

SAFETY DATA SHEET  
(Globally Harmonized System)

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

- 1.1 Product identifier  
**AMAIZE®**
- 1.2 Other means of identification Not applicable
- 1.3 Recommended use of the chemical and restrictions on use  
**AMAIZE®** is intended for the controlled hydrolysis of starch from corn, wheat and barley in feed for beef and dairy cattle.
- 1.4 Details of the supplier of the safety data sheet  
Alltech Inc.  
3031 Catnip Hill Road  
Nicholasville, KY 40356  
Phone: (01) (859) 885-9613 [U.S.A.]  
Fax: (01) (859) 887-6736 [U.S.A.]
- 1.5 Emergency telephone number  
Chem Trec: 1-800-424-9300 24 hours

## SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture Not applicable  
Classification:  
Respiratory sensitizer (Category 1)  
H Phrases:  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
P Phrases:  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P285 In case of inadequate ventilation wear respiratory protection.  
P304+341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342+311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician  
P501 Dispose of contents/container in accordance with local/regional/national/international regulation
- 2.2 GHS Label elements Not applicable
- 2.3 Other hazards

- Inhalation: Exposure to dust may cause irritation to the nose, throat or respiratory system. If application creates dust, use appropriate approved respiratory protection. Persons with allergies should avoid exposure.
- Skin Contact: Skin contact may cause a slight irritation. Symptoms may include redness, itching and pain. Persons with allergies should avoid exposure.
- Eye Contact: Product may cause slight irritation. Symptoms include redness, itching and pain.
- Ingestion: Not found to be toxic by oral exposure. Ingestion of this product may cause slight irritation.
- Chronic Health Effects: Not identified.

SECTION 3: Composition/information of ingredients

- 3.1 Substances Not applicable
- 3.2 Mixtures

CAS#:	Component	Weight %
NA	Processed grain by-products	Not disclosed
NA	Dried <i>Aspergillus oryzae</i> fermentation product	Not disclosed

NA: Not applicable

SECTION 4: First aid measures

- 4.1 Description of first aid measures
  - Eyes: Flush eyes immediately with copious amounts of clean water for 15 minutes. If irritation or redness persists, seek medical attention if allergic response exhibited.
  - Skin: Remove affected clothing immediately. Flush affected area(s) with copious amounts of soap and water. If skin surface is damaged, apply a clean dressing. Wash contaminated clothing before reuse. If irritation or redness develops, seek medical attention immediately.
  - Inhalation: Remove victim from source and allow to rest in well ventilated area. If breathing is difficult, obtain medical attention immediately.
  - Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention.
- 4.2 Most important symptoms and effects, both acute and delayed Not identified.
- 4.3 Indication of any immediate medical attention and special treatment needed Not identified.

SECTION 5: Firefighting measures

- 5.1 Suitable extinguishing media
  - Use media that is appropriate to treat surrounding fire. Consider alcohol-resistant foam, carbon dioxide, regular dry chemical, or water spray. Avoid heavy stream of water. Self contained breathing apparatus is required.

- 5.2 Special hazards arising from the substance or mixture  
Evolves carbon dioxide, carbon monoxide or hydrocarbon fumes upon combustion.
- 5.3 Special protective actions for fire-fighters  
Move container from fire area if it can be done without risk. Do not scatter spilled material with high pressure water streams. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products.  
Fire fighters should wear self-contained breathing apparatus with full face piece operated in positive pressure mode and protective clothing to prevent contact with skin and eyes.

#### SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures  
Ventilate the area. Wear appropriate protective equipment as specified in section 8. Avoid dust formation and avoid inhalation of dust. Use a respirator or a combination filter. Keep unnecessary personnel away.
- 6.2 Environmental precautions  
Place contaminated materials in disposal containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material. Do not dispose in canals, surface water, or ground water.
- 6.3 Methods and material for containment and cleaning up  
Sweep, shovel, or vacuum up the material. Avoid any excess dust formation. Use caution as product may be slippery when wet. Keep product out of sewage and drainage systems and all bodies of water. Clean spills immediately. Ventilate the contaminated area. Thoroughly wash the area with water after a spill.

#### SECTION 7: Handling and storage

- 7.1 Precautions for safe handling  
Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly with soap and water after handling. The use of respiratory protection is advised when dust concentrations exceed any established exposure limits (see section 8).
- 7.2 Conditions for safe storage, including any incompatibilities  
Store in a cool, dry place. Shelf life under these conditions is 18 months.

#### SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters                      Not available  
Component (CAS#):
- 8.2 Appropriate engineering controls:  
Use process enclosure, general dilution ventilation, or local exhaust systems, where necessary to maintain airborne dust concentrations below the applicable regulations. A

system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.

### 8.3 Individual protection measures

- Eye/face: Protective goggles or face shields.
- Skin: Wear impervious gloves and general purpose overalls with elasticized cuffs and leg bottoms. Persons with allergies should avoid exposure.
- Respiratory: Protection is not normally required. Wear a dust mask or other appropriate approved respiratory protection when effective engineering controls are not feasible or during operations that generate airborne dust concentrations exceeding the relevant standards. A respiratory protection program that meets applicable requirements whenever workplace conditions warrant a respirator's use. Persons with allergies should avoid exposure.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

(a) Physical appearance	Tan, free-flowing granulate
(b) Odour	Not available
(c) Odour Threshold	Not available
(d) Bulk Density	Not available
(e) pH	Not available
(f) Melting point/freezing point	Not available
(g) Initial boiling point	Not available
(h) Flash point	Not available
(i) Evaporation rate	Not available
(j) Flammability	Not available
(k) Upper/lower flammability or explosive limits	Not available
(l) Vapour pressure	Not available
(m) Vapour density	Not available
(n) Relative density	Not available
(o) Solubility	Not available
(p) Partition coefficient: n-octanol/water	Not available
(q) Auto ignition temperature	Not available
(r) Decomposition temperature	Not available
(s) Viscosity	Not available

### 9.2 Other information

To the best of our knowledge the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

## SECTION 10: Stability and reactivity

10.1	Reactivity	Not available
10.2	Chemical stability	Product is stable under normal storage conditions (21 °C, 1 atm).
10.3	Possibility of hazardous reactions	Not available
10.4	Conditions to avoid	Avoid moisture, heat and sources of ignition.
10.5	Incompatible materials	Not available
10.6	Hazardous decomposition products	Not available

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- |                                       |   |
|---------------------------------------|---|
| (a) Acute toxicity                    | Not identified  |
| (b) Skin corrosion/irritation         | Not expected to be toxic. Exposure may cause slight irritation. |
| (c) Serious eye damage/irritation     | Not available   |
| (d) Respiratory or skin sensitization | Not available   |
| (e) Germ cell mutagenicity            | Not available   |
| (f) Carcinogenicity                   | Not applicable  |
| (g) Reproductive toxicity             | Not applicable  |
| (h) STOT-single exposure              | Not applicable  |
| (i) STOT-repeated exposure            | Not applicable  |
| (j) Aspiration hazard                 | Not applicable  |
- 11.2 Information on the likely routes of exposure Not applicable
- 11.3 Symptoms related to the physical, chemical and toxicological characteristics Not applicable
- 11.4 Delayed and immediate effects and also chronic effects from short and long term exposure  
 Not applicable
- 11.5 Other information  
 Other toxicological information: To the best of our knowledge the chemical, physical and toxicological properties of this product have not been thoroughly investigated.

SECTION 12: Ecological information

- |                                    |               |
|------------------------------------|---------------|
| 12.1 Toxicity                      | Not available |
| Component (CAS#):                  |               |
| Test & Species:                    |               |
| 12.2 Persistence and degradability | Not available |
| 12.3 Bioaccumulative potential     | Not available |
| 12.4 Mobility in soil              | Not available |
| 12.6 Other adverse effects         | Not available |

SECTION 13: Disposal considerations

- |                              |                |
|------------------------------|----------------|
| 13.1 Waste treatment methods | Not identified |
|------------------------------|----------------|
- Disposal Instructions: Consult local, state and/or provincial environmental regulatory authorities for acceptable disposal procedures and locations.

SECTION 14: Transport information

- |  |                |
|--|----------------|
| 14.1 UN number   | Not applicable |
| 14.2 UN proper shipping name   | Not applicable |
| 14.3 Transport hazard class(es)  | Not applicable |
| 14.4 Packing group   | Not applicable |
| 14.5 Environmental hazards   | Not applicable |
| 14.6 Special precautions for user  | Not applicable |
| 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable |

SECTION 15: Regulatory information

- 15.1 Safety, health, and environmental regulation/legislation specific for the substance or mixture  
Not available

SECTION 16: Other information

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