

SAFETY DATA SHEET



1. IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Identifier:	ChitoRem [®] Chitin Complex
Recommended Use:	Bioremediation
Recommended Restrictions:	none known
Supplier Name:	JRW Bioremediation, LLC
Address:	14321 W. 96 th Terrace Lenexa, KS 66215
Telephone:	913-438-5544
EMERGENCY Telephone:	800-779-5545 x 116 (Mon-Fri 9am-5pm CST) 913-961-6644 (afterhours)

2. HAZARD IDENTIFICATION

Health & Physical Hazards:

This product contains no substances in their current physical state that are considered to be hazardous to health unless subject is allergic to shellfish. While the chemical, physical, and toxicological properties have not been thoroughly examined, no acute or delayed symptoms or effects have been observed to date.

Flammability Hazards:

This is a Non-Flammable ground flour.

Reactivity Hazards:

This product is considered stable.

OSHA Hazards:

This material is not considered hazardous by OSHA. No labels or signage are known to be required.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS #	% by Weight
Chitin	1398-61-4	20-40%
Protein	NA	20-60%
Calcium carbonate	471-34-1	10-20%
Water/moisture	7732-18-5	10-20%

4. FIRST-AID MEASURES

Inhalation:

Inhalation of dust may accumulate on linings of sinus and lungs, possibly causing mild irritation of respiratory system and dry cough. Move to fresh air.

Skin Contact:

Powder could cause mild irritation if allergic to shellfish. In case of contact with skin, immediately wash with plenty of soap and water. Seek medical attention if skin irritation develops or persists.

Eye Contact:

May cause mechanical irritation. In case of contact with eyes, treat as a foreign object and immediately flush eyes with water for at least 15 minutes, lifting eyelids to facilitate irrigation. Get medical attention if necessary.

Ingestion:

Not likely to be hazardous by ingestion.

Signs and symptoms of exposure:

Mild irritation to skin and eyes upon contact; mild irritation to respiratory system upon inhalation.

Medical Conditions aggravated by exposure:

Shellfish allergies. May aggravate preexisting respiratory conditions.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Water, carbon dioxide, sand, foam, or dry chemical.
Unsuitable Extinguishing Media:	Do not use heavy water stream as it may spread or scatter.
Specific hazards from substance/mixture:	Depending on moisture content, and particle size, airborne dust of chitin might explode in the presence of an ignition source. It is comparable to flour and wood dust. Dust explosion limits unknown.
General fire hazards:	No unusual fire or explosion hazards noted
Special protective equipment / precautions for fire-fighters:	Treat as Class A. Use protective clothing and positive pressure breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Methods and Materials for containment and clean up:

Material may be vacuumed or collected and placed in container for recovery or disposal. Material is biodegradable. Land disposal is acceptable, according to all local, state, and federal regulations at an approved waste treatment facility.

Personal precautions / Protective equipment:

NIOSH/MSHA-approved respirator is recommended when large quantities of the dust is airborne. Gloves are not required but recommended to minimize potential mechanical irritation from handling. Safety glasses recommended when there is a high level of airborne dust.

Environmental precautions:

No special environmental precautions required.

7. HANDLING AND STORAGE

Precautions for safe handling:

Follow good hygienic and housekeeping practices. Clean up areas where Chitin dust settles to avoid excessive accumulation of this combustible material. Minimize blow down, sweeping, and other practices that generate high airborne dust concentrations. Wash to remove dust after use. When using, do not eat, drink, or smoke.

Conditions for safe storage, including any incompatibilities:

Keep in properly labeled containers. Store in a cool, dry area away from open flames and strong oxidizers. Use adequate mechanical ventilation, especially in confined spaces. Local exhaust is recommended.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:	No exposure or biological limits noted for ingredients(s).
Appropriate engineering controls:	Use adequate mechanical ventilation, especially in confined spaces.
Individual protection measures, such as Personal Protective Equipment (PPE):	
Eye/Face protection:	Safety glasses recommended when there is a high level of airborne dust.
Skin / hand / body protection:	Gloves are not required but recommended to minimize potential mechanical irritation from handling. Suitable protective clothing as defined by employer.
Respiratory protection:	None required under normal use in well ventilated area. NIOSH/MSHA-approved respirator is recommended when large quantities of the dust is airborne.
General considerations:	Use good industrial hygiene and best safety practices. When using material, do not eat, drink, or smoke. Avoid use of this product if allergic to shellfish.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	light to medium brownish with occasional orange flecks
Physical state:	varying sizes of sand-like ground granular and flaked particles to powdery flour solids
Odor:	fish-like crab odor
pH:	not determined
Melting point/freezing point:	not determined
Initial boiling point:	not applicable
Closed cup Flash point:	not applicable
Evaporation rate:	not determined
Flammability (solid, gas):	not determined
Upper/lower flammability or explosive limits:	not determined
Vapor pressure (Mg Hg):	not determined
Vapor density (air = 1):	not determined
Density:	+/- 25lbs/CF
Specific gravity (H2O = 1):	21 lbs/ ft3
Solubility in water:	insoluble in water, alcohols, and most acids.
Auto-ignition temperature:	not determined

10. STABILITY AND REACTIVITY

Reactivity:	Non-reactive under conditions of normal use, storage & transport.
Chemical stability:	Stable under conditions of normal use, storage and transport.
Possibility of hazardous reactions:	Hazardous polymerization will not occur.
Conditions to avoid:	None known
Incompatible materials:	Not applicable
Hazardous decomposition products:	None known

11. TOXICOLOGICAL INFORMATION

No adverse health effects are expected if the product is used as intended, under normal circumstances, and in accordance with this Safety Data Sheet. Individuals with allergies to shellfish should avoid handling and use of this product.

Inhalation:	Inhalation of dust may accumulate on linings of sinus and lungs, possibly causing cause mild irritation of respiratory system and dry cough. Move to fresh air.
Ingestion:	Not likely to be hazardous by ingestion.
Skin:	Powder could cause mild irritation if allergic to shellfish. In case of contact with skin, immediately wash with plenty of soap and water. Seek medical attention if skin irritation develops or persists. No known effect from chronic exposure.
Eye contact:	May cause mechanical irritation. In case of contact with eyes, treat as a foreign object and immediately flush eyes with water for at least 15 minutes, lifting eyelids to facilitate irrigation. Get medical attention if necessary.
Signs & symptoms of exposure:	Mild irritation to skin and eyes upon contact; mild irritation to respiratory system upon inhalation. No known effect from chronic exposure.
Carcinogenicity:	Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA
Mutagenicity:	No known effect.
Reproductive Toxicity:	No known effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Product is not considered environmentally hazardous and is not expected to cause significant harm to aquatic, animal, or plant life.
Persistence/degradability:	Readily biodegradable over time.
Bio accumulative potential:	Not expected to bio concentrate or bio accumulate.
Mobility in soil:	Immobile.

13. DISPOSAL CONSIDERATIONS

Disposal Methods:

Material may be vacuumed or collected and placed in container for recovery or disposal. Material is biodegradable. Land disposal is acceptable, according to all local, state, and federal regulations at an approved waste treatment facility.

14. TRANSPORTATION INFORMATION

DOT hazard class:	Not Applicable, non-regulated
Labeling:	Not Applicable
Proper Shipping Name:	ChitoRem® Chitin Complex
NMFC#:	175420
Class	50

15. REGULATORY INFORMATION

Restrictions on use: None.

Other regulations: No information available or not applicable.

16. OTHER INFORMATION

The information in this SDS summarizes to the best of our knowledge at the date of issue, the chemical health and safety hazards of this material and general guidance for safe handling, use, processing, storage, transportation, disposal, and release. This information is not intended to be considered a warranty or quality specifications. The information contained relates only to the specific material designated and may not be valid if used in conjunction with other materials or in any other processes other than intended use. If further clarification or information is required, please contact JRW Bioremediation.