

Safety Data Sheet: Cellulase

1. Identification

Product	Cellulase; CAS 9012-54-8; EC 232-734-4
Use	Professional pulp and cellulose-fibre process development.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Cellulase. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Respiratory sensitization Category 1.
Signal word / symbols	Danger; GHS08
Hazard statements	H334: may cause allergy or asthma symptoms or breathing difficulties if inhaled.
Prevention	Use adequate ventilation; avoid inhaling mist. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Cellulase enzyme component, CAS 9012-54-8, EC 232-734-4, in an aqueous enzyme preparation. A reviewed liquid reference lists 10–20% active enzyme protein. This fraction and its carrier recipe are not assigned to the supplied >100,000 U/mL activity grade.
Supply grade	Activity >100,000 U/mL
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to mist.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Seek medical advice for persistent irritation.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Seek medical advice if irritation persists.
Ingestion	Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain medical advice.
Effects / treatment	Enzyme aerosols or dried-residue dust can sensitize the respiratory system and cause coughing, wheezing or breathing difficulty, including delayed effects. Obtain medical assistance for respiratory symptoms. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide suited to the surrounding fire. Prevent dispersal of enzyme aerosols and contain contaminated runoff.
Hazards	The reviewed liquid reference does not assign specific hazardous decomposition products. Avoid heating to dryness or exposure to fire; firefighters must use self-contained breathing apparatus.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personnel	Isolate the area, ventilate and avoid aerosols and dried-residue dust. Use suitable gloves, eye and respiratory protection.
Environment	Contain spills and protect drains and waterways.
Cleanup	Recover liquid using contained low-splash methods or compatible inert absorbent. Clean residues carefully without spraying or high-pressure washing; prevent dried residues becoming airborne.

7. Handling and Storage

Handling	Use enclosed low-splash transfer with adequate ventilation. Prevent enzyme aerosols and dried-residue dust; do not spray or use high-pressure cleaning. Wear gloves, eye protection and work clothing, with suitable respiratory protection when airborne enzyme cannot be controlled.
Storage	Keep tightly closed in clean compatible containers in a cool, dry area. Protect the enzyme preparation from excessive heat, direct sunlight, freezing and contamination. Follow the storage temperature on the ordered grade label.
Incompatibilities	No specific chemical incompatibility is assigned by the reviewed liquid reference. Excessive heat, freezing and contamination can reduce activity; do not mix with unqualified process chemicals.

8. Exposure Controls / Personal Protection

Exposure limits	Reviewed enzyme component DMEL for long-term local inhalation exposure: 60 ng/m ³ active enzyme protein. This is not a universal occupational limit; apply local requirements and a task-specific aerosol-control assessment.
Engineering controls	Use local extraction where mist can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	Brown liquid
Physical state	Aqueous enzyme preparation
pH, supply TDS	4.8–5.2
Density, supply TDS	≤1.25 g/mL
Other properties	Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred.

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	No specific chemical incompatibility is assigned by the reviewed liquid reference. Excessive heat, freezing and contamination can reduce activity; do not mix with unqualified process chemicals.
Decomposition	The reviewed liquid reference does not assign specific hazardous decomposition products. Avoid heating to dryness or exposure to fire; firefighters must use self-contained breathing apparatus.

11. Toxicological Information

Exposure effects	Enzyme aerosols or dried-residue dust can sensitize the respiratory system and cause coughing, wheezing or breathing difficulty, including delayed effects. Obtain medical assistance for respiratory symptoms.
Reference classification	Respiratory sensitization Category 1.
Data limits	Respiratory sensitization is established for the enzyme component. Reviewed active-enzyme-protein oral LD50 >2,000 mg/kg and non-irritating skin/eye tests do not characterize the actual carrier or complete supplied batch. No supplied-batch reproductive endpoint is assigned.

12. Ecological Information

Environmental effects	Reviewed active-enzyme-protein fish LC50 and water-flea EC50 exceed 39.5 mg/L; component reported readily biodegradable. These component results do not establish the environmental safety of the actual formulation.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Non-dangerous goods
UN number	Not assigned
Shipping name	Not regulated as dangerous goods
Class / packing group	Reviewed aqueous cellulase references: DOT / IMDG / IATA non-dangerous goods; no UN number or packing group assigned. This does not characterize a different carrier or finished formulation.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Cellulase; CAS 9012-54-8; EC 232-734-4
HS reference	350790; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished formulation.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H334: may cause allergy or asthma symptoms or breathing difficulties if inhaled.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.1; prepared 2026-10-07. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

Revision: 2026.1 | Revision date: 2026-10-07