

# SAFETY DATA SHEET

## Section 1 – Product and Company Identification

Material Name - Barley (whole kernel barley varieties including but not limited to colored, BG203, and Sustagrain)  
 Chemical Category - Raw Grain Material

Manufacturer - Ardent Mills, LLC; Ardent Mills, ULC: Molinos de Puerto Rico, LLC  
 1875 Lawrence Street  
 Denver, CO 80202  
[www.ardentmills.com](http://www.ardentmills.com)

Telephone  
 General - Call your Ardent Mills' Customer Service Rep  
 Emergency - 1-800-424-9300 CHEMTREC

Preparation Date - 11/05/2018  
 Last Revision Date - 11/05/2018

## Section 2 – Hazards Identification

### Emergency Overview **WARNING**

***May form combustible dust concentrations in air (during processing such as grinding).***

**Prevention** - Avoid generating fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source

**Response** - When responding to explosion or any subsequent fire, DO NOT use high pressure extinguishing agent as this may spread the dust and may create an additional ignitable dust cloud.

**Storage/Disposal** - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Potential Health Effects**

**Eyes** – Direct contact with eyes may cause temporary irritation  
**Skin** – None known.  
**Inhalation** – Dust may irritate the respiratory system.  
**Ingestion** – Expected to be a low ingestion hazard.

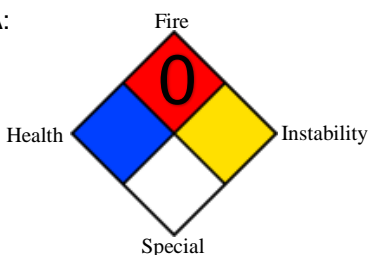
**Chronic Effects** - May cause allergic reaction in persons sensitive to wheat proteins.

**Environmental Effects** - Not expected to be harmful to aquatic organisms.

**Physical Descriptions**

**Form** – Solid  
**Color** – Varies, but typically tan to brown  
**Odor** – No data available  
**Flash Point** – Not relevant  
**WHMIS** – Not relevant  
**EU** – Not Relevant  
**GHS** - Specific Target Organ Toxicity Single Exposure – Category 3; Respiratory Tract Irritation, Skin Corrosion/Irritation – Category 3; Serious Eye Damage, Eye Irritation – Category 2B; Respiratory Sensitizer – Category 1

**NFPA:**



## Potential Health Effects

### Inhalation

Acute (immediate) – Whole kernel barley is not considered inhalable due to particle size. No known health effects.

Chronic (delayed) – Whole kernel barley is not considered inhalable due to particle size. No known health effects.

### Skin

Acute (immediate) – Under normal conditions of use, no health effects are expected.

Chronic (delayed) – Under normal conditions of use, no health effects are expected.

### Eye

Acute (immediate) – May cause irritation

Chronic (delayed) – Under normal conditions of use, no chronic effects are expected.

### Ingestion

Acute (immediate) – No effects are expected for most people. Listed as food allergen.

Chronic (delayed) – Under normal conditions of use, no chronic effects are expected.

## Section 3 – Composition/Information on Ingredients

### Hazardous Components

Chemical Name	Identifiers	%(weight)	LD50/LC50	Classifications According to Regulation/Directive	Comments
Raw Grain	NDA	100%	NDA		

## Section 4 – First Aid Measures

### Inhalation

- Get medical attention if symptoms occur. Remove to fresh air.

### Skin

- No data available.

### Eye

- Get medical attention if symptoms occur. If contact with eyes directly, flush with gently flowing fresh water thoroughly.

### Ingestion

- Get medical attention if symptoms occur.

## Section 5 – Fire Fighting Measures

### Extinguishing Media

- Dry chemical, CO2, foam or water fog.

### Unsuitable Extinguishing Media

- High pressure water spray may cause a combustible dust cloud.

### Firefighting Procedures

- FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: ALWAYS stay away from tanks engulfed in fire. LARGE FIRES: Move containers from fire area if can accomplish without risk.

### Unusual Fire & Explosion Hazards

- Fine dust (typically less than 420 microns) associated with this product may represent a combustible dust hazard. Ignition energy (Kst value) vary with particle size.

### Hazardous Combustion Products

- None known

### Protection of Firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA).

### Flash Point

- Not relevant.

### Explosion Limits

#### Upper

- Not relevant

#### Lower

- Not relevant

### Auto-Ignition Temperature

- Not known

## Section 6 – Accidental Release Measures

### Personal Precautions

- No data available.

### Emergency Procedures

- Keep unauthorized personnel away.

### Environmental Precautions

- Avoid run off to waterways and sewers.

### Containment/Clean-up Measures

- Carefully shovel or sweep up spilled material and place in suitable container. Use appropriate Personal Protective Equipment (PPE)

### Prohibited Materials

- No data available.

**Section 7 – Handling and Storage**

Handling - Follow good manufacturing practices when handling this product. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 61: Standard for the Prevention of Fires and Dust Explosions in the Agricultural and Food Processing Facilities

Storage - No data available.

Special Packaging Materials - None required.

Incompatible Materials or Ignition Sources - None known.

**Section 8 – Exposure Controls/Personal Protection**

Personal Protective Equipment  
Respiratory - When exposed to the dust associated with grain, follow the OSHA respirator regulations found in 29 CFR 1910.134 or the European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face - Protective safety glasses recommended.

Hands - No data available.

Skin/Body - None required for normal handling.

General Industrial Hygiene Considerations - Persons who handle grain products must follow good hygienic practices (i.e. wash frequently, and wear clean clothing)

Engineering Measures/Controls - Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Exposure Limits/Guidelines			
	Result	ACGIH	United States - California
Raw Grain	N/A	N/A	N/A

Exposure Control Notations  
ACGIH – None listed

Exposure Limits Supplemental  
ACGIH – None listed

Environmental Exposure Controls  
No data available

## Section 9 – Physical and Chemical Properties

<b>Material Description</b>			
<b>Physical Form</b>	Solid	<b>Appearance/Description</b>	No data available.
<b>Color</b>	No data available.	<b>Odor</b>	No data available.
<b>Taste</b>	No data available.	<b>Particulate Type</b>	Not relevant
<b>Particulate Size</b>	Not relevant	<b>Aerosol Type</b>	Not relevant
<b>Odor Threshold</b>	Not relevant	<b>Physical and Chemical Properties</b>	Not relevant
<b>General Properties</b>			
<b>Boiling Point</b>	Not relevant	<b>Melting Point</b>	Not relevant
<b>Decomposition Temperature</b>	Not relevant	<b>Heat of Decomposition</b>	Not relevant
<b>pH</b>	Not relevant	<b>Specific Gravity/Relative Density</b>	Not relevant
<b>Density</b>	Not relevant	<b>Bulk Density</b>	Not relevant
<b>Water Solubility</b>	Not relevant	<b>Solvent Solubility</b>	Not relevant
<b>Viscosity</b>	Not relevant		
<b>Volatility</b>			
<b>Vapor Pressure</b>	Not relevant	<b>Vapor Density</b>	Not relevant
<b>Evaporation Rate</b>	Not relevant	<b>VOC (Wt.)</b>	Not relevant
<b>VOC (Vol.)</b>	Not relevant	<b>Volatiles (Wt.)</b>	Not relevant
<b>Volatiles (Vol.)</b>	Not relevant		
<b>Flammability</b>			
<b>Flash Point</b>	Not relevant	<b>UEL</b>	Not relevant
<b>LEL</b>	Not relevant	<b>Auto-Ignition</b>	Not known
<b>Self-Accelerating Decomposition Temperature (SADT)</b>	Not relevant	<b>Heat of Combustion (<math>\Delta H_c</math>)</b>	Not relevant
<b>Burning Time</b>	Not relevant	<b>Flame Duration</b>	Not relevant
<b>Flame Height</b>	Not relevant	<b>Flame Extension</b>	Not relevant
<b>Ignition Distance</b>	Not relevant		
<b>Environmental</b>			
<b>Half-Life</b>	Not relevant	<b>Octanol/Water Partition coefficient</b>	Not relevant
<b>Coefficient of water/oil distribution</b>	Not relevant	<b>Bioaccumulation Factor</b>	Not relevant
<b>Bioconcentration Factor</b>	Not relevant	<b>Biochemical Oxygen Demand BOD/BOD5</b>	Not relevant
<b>Chemical Oxygen Demand</b>	Not relevant	<b>Persistence</b>	Not relevant
<b>Degradation</b>	Not relevant		

## Section 10 – Stability and Reactivity

<b>Stability</b>	- Stable when kept dry under normal temperatures and pressures.
<b>Hazardous Polymerization</b>	- Hazardous polymerization will not occur.
<b>Conditions to Avoid</b>	- High humidity and/or wet conditions.
<b>Incompatible Materials</b>	- None known.
<b>Hazardous Decomposition Products</b>	- None known.

## Section 11 – Toxicological Information

<b>Other Information</b>	- This product has not been tested as a separate entity. No specific toxicological data is available for the ingredients.
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## Section 12 – Ecological Information

<b>Ecological Fate</b>	- No data available
<b>Persistence/Degradability</b>	- No data available
<b>Bioaccumulation Potential</b>	- No data available
<b>Mobility in Soil</b>	- No data available
<b>Other Information</b>	- Product has not been studied as distributed

## Section 13 – Disposal Considerations

<b>Product</b>	- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
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## Section 14 – Transportation Information

<b>DOT</b>	- Not regulated as a hazardous material.
<b>IATA</b>	- Not regulated as a dangerous good.

## Section 15 – Regulatory Information

Not any known regulatory list for hazardous materials.

## Section 16 – Other Information

<b>Preparation Date</b>	- 11/05/2018
<b>Last Revision Date</b>	- 11/05/2018
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