

**Bahl Farms Inc/Consulting (Bahl Naturals)
Material Safety Data Sheet
Alphagalactosidase**

1. Product name	Alphagalactosidase
Description	Micro-granular enzyme preparation
Use	Processing aid in the food/beverage/feed industry
Supplier's Name:	Bahl Farms Inc/Consulting (Bahl Naturals Line of Products)
Address	17519 Jetton road, Cornelius, NC 28031 USA

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical nature / Synonyms	Alphagalactosidase / Mellbiase
IUB / EINECS / CAS nos	3.2.1.22 / 232-792-0 / 9025-35-8
Components contributing to the hazard	Enzyme Protein
Concentration range	1-10 %
Classification	Xn, R42, S22

3. HAZARDS IDENTIFICATION

This product contains micro granular enzyme and therefore the risk associated with inhalation of enzyme dust is significantly reduced. Repeated inhalation of enzyme dust may cause sensitization and will cause allergic type responses in sensitized individuals. Respiratory symptoms are similar to those of asthma or hay-fever. Prolonged skin contact may cause skin irritation.

4. FIRST AID MEASURES

Inhalation: Remove from exposure. If irritation or allergic response develops, consult a doctor.

Skin contact: Wash skin with plenty of cold water.

Eye contact: Irrigate eyes with cold water for at least 20 mins. Obtain medical advice if irritation occurs.

Ingestion: Rinse mouth thoroughly with water and drink water afterwards. Consult a doctor.

5. FIRE FIGHTING MEASURES

Suitable fire fighting extinguishing media: water, foam

6. ACCIDENTAL RELEASE MEASURES

Personal protective equipment as outlined in section 8 must be used when dealing with accidental release of product. The product is completely biodegradable. Spillages of enzyme products should be dealt with immediately. Remove large spillages by vacuum with a high efficiency filter. Flush remainder with plenty of water. Avoid splashing. Do not use high pressure or steam washing. Provide sufficient ventilation. Wash all contaminated clothing. **MSDS** Alphagalactosidase

7. HANDLING AND STORAGE

Airborne dust or aerosols can develop during spillage, material transfers, pumping of air through liquid, vigorous stirring, steam cleaning and high pressure water flushing. Any operation which might create dust or aerosol should take place in areas that are provided with adequate exhaust or other forms of mechanical control systems. It is important to prevent direct contact with skin. Operations which may create spillage and splashing must be avoided. Rubbing of the face and eyes should be avoided when wearing protective gloves that have been in contact with enzyme.

Store product in dry and cool conditions. This product is capable of forming flammable dust clouds in the air, but this hazard is not significant under normal conditions of use in the industry. Source of ignition should be eliminated and build up of dust on floors and equipment avoided.

8. EXPOSURE CONTROLS PERSONAL PROTECTION

Personal protection is necessary in circumstances where there is accidental or unconfined release of product.

Respiratory protection:	Respirator approved for solid and liquid particulates including dusts and mists e.g. 3M 8810 mask or respirator with P3 filter or equivalents
Hand protection:	Impermeable gloves
Eye protection:	Protective glasses

9. PHYSICAL AND CHEMICAL PROPERTIES

Color/Physical state:	Brown powder
Odor:	Slight fermentation odor
Density:	Not available
pH:	Not applicable
Solubility:	Insoluble carrier
Flashpoint:	Not applicable

10. STABILITY AND REACTIVITY

This product is stable under normal conditions of use. Enzyme dust, like other dust, can form explosive clouds at concentrations above 50 g/m³. These dust clouds have minimum cloud ignition temperature of 400 °C. No hazardous conditions or decomposition products have been identified.

11. TOXICOLOGICAL INFORMATION

Long term experience of this product type indicates no danger to health when properly handled under industrial conditions. Repeated inhalation of enzyme aerosol may cause sensitization and will cause allergic type reaction in sensitized individuals. Prolonged skin contact may cause irritation.

MSDS Alphagalactosidase**12. ECOLOGICAL INFORMATION**

This product type is believed not to be dangerous to the environment. This product is expected to be biodegradable.

13. DISPOSAL INFORMATION

Product and contaminated packaging must be disposed of in accordance with local authority regulations.

Liquid enzymes:

Surplus liquid / enzyme spills may be disposed of to municipal / waste water treatment plants as it is biodegradable, or in accordance with local authority regulations

Liquid enzyme packaging:

Containers should be drained of excess enzyme residue and rinsed with water. The containers may then be recycled / reused or disposed of as in accordance with local authority regulations.

Powder enzymes:

Powder enzymes may be disposed of to landfill / Incineration as in accordance with local authority regulations.

Powder enzyme packaging:

Care should be taken to ensure that the packaging is free from any enzyme residues before it can be sent for recycling/reuse or further disposal in accordance with local authority regulations:

14. TRANSPORT INFORMATION

This product is not a dangerous good according to international regulations for transport.