

MATERIAL SAFETY DATA SHEET

1. Product Name/Identification

ChitoVan CF

2. Composition

Active Ingredient: Chitosan, dry flake	CAS # 90-12-76-4
Chemical name(s):	Chitosan
Source:	From recycled crab and shrimp shells

3. Physical/Chemical Properties

Appearance and Odor:	Dry oatmeal-like flakes.
Solubility:	Completely insoluble in water
Specific Gravity:	0.2±0.05 g/mL
Boiling Point:	NA
Chitosan Molecular Formula	C ₆ H ₁₁ NO ₄
Chitosan Molecular Weight	161
pH:	NA

4. Toxicological Data

Acute oral, LD50 (mice)	>16 g/kg
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5. Ecological Information

LOEC Acute Rainbow trout	>10,000 mg/l
NOEC Acute Rainbow trout	>10,000 mg/l
LC50 Acute Rainbow trout	>10,000 mg/l

6. Fire and Explosion Hazard Data

Flash Point:	n/a
Flammability:	Non-flammable
Unusual Fire and Explosion Hazards:	There is no danger of fire or explosion.
Fire Fighting Media:	Use water or foam (not flammable in nature)

7. Health Hazards Information

Acute Health Effects – Signs and Symptoms of Exposure, Emergency and First Aid Procedures:	<p>Eye Contact: Chitosan may be mildly irritating to eyes. Flush with water for 15 minutes to remove and call a physician. Skin Contact: Chitosan is not hazardous but cleansing the skin after use is advisable.</p> <p>Inhalation: if a large amount of dust is inhaled remove to fresh air and call a physician. Ingestion: If swallowed, no specific intervention is indicated as the compound is not likely to be hazardous by ingestion. However, consult a physician if necessary.</p>
Potential Chronic Health Effects:	There is no known effect from chronic exposure to this product
Carcinogenicity:	Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

8. Personal Protective Equipment

Respiratory Protection:	Not required.
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Protective Gloves:	Rubber gloves are recommended.
Eye Protection:	Safety glasses are recommended.
Other Protective Clothing:	Not needed.

9. Regulatory

TSCA:	Not listed on the TSCA inventory.
OSHA:	Not considered hazardous.
EPA:	Exempt from EPA code.
SARA Section 302:	Does not have an RQ or TPQ.
SARA Section 313:	Not reportable under Section 313.
RCRA	Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a waste material containing the product, or derived from the product should be classified as a hazardous waste.

10. Storage, Handling and Disposal

Storage:	Store away from strong oxidizers.
For Spills:	Utilize protective clothing. Sweep up spilled Chitosan and dilute residual dust with water and hose down.
Waste Disposal Method:	Land disposal is acceptable as the compound is biodegradable. Follow local, state and federal regulations.
Work/Hygiene Practices:	Follow good hygienic and housekeeping practices. Clean up areas where Chitosan was used.

11. Transportation Information

DOT Shipping Name:	Chitosan
Technical Shipping Name:	Chitosan
DOT Hazard Class	Class 55, not regulated
Product RQ (lbs):	None
DOT Label:	None
DOT Placard:	None required
Product Label:	Chitosan

12. Stability and Reactivity

Chemical Family:	Natural polysaccharide
Stability:	Stable
Hazardous Polymerization:	Polymerization will not occur.
Incompatibility:	Incompatible with strong oxidants and strong bases.
Decomposition:	Decomposition will not occur.
Instability Conditions:	Stable at normal temperatures and storage conditions.
Decomposition Temperature:	211 ^o F
Decomposition Products:	NA

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