

GENUVISCO® carrageenan CG-129

Prepared in accordance with GB/T 16483-2008, GB/TGB/T 24774-2009, GB 13690 – 2009, GB/T 17519–2013
Globally Harmonized System (GHS)

Issue Date: 21/May/2017

Print Date: 07/Feb/2018

Revision Number: 1.2

Page 1 of 13

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identifier

Product Name: GENUVISCO® carrageenan CG-129

Pure substance/mixture Substance

Carrageenan
CAS Number 9000-07-1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Stabilizer. Thickening agent.

1.3. Details of the supplier of the safety data sheet

Company: CP Kelco Singapore Pte., Ltd.
8th Floor, No.3 Building,
No.1535, Hongmei Road,
Xuhui District
Shanghai 200233 P.R.China

Tel: +65 6491 9100

Fax: +65 6491 9101

Manufacturing Site CP Kelco ApS
DK-4623 Lille Skensved
Denmark
Tel +45 56 165 616
Fax +45 56 169 446

1.4. Emergency telephone number CHEMTREC: +1 800 424 9300 or International +1 703 527 3887
In Asia Pacific: +65 6491 9100

E-mail customer.request@cpkelco.com

Internet www.cpkelco.com

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017
Print Date: 07/Feb/2018

Revision Number: 1.2
Page 2 of 13

GHS Classification

| | |
|-----------------------------|----------------|
| Physical Hazard | Not classified |
| Health Hazard | Not classified |
| Environmental Hazard | Not classified |

2.2. Label elements

| | |
|---------------------------|--|
| Symbols/Pictograms | None |
| Signal Word | None |
| Hazard Statement | The substance does not meet the criteria for classification. |

Precautionary Statements

| | |
|-------------------------|---|
| Prevention | Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Avoid dust formation Combustible dust may form combustible (explosive) dust-air mixtures Take precautionary measures against static discharges Avoid breathing dust. Use mechanical ventilation (dilution and local exhaust) to control exposure Wear protective gloves/protective clothing/eye protection/face protection. |
| Response | Wash hands and face before breaks and immediately after handling the product. If skin irritation occurs: Get medical advice/attention |
| Spills and Leaks | Collect spillage |
| Storage | Store in a dry place Store away from incompatible materials. |
| Disposal | Dispose of contents/containers in accordance with local regulations |

Hazards not otherwise classified (HNOC) COMBUSTIBLE DUST MAY FORM COMBUSTIBLE (EXPLOSIVE) DUSTAIR MIXTURES. Contact with dust can cause mechanical irritation or drying of the skin. Slippery, can cause falls if walked on.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture versus substance information Substance

| Chemical Name | CAS Number | China (IECSC) | TSCA: United States | REACH registration number | China classification | % by Wt |
|---------------|------------|---------------|---------------------|---------------------------|--|---------|
| Carrageenan | 9000-07-1 | Y | Y | Exempt | Not classified as a dangerous goods/substances | -- |

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017
Print Date: 07/Feb/2018

Revision Number: 1.2
Page 3 of 13

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

| | |
|--|--|
| General Advice | Employ good industrial hygiene practice. Wear suitable protective clothing, gloves and eye/face protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. When in doubt or if symptoms are observed, get medical advice. |
| Eye Contact | In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. |
| Skin Contact | Wash with plenty of soap and water. |
| Ingestion | Rinse mouth thoroughly with water. |
| Inhalation | Do not breathe dust. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| Aspiration hazard | Based on available data, the classification criteria are not met. |
| 4.2. Most important symptoms and effects, both acute and delayed | Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin. |
| 4.3. Indication of any immediate medical attention and special treatment needed | Treatment should be symptomatic and supportive. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017
 Print Date: 07/Feb/2018

Revision Number: 1.2
 Page 4 of 13

Section 5: FIRE FIGHTING MEASURES

General Advice Treat as "Class A" fire. Product will burn when in contact with a flame Self extinguishes when ignition source is removed. Tends to smoulder.

5.1. Extinguishing media

Suitable Extinguishing Media Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO2).

Unsuitable Extinguishing Media None known.

5.2. Special hazards arising from the substance or mixture

Dust Explosion Hazard Can contain sufficient fines to cause a combustible dust explosion. Do not breathe smoke, gases or vapors generated

Hazardous Combustion Products Carbon dioxide
Carbon monoxide

5.3. Advice for firefighters

Special protective equipment for firefighters Wear a self-contained breathing apparatus and chemical protective clothing.

Fire-fighting measures Water mist may be used to cool closed containers. Combustible dust may form combustible (explosive) dust-air mixtures.

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017
Print Date: 07/Feb/2018

Revision Number: 1.2
Page 5 of 13

Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment and emergency procedures** Keep unauthorized personnel away. Ensure adequate ventilation. Avoid dust formation. Use only non-sparking tools. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Use personal protection recommended in Section 8.
- For non-emergency personnel** Keep unauthorized personnel away.
- For emergency responders** Keep unauthorized personnel away. Use personal protection recommended in Section 8.
- 6.2. Environmental precautions** Avoid runoff to waterways and sewers.
- 6.3. Methods and material for containment and cleaning up** Large Spill:. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Small Spill:. Vacuum or sweep material and place in a disposal container. The use of water wash down is not recommended unless the spilled material is already wet.
- 6.4. Reference to other sections** Section 8: Exposure controls and personal protection. See Section 13 for additional waste treatment information.

Section 7: HANDLING AND STORAGE

- 7.1. Precautions for safe handling** Avoid exposure - obtain special instructions before use
Do not handle until all safety precautions have been read and understood.
Minimize dust generation and accumulation
Do not breathe dust
Ensure adequate ventilation
Wear appropriate personal protective clothing to prevent skin contact
Handle in accordance with good industrial hygiene and safety practice
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Use only non-sparking tools
- 7.2. Conditions for safe storage, including any incompatibilities** Keep container tightly closed and dry. Store away from incompatible materials.

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017

Print Date: 07/Feb/2018

Revision Number: 1.2

Page 6 of 13

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits

| Chemical Name | China | ACGIH | OSHA |
|--------------------------|-----------------|-----------------|-----------------|
| Carrageenan 9000-07-1 | Not established | Not established | Not established |

Biological Limit Values: No information available

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Engineering Measures

Provide a good standard of controlled ventilation (5 to 10 air changes per hour). Use exhaust ventilation to keep airborne concentrations below exposure limits. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Wear suitable protective clothing.

Hand Protection For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

Respiratory Protection In case of inadequate ventilation wear respiratory protection.

Thermal hazards None known. Wear suitable protective clothing.

Hygiene Measures Follow general hygiene considerations recognized as common good workplace practices. The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc.

Environmental Exposure Controls Dispose of in accordance with local regulations.

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017
Print Date: 07/Feb/2018

Revision Number: 1.2
Page 7 of 13

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | |
|--------------------------------------|------------------------------------|
| Physical State | Solid. Powder. |
| Color | White to light yellow -- light tan |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH: | 7.0 - 10.0, solution (1 %) |
| Melting Point / Melting Range | No data available |
| Boiling Point | No information available |
| Flash Point: | Not applicable |
| Evaporation Rate | No data available |
| Flammability (solid, gas) | |
| Flammability Limit in Air | No data available |
| Explosive Properties | No information available |
| Vapor Pressure | No data available |
| Vapor Density | No data available |
| Water Solubility | Soluble |
| Partition coefficient | No data available |
| Viscosity | No information available |
| Specific Gravity | No data available |
| Oxidizing Properties | No data available |
| Decomposition Temperature | No data available |

Section 10: STABILITY AND REACTIVITY

| | |
|---|---|
| 10.1. Reactivity | None. |
| 10.2. Chemical stability | Stable under normal conditions. |
| 10.3. Possibility of hazardous reactions | No specific hazard known. |
| 10.4. Conditions to avoid | Dust formation. Keep away from heat, sparks and flame. Strong oxidizing agents. |
| 10.6. Hazardous decomposition products | None known. |

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017
Print Date: 07/Feb/2018

Revision Number: 1.2
Page 8 of 13

Section 11: TOXICOLOGICAL INFORMATION

| | |
|---|--|
| General Information | Users are advised to consider national Occupational Exposure Limits or other equivalent values. |
| Information on Likely Routes of Exposure | |
| Inhalation | Do not breathe dust. |
| Skin | Not a skin sensitizer. Prolonged or repeated contact may dry skin and cause irritation. |
| Eyes | Dust contact with the eyes can lead to mechanical irritation. |
| Ingestion | Ingestion is not a likely route of exposure. |
| Aspiration hazard | Not an expected route of exposure. |
| Symptoms | May cause respiratory tract irritation Repeated exposure may cause skin dryness or cracking Dust contact with the eyes can lead to mechanical irritation |
| <u>Carrageenan - 9000-07-1</u> Oral LD50 | 5400 mg/kg Rat |
| Acute Toxicity | Not classified. |
| Chronic Toxicity | No evidence of mutagenic, reproductive or carcinogenic effects. |
| Chronic Effects | Based on available data, the classification criteria are not met. |
| Reported Human Effects | No evidence of mutagenic, reproductive or carcinogenic effects. |
| Serious eye damage/eye irritation | Dust may cause mechanical irritation to eyes. Based on available data, the classification criteria are not met. |
| Respiratory Sensitization | Based on available data, the classification criteria are not met. Inhalation of dust in high concentration may cause irritation of respiratory system. |
| Skin Corrosion/Irritation | Based on available data, the classification criteria are not met. Contact with dust can cause mechanical irritation or drying of the skin. |
| Skin Sensitization | Based on available data, the classification criteria are not met. Not a skin sensitizer. |
| Mutagenicity | Based on available data, the classification criteria are not met. |
| Reproductive Toxicity | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity - Single exposure | No data available. |
| Specific target organ toxicity - | No data available. |

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017
Print Date: 07/Feb/2018

Revision Number: 1.2
Page 9 of 13

Repeated exposure

Section 12: ECOLOGICAL INFORMATION

- 12.1. Ecotoxicity** Not considered to be harmful to aquatic life. Avoid release to the environment.
- 12.2. Persistence and degradability** Readily biodegradable.
- 12.3. Bioaccumulative potential** This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
- Partition coefficient** No data available.
- Bioconcentration factor (BCF)** Not available.
- 12.4. Mobility in soil** No data available.
- 12.5. Results of PBT and vPvB assessment** This substance does not meet the criteria for classification as PBT or vPvB.
- 12.6. Other adverse effects** None known

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- Contaminated Packaging** Product residue may remain in empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.
- Waste codes** Waste codes should be assigned by the user based on the application for which the product was used
- Disposal Methods** Dispose of waste product or used containers according to local regulations

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017

Print Date: 07/Feb/2018

Revision Number: 1.2

Page 10 of 13

Section 14: TRANSPORT INFORMATION

Mode of Transportation (Road, Water, Air, Rail)

| | |
|----------|---------------|
| US DOT | Not regulated |
| ADR | Not regulated |
| RID | Not regulated |
| ADN | Not regulated |
| IATA | Not regulated |
| IMDG/IMO | Not regulated |
| ICAO | Not regulated |

14.1. UN number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

14.6. Special precautions for user Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017

Print Date: 07/Feb/2018

Revision Number: 1.2

Page 11 of 13

Section 15: REGULATORY INFORMATION

Global Inventories

Pure substance/mixture Substance

| Chemical Name | CAS Number | EC No | REACH registration number | Australia (AICS) | Canada (DSL) | China (IECSC) | Japan | S. Korea (KECL) | Mexico | New Zealand | Philippines (PICCS) | Taiwan | TSCA: United States |
|---------------|------------|-----------|---------------------------|------------------|--------------|---------------|------------|-----------------|--------|-------------|---------------------|--------|---------------------|
| Carrageenan | 9000-07-1 | 232-524-2 | Exempt | Y | Y | Y | KE-14-0067 | Y | Y | Y | Y | Y | Y |

Legend

X / Y: Complies , - / N: Not Listed Exempt

The product has not been classified as dangerous according to the legislation in force (GB13690 and GB6944). safety data sheet conforms to the following laws, regulations and standards::

Regulations on the Control over Safety of Dangerous Chemicals

Regulations on Labor Protection in Workplaces Where Toxic Products Are Used

Measures for the Safe Use of Chemicals in Workplaces

Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)

General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009)

Packing Symbol of Dangerous Goods(GB190-2009)

Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017

Print Date: 07/Feb/2018

Revision Number: 1.2

Page 12 of 13

Section 16: OTHER INFORMATION

| | |
|-----------------------------------|---|
| Reason for Revision | GB/T 16483-2008 GB/T 24774-2009 GB 13690 – 2009 GB/T 17519–2013 |
| Prepared by | CP Kelco Global Regulatory Affairs Email: Regulatory.Affairs@cpkelco.com |
| GHS Classification | |
| Physical Hazard | Not classified |
| Health Hazard | Not classified |
| Environmental Hazard | Not classified |
| Symbols/Pictograms | None |
| Signal Word | None |
| Hazard Statement | This product is not classified as hazardous according to the UN GHS guideline and labeling is not required This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) Combustible dust may form combustible (explosive) dust-air mixtures |
| Training Advice | Do not handle until all safety precautions have been read and understood. |
| Abbreviations and acronyms | International Agency for Research on Cancer (IARC) International Air Transport Association (IATA) International Maritime Dangerous Goods (IMDG) International Uniform Chemical Information Database (IUCLID) Workplace Hazardous Materials Information System (WHMIS) status and classification EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification DOT (Department of Transportation) OSHA (Occupational Safety and Health Administration of the US Department of Labor) TWA - Time-Weighted Average Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008) PPE - Personal Protection Equipment NIOSH - National Institute for Occupational Safety and Health TDG (Transport of Dangerous Goods) Canada CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) Reportable Quantity (RQ) (RQ/% in mixture) STEL - Short Term Exposure Limit TLV® - Threshold Limit Value Derived No Effect Level (DNEL) SVHC: Substances of Very High Concern for Authorization: Land transport (ADR/RID) Biochemical oxygen demand (BOD) Chemical oxygen demand (COD) ICAO (air) (IMDG) International Maritime Dangerous Goods Positive Pressure Self-Contained Breathing Apparatus (SCBA) |

CP KELCO

Safety Data Sheet

GENUVISCO® carrageenan CG-129

Issue Date: 21/May/2017

Print Date: 07/Feb/2018

Revision Number: 1.2

Page 13 of 13

Predicted No Effect Concentration (PNEC)
Globally Harmonized System (GHS)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet