



Material Safety Data Sheet

Section 1- Chemical Product and Company Identification	
Common Name	Oat Beta-(1,3)(1,4)-D-Glucan
Trade Name	Beta Glucan / Oat Beta Glucan / Glucan
Supplier	Shanghai ZNC Biotechnology Co., Ltd. Room 617, Building 4-5, No.500 East Gaoke Road, Pudong New Area, Shanghai (201210), China Tel: 0086-21-68453907 Fax: 0086-21-58356660
	CAS No. 9041-22-9 IN CASE OF EMERGENCY CHEMIREC (24hr) CALL: +86-21-68453907

Section 2- Composition and Information on Ingredients				
Name	CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	% by Weight
Oat Beta-Glucan	9041-22-9	NONE	NONE	10% – 90%

Section 3- Hazards Identification	
Emergency Overview	May cause skin irritation and/or dermatitis.
Principle Routes of Exposure	Skin
Inhalation	May cause irritation of respiratory tract
Ingestion	May be harmful if swallowed
Skin Contact	May cause allergic skin reaction
Eye Contact	Avoid contact with eyes
Statements of Hazard	May cause allergic skin reaction.
Statement of Spill or Leak – ANSI Label	Eliminate all ignition sources. Contain and/or absorb spill with inert material (e. g. sand, vermiculite). Then place in appropriate container. For large spills, use water spray to disperse vapors, flush spill area. Prevent runoff from entering waterways ore sewers.

Section 4- First Aid Measures	
General Information	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Eye Contact	In the case of contact with eyes, rinse opened eye for several minutes under running water. Then consult a doctor.
Skin Contact	In case of contact, immediately wash skin with plenty of water and rinse thoroughly. Get medical attention immediately.
Inhalation	If inhaled, move to fresh air or artificial respiration if needed. Get medical attention immediately.
Ingestion	Do not induce vomiting without medical advice.

Protection of First-Aiders	No information available.
Medical Conditions	None Known
Aggravated By Exposure	

Section 5- Fire and Explosion Data

Suitable Extinguishing Media	Use dry chemical, CO ₂ , water spray or "alcohol" foam
Specific Hazards	Burning produces irritant fumes.
Unusual Hazards	None known
Special Protective Equipment For Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific Methods	Water mist may be used to cool closed containers.
Flash Point	Not determined
Autoignition Temperature	Not determined

Section 6- Accidental Release Measures

Personal Precautions	Use personal protective equipment.
Environmental Precautions	Prevent product from entering drains.
Methods For Cleaning Up	Sweep up and shovel into suitable containers for disposal.

Section 7- Handling and Storage

Storage	Room temperature
Handling	Use only in area provided with appropriate exhaust ventilation.
Safe Handling Advice	Wear personal protective equipment.
Incompatible Products	Oxidising and spontaneously flammable products

Section 8- Exposure Controls/ Personal Protection

Personal Protective Equipment	<p>Engineering Measures: Ensure adequate ventilation, especially in confined areas.</p> <p>Respiratory Protection: Breathing apparatus only if aerosol or dust is formed.</p> <p>Hand Protection: Pvc or other plastic material gloves.</p> <p>Skin and Body Protection: Usual safety precautions while handling the product will provide adequate protection against this potential effect.</p> <p>Eye Protection: Safety glasses with side-shields</p> <p>Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice</p>
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Section 9- Physical and Chemical Properties

Appearance and Odour	Powder	Physical State	Solid
Boiling Point	Not available.	Color	White to off-white.
Melting Point	Not available.	Ignition Temperature	Not available.
Density	Not available.	Vapor Pressure	Not available.
Solubility in Water	Not available.	Vapor Density	Not available.
Autoignition Temperature	Not available.	Flash Point	Not available.

Section 10- Stability and Reactivity Data

Stability	Stable under recommended storage conditions.
Polymerization	None under normal processing.
Material to Avoid	Strong oxidising agents
Conditions to Avoid	Exposure to air or moisture over prolonged periods.

Section 11- Toxicological Information	
Product Information	RTECS Number: Not available.
Routes of Entry	Eye and skin contact. Inhalation. Ingestion.
Toxicity to Animals	(Oral) LD50 Rat: Not Determined; (Oral) LD50 Mouse: Not determined.
Toxic Effects on Humans	<p>Chronic Toxicity: Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.</p> <p>Local Effects: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.</p> <p>Specific Effects: May include moderate to severe erythema (redness) and moderate edema (raised skin), mausea, vomiting, headache..</p> <p>Primary Irritation: Not available.</p> <p>Carcinogenic Effects: Not available.</p> <p>Mutagenic Effects: Not available.</p> <p>Reproductive Toxicity: Not available.</p>
Section 12- Ecological Information	
Mobility	Not available.
Bioaccumulation	Not available.
Ecotoxicity Effects	Not available.
Aquatic Toxicity	Not available.
Section 13- Disposal Considerations	
Waste from Residues/ Unused Products	Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.
Contaminated Packaging	Do not re-use empty containers.
Section 14- Transport Information	
UN/ID No.	Not regulated
DOT Classification	Not regulated
TDG (Canada)	WHMIS Hazard Class: Non-controlled
IMDG/IMO	IMDG – Hazard Classifications: Not Applicable
Section 15- Other Regulatory Information and Pictograms	
European/ International Regulations	<p>European Labelling in Accordance with EC Directives</p> <p>Hazard Symbols: Not available.</p> <p>Risk Phrases:</p> <p>Safety Phrases: S22 Do not breathe dust. S 24/25 Avoid contact with skin and eyes. WGK (Water Danger/Protection): 0</p>
U.S. Federal	TSCA: Glycine is listed on the TSCA inventory.
SARA 313 Notification	The above is your notification as to the SARA 313 listing for this product(s) pursuant to Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

	<p>If you are unsure if you are subject to the reporting requirements of Section 313, or need more information, please call the EPA Emergency Planning and Community Right-To-Know Information Hotline: (800) 535-0202 or (202) 479-2499 (in Washington DC or Alaska).</p>
State Notification	<p>The above information is your notice as to the Right-to-Know listings of the state products(s). Individual states will list chemicals for a variety of reasons including, but not limited to, the compounds toxicity; carcinogenic, tumorigenic and/or reproductive hazards; and the compounds environmental impact if accidentally released.</p>

Section 16- Other Information

MSDS Code	ZNCBIO 1001
Prepared by	Environment Health & Safety Department
References	Not available.
Other Special Considerations	Not available.
Validated by <i>Whip Zhu</i> on Nov. 28, 2013	Verified by <i>Whip Zhu</i> Printed on Nov. 28, 2013
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Notice to Reader

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other material, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable **Shanghai ZNC Biotechnology Co., Ltd.** assumes no responsibility for the completeness or accuracy of the information contained herein.*