

MATERIAL SAFETY DATA SHEET (MSDS)

Chitosan

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1. Product identifiers

Product name: Chitosan (Acid-Soluble)

CAS-No.: 9012-76-4

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

Identified uses: Laboratory chemicals, industrial & professional use only.

3. Details of the supplier of the safety data sheet

Company: Promecens Entosystems Private Limited

3196, Sector 15, Sonipat, Haryana – 131001, India

- **Pune Office (Plant and R&D):** Venture Center, 100 NCL Innovation Park, Pune, Maharashtra, India, 411008
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SECTION 2: Hazards identification

1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2. Label elements

No labelling elements required.

3. Other hazards

Does not contain PBT or vPvB substances at $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms: Poly(D-glucosamine); Deacetylated chitin

CAS-No.: 9012-76-4

No additional components require disclosure.

SECTION 4: First aid measures

1. Description of first aid measures

- **General advice:** Consult a physician. Show this SDS to the attending doctor.
- **Inhalation:** Move to fresh air. Provide artificial respiration if required.
- **Skin contact:** Wash with soap and water. Seek medical advice if irritation occurs.
- **Eye contact:** Rinse with water.
- **Ingestion:** Rinse mouth. Do not induce vomiting unless advised by a physician.

2. Most important symptoms and effects

Refer to Section 11.

3. Indication of immediate medical attention

No specific data available.

SECTION 5: Firefighting measures

1. Extinguishing media

Use water spray, dry chemical, alcohol-resistant foam, or CO₂.

2. Special hazards

May release carbon and nitrogen oxides.

3. Advice for firefighters

Use self-contained breathing apparatus.

4. Additional information

No further relevant data.

SECTION 6: Accidental release measures

1. Personal precautions

Avoid dust formation. Ensure proper ventilation.

2. Environmental precautions

Prevent release into drains or environment.

3. Methods for cleaning up

Sweep up, avoid dust, and dispose into closed containers.

4. Reference to other sections

Refer to Sections 8 and 13.

SECTION 7: Handling and storage

1. Precautions for safe handling

Avoid dust and ensure adequate ventilation.

2. Conditions for safe storage

Store in cool, dry, and well-ventilated areas. Keep container tightly sealed.

3. Specific end use(s)

As indicated in Section 1.2.

SECTION 8: Exposure controls/personal protection

1. Control parameters

No occupational exposure limits established.

2. Exposure controls

- **Engineering controls:** Use standard hygiene and safety practices.
- **Eye protection:** Safety goggles (EN 166/NIOSH).
- **Skin protection:** Wear protective gloves and clothing.
- **Respiratory protection:** Use dust masks if necessary (EN 143/NIOSH).
- **Environmental exposure:** Avoid release into environment.

SECTION 9: Physical and chemical properties

Property	Value
Appearance	Powder, beige
Odour	No data available
pH	No data available
Melting/Freezing point	No data available
Boiling point/range	No data available
Flash point	No data available
Solubility in water	No data available
Auto-ignition temp	No data available
Viscosity	No data available
Explosive properties	No data available

SECTION 10: Stability and reactivity

- 1. Reactivity:** No data available
- 2. Stability:** Stable under recommended conditions
- 3. Hazardous reactions:** None expected
- 4. Conditions to avoid:** Strong oxidizers
- 5. Hazardous decomposition:** Carbon and nitrogen oxides under fire

SECTION 11: Toxicological information

Parameter	Value
Acute toxicity (oral, rat)	LD ₅₀ > 10,000 mg/kg
Skin/Eye irritation	No data available
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	Not listed by IARC
Reproductive toxicity	No data available
STOT - single/repeated exposure	No data available
Aspiration hazard	No data available

SECTION 12: Ecological information

Parameter	Value
LC ₅₀ - Fish (<i>Oncorhynchus mykiss</i>)	1.73 mg/L (96h)
EC ₅₀ - <i>Daphnia pulex</i>	13.69 mg/L (48h)
Persistence/degradability	No data available
Bioaccumulation/mobility in soil	No data available
PBT/vPvB assessment	Not applicable
Other adverse effects	Toxic to aquatic life

SECTION 13: Disposal considerations

1. Waste treatment methods

Dispose through licensed facilities. Burn in chemical incinerator with afterburner and scrubber.

Contaminated packaging: Dispose as unused product.

SECTION 14: Transport information

Parameter	Value
UN number	Not applicable
UN proper shipping name	Not dangerous goods
Transport hazard class(es)	-
Packing group	-
Environmental hazards	No
Marine pollutant (IMDG)	No
Special precautions	None

SECTION 15: Regulatory information

1. Safety, health and environmental regulations

Compliant with Regulation (EC) No. 1907/2006 (REACH)

2. Chemical safety assessment

Not conducted for this product.

SECTION 16: Other information

The information provided in this MSDS is believed to be accurate and is based on the best available knowledge. However, Promecens Entosystems Private Limited assumes no liability for completeness or accuracy. It is the responsibility of the user to ensure safe use and compliance with applicable laws and regulations.

