

PRODUIT DU GOLFE ST. LAURENT LTÉE
(PRODUCTEUR DE) FARINE ET HUILE DE POISSON
COQUILLE ET FARINE DE CRUSTACÉ



ST. LAURENT GULF PRODUCTS LTD.
(PRODUCER OF) FISH MEAL & OIL
CRUSTACEAN SHELL & MEAL

MSDS – Chitosan

Issued September 14, 2005

Section 1. Product Information

Name	:	Chitosan extracted from American lobster (<i>Homarus americanus</i>) or from Snow crab (<i>Chionoecetes opilio</i>)
Formula	:	$C_{12}H_{24}N_2O_9$
Distributed by	:	St. Laurent Gulf Products Ltd. Caraquet, NB, Canada
Address	:	2260 rue du Quai, Bas Caraquet, NB E1W 1B7, Canada
24 Hour Emergency Telephone	:	506-727-8708

Section 2. Hazards Data

DOT shipping requirements	:	N/A
DOT Label	:	N/A
Surface Freight Classification	:	N/A

Section 3. Physical Characteristics

Boiling Point	:	N/A
Vapor Pressure (mm Hg)/Vapor Density (Air=1)	:	N/A
Water Solubility (%)	:	
Physical State	:	Solid flakes
pH (1:2 w/water)	:	
Specific Gravity H₂O=1	:	N/A
Melting Point	:	N/A
Evaporation Rate (butyl acetate=1)	:	N/A
Appearance/Colour/Odour	:	White. Slight crab/lobster odour.

PRODUIT DU GOLFE ST. LAURENT LTÉE
(PRODUCTEUR DE) FARINE ET HUILE DE POISSON
COQUILLE ET FARINE DE CRUSTACÉ



ST. LAURENT GULF PRODUCTS LTD.
(PRODUCER OF) FISH MEAL & OIL
CRUSTACEAN SHELL & MEAL

Section 4. Fire and Explosion Hazard

Flash Point (Method)	: N/A
Flammable Limits	: N/A
Extinguishing Media	: Water spray, carbon dioxide, dry chemical powder, or appropriate foam.
Special fire fighting procedures	: Firefighter must wear SCBA ¹ & full protective clothing
Unusual Fire and Explosion Hazards	: Emits toxic fumes under fire conditions
Auto-Ignition Temperature	: N/A
Auto Decomposition Temperature	: N/A

Section 5. Reactivity Data

Stability	: Quite stable
Conditions to Avoid	: N/A
Incompatibility (Materials to Avoid)	: Strong oxidizing agents, protect from moisture
Hazardous Decomposition	: Toxic fumes of : carbon monoxide, carbon dioxide, nitrogen oxide, & hydrogen chloride gas
Hazardous Polymerization	: Will not occur

Section 6. Health Hazard Data

Routes of Entry	: Inhalation. Skin. Ingestion
Effects of Overexposure	: May be harmful by inhalation, ingestion, or skin absorption. May cause eye and skin irritation
Signs and Symptoms of Exposure	:
Medical Conditions Generally Aggravated by Exposure	: Allergic reaction may occur.
Emergency First Aid Procedures	: In case of contact immediately wash skin with soap and copious amounts of water. EYES: flush with copious amounts of water for 15 min. Assure adequate flushing of eyes by separating eye lids. If inhaled remove to fresh air. Remove and wash contaminated clothing promptly. If swallowed, wash our mouth with water, provided the person is conscious.

¹ Self-contained breathing apparatus

PRODUIT DU GOLFE ST. LAURENT LTÉE
(PRODUCTEUR DE) FARINE ET HUILE DE POISSON
COQUILLE ET FARINE DE CRUSTACÉ



ST. LAURENT GULF PRODUCTS LTD.
(PRODUCER OF) FISH MEAL & OIL
CRUSTACEAN SHELL & MEAL

Section 7. Preventive Measures

Precautions for Safe Handling and Use

Release or Spill : Do not raise dust. Sweep up material and put into container for disposal.
Wash & ventilate spill site.

Waste Disposal Method : Employ normal disposal procedures.
Observe Federal, State, and Local Laws.

Precaution to be taken in handling and storing : Product should be kept in a dry place.
Keep storage container tightly closed.

Protective Gloves : Chemical resistant gloves

Eye Protection : Safety goggles

Other Precautions : Avoid prolonged/repeated exposure. Wash thoroughly after handling.

Section 8. First Aid Measures

Control Measures

Respiratory : Dust mask with organic vapor filter.

Ventilation : Local exhaust
Mechanical (general)

Protective Gloves : Necessary if allergic

Eye Protection : Goggles recommended

Other Protective : None

Clothing or Equipment

Work/Hygienic Practices : Wash with soap and water

Disclaimer

This information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. St. Laurent Gulf Products Ltd makes no warranty of any kind, expressed or implied, concerning the safe use of this material in your process or combination with any other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.