU 5435 F
10.1 Reactivity	Very low chemical reactivity
10.2 Chemical stability	Very stable under normal conditions of use
10.3 Possibility of hazardous reactions	Hazardous polymerization does not occur
10.4 Conditions to avoid	Dust accumulation, heat, sparks, flames. Dust clouds may be explosive under certain conditions.
10.5 Incompatible materials	Oxidizing agents, strong acids.
10.6 Hazardous decomposition products	Combustion products may include: Carbon monoxide (CO), carbon dioxide (CO ₂), other pyrolysis products typical of burning organic material as aldehydes ketones, sulfur oxides and water Combustion may emit poisonous fumes.

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11. Toxicological information

11.1 Health hazards

See section 2

11.2 Specific Target Organ Toxicity (STOT)

Component Information	Single Exposure	Repeated Exposure	Sensitization
CS PGU 5435 F	None known	None known None noted in chronic animal studies	Not expected to be sensitizing

11.3 Acute Toxicity: Tests on animals

Component Information	LD50 Oral	LD50 Dermal	LC50 Inhalation
CS PGU 5435 F	1500 mg/kg (rat)	> 2,000 mg/kg (rabbit)	>0.93mg/l (4h) (rat)

*Source=IARC

11.4 Chronic Effects

Route of exposure	CS PGU 5435 F
Ingestion	No data available
Inhalation	Dust may cause respiratory tract irritation
Skin contact	No data available
Eyes	Dust may cause eye irritation

The product does not represent a chronic toxicity hazard based on the known and available information.

11.5 Carcinogenicity

Component Information	OSHA	NTP / USA*	IARC	ACGIH
CS PGU 5435 F	Not included in OSHA list of carcinogens	Not listed	Not a carcinogen in agreement to IARC	Not Listed

- National Toxicology Program

Carrageenans for food application have molecular weight higher than 100,000 kDa and do not have carcinogenic effects

11.6 Other Immediate or Delayed Effects

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Effect	CS PGU 5435 F
Reproductive Toxicity	Not know reproductive hazards
Teratogenicity	Not know teratogenic effects
Mutagenicity	Not know mutagenic effects
Aspiration hazard	Dust may cause respiratory tract irritation. Aspiration may cause chemical pneumonitis.

12. Ecological Information

Effect	CS PGU 5435 F
12.1 Eco-toxicity Aquatic Organisms	Not toxic
12.2 Eco-toxicity Terrestrial	Not toxic
12.3 Persistence and degradability	Expected to be biodegradable
12.4 Bio-accumulative potential	Bio-accumulation is unlikely
12.5 Other adverse effects	Even though the product is not environmentally hazardous, large or frequent spills can have harmful or damaging effects on the environment.

13. Disposal considerations

13.1 Waste treatment methods

Disposal instructions		
Standard Product	Contaminated Product	Packaging
Discharge, treatment or disposal is subject to national, state or local laws. In case of obsolete material or product that exceeds its shelf life, before throwing it to the garbage, please consider the following: This material may be recycled if it is unused, or if it has not been contaminated. Please contact your Gelymar's representative to consult if shelf life can be extended.	The product could become hazardous waste if it is mixed with hazardous waste or chemicals. Consult local regulations, specific for hazardous waste disposal. References: USA: 40 CFR 261 EU: 2008/98/EC and 2000/532/EC	Since emptied bags retain product residue, follow label warnings even after the bags are emptied.

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14. Transport information

The UN/NA Number or DOT Number, UN Proper shipping name, Transport Class and Packing Group do not applied for this product, because their components are not hazardous substances.

Other transport information

Components	IATA	IMO	RID / ADR
CS PGU 5435 F	Not regulated as a hazardous material	Not regulated as a hazardous material	Not regulated as a hazardous material

15. Other regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Country / Region	Legislation in force	Commentaries
European Union	CLP Regulation Directive 2008/122 EC Regulation (EC) 1336 / 2008	The components of this product are not included in the list of hazardous chemicals.
Canada	Hazardous Product Act (HPA) Controlled Product Regulations (CPR) WHMIS-2015	The components of this product are not included in the list of hazardous chemicals.

16. Other information

16.1 Other non-GHS Classifications

Ingredient	CS PGU 5435 F	Code
USA: HMIS		0 Minimal 1 slight 2 Moderate 3 Serious 4 Severe
✓ Health hazard	1	
✓ Flamability	1	
✓ Physical hazard	0	
✓ Personal protection	X	
USA: NFPA		0= Insignificant 1= Slight 2= Moderate 3= High 4= Extreme
✓ Health hazard	1	
✓ Flammability	1	
✓ Reactivity	0	
✓ Specific hazard	None	

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16.2 International Inventories

The components of this product are included in the following international inventories

Component	TSCA (USA)	DSL (Canada)	EINECS / ELI NCS (Europe)	ENCS (Japan)	IECSC China	PICCS (Philippines)	AICS (Australia)
CS PGU 5435 F	X	X		X	X	X	X

TSCA: Toxic Substances Control Act DSL: Domestic and Non-domestic Substance List EINECS : European Inventory of Existing Commercial Chemicals ENCS: Existing and New Chemical Substances Inventory	IECS Inventory of Existing Chemical Substances in China PICCS:Philippines Inventory of Chemicals and Chemical Substances AICS: Australian Inventory of Chemical Substances
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To our knowledge and to our understanding, the information provided in this safety data sheet is correct to the date of its publication. The above mentioned information only is facilitated to guide the user in the manipulation, use, prosecution, storage, transport and elimination of the product in satisfactory safety conditions and it will not be had as one guarantee or quality specification. This SDS will have to be used jointly with the technical specifications, which it does not substitute. The information only refers to the designated concrete product and cannot prove of application if the above mentioned product is used in combination with other materials or in another production process. The SDS does not exempt the user of the obligation to make sure that expires the whole current regulation related to its activity.

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