

# Safety Data Sheet

## Section 1 – PRODUCT AND COMPANY IDENTIFICATION

**MANUFACTURER:** Cardinal Ethanol, LLC  
**ADDRESS:** 1554 N. 600 East  
 Union City, IN 47390  
**PHONE NUMBER:** 765-964-3137  
**PRODUCT NAME:** Dried Distillers Grains  
**COMMON NAME:** DDG  
**CHEMICAL NAME:** Not Applicable  
**CHEMICAL FORMULA:** Not Applicable  
**CHEMICAL FAMILY:** Grains, Fibers

## Section 2 – HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Tan granular product with roasted corn aroma

### OSHA HAZARD CLASS

Dust from this product may be considered an eye irritant

### WHMIS CLASSIFICATION

Dust from this product may be considered an eye irritant

### SYNERGISTIC MATERIALS

Not available

### POTENTIAL HEALTH EFFECTS

**ROUTES OF ENTRY:** Inhalation, Dermal, Ingestion.

### ACUTE EFFECTS OF OVER EXPOSURE:

**Eyes** – Dust is eye irritant.

**Skin** – Not applicable

**Inhalation** - Solid

**Ingestion** – It is unlikely that an acute hazard would be posed from ingestion of this product.

**CHRONIC EFFECTS OF OVER EXPOSURE:** Not available

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Not available

**CARCINOGENICITY:** Not available

## Section 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENTS	PERCENTAGES (by weight)	CAS #	TLV (ppm)
<b>Major components</b>			
Ground Corn	88 – 90%	Not Applicable	Not Applicable
Water (remainder)	10 – 12%	Not Applicable	Not Applicable
<b>Exposure Limits</b>			
Nuisance Particles	<b>PEL (TWA)</b> 10 mg/m <sup>3</sup>	<b>PEL (STEL)</b> N/A	<b>TLV (TWA)</b> 4 mg/m <sup>3</sup>

## Section 4 – FIRST AID MEASURES

**EMERGENCY AND FIRST AID PROCEDURES:**

**Eye Contact** - If material comes in contact with the eyes, flush with water

**Skin Contact** – Wash with soap and water

**Inhalation** - Not available

**Ingestion** - It is unlikely that an acute hazard would be posed from ingestion of this product.

**NOTES TO PHYSICIAN** -Dried Distillers Grain is an animal feed product.  
-Health effects upon exposure or ingestion are expected to be minimal.

**Section 5 – FIRE FIGHTING MEASURES**

**FLASH POINT:** Not applicable

**AUTO IGNITION TEMP:** Not applicable

**FLAMMABLE LIMITS IN AIR**  
**% BY VOLUME**

**LOWER**  
55 gm/m<sup>3</sup>

**UPPER**  
Unknown

**EXTINGUISHING MEDIA:**

**Large Fires:** Apply water fog or all-purpose-type foams by manufacturers' recommended techniques

**Small Fires:** Use carbon dioxide or dry chemical media

**SPECIAL FIRE FIGHTING PROCEDURES:** None

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Do not allow dust to accumulate, spark may cause explosion.

**HAZARD RATINGS:**      **NFPA 704:**      Health- 1      Fire- 1      Reactivity- 0

**Section 6 – ACCIDENTAL RELEASE MEASURES**

**STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED:** Not applicable.

**Section 7 – HANDLING AND STORAGE**

**HANDLING AND STORING:** Handle and/or store as you would any other grain product—below 14%moisture.

**Section 8 – EXPOSURE CONTROL – PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Provide adequate ventilation to keep dust levels below permissible concentrations.

**RESPIRATORY EQUIPMENT:** Dust mask generally not required. Use appropriate NIOSH-approved respiratory protection where atmospheric concentrations may exceed acceptable exposure limits. User should consult a respirator guide, such as NIOSH or the Canadian Standards Association's guide.

**VENTILATION:** Local ventilation is recommended where practical.

**EYE PROTECTION:** Safety glasses or goggles where contact with material may occur

**PROTECTIVE CLOTHING:** Neoprene gloves or natural rubber gloves may be used.

**OTHER (SAFETY SHOWERS, EYE WASH STATIONS, ETC.):** Eyewash, safety shower generally not needed, but this and other protective equipment as required.

**Section 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Tan granular product  
**BOILING POINT °C at 760mm/Hg:** N/A  
**VAPOR PRESSURE:** Not applicable  
**SOLUBLE IN WATER:** Insoluble

**ODOR:** Roasted corn aroma  
**SPECIFIC GRAVITY (water=1):** Not applicable  
**VAPOR DENSITY (air=1):** Not applicable  
**DENSITY, kg/L @20°C:** approximately 1

**FLASH POINT:** Not applicable  
**FREEZING POINT °C:** N/A  
**pH:** Not Applicable  
**MISCIBILITY IN WATER:** Not Applicable

**AUTO IGNITION TEMP:** Not applicable  
**% VOLATILES BY VOLUME:** Not Applicable  
**DISTILLATION RANGE, °C:** Not Applicable

**EVAPORATION RATE (butyl acetate=1):** Negligible  
**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not Applicable

### Section 10 – STABILITY AND REACTIVITY

#### STABILITY

**STABLE**

**UNSTABLE**

#### INCOMPATIBILITY -

**CONDITIONS TO AVOID:** Avoid dust accumulation in air.

**MATERIALS TO AVOID:** Not applicable

**INCOMPATIBILITY:** Not applicable

**HAZARDOUS DECOMPOSITION PRODUCTS:** Not applicable

**HAZARDOUS POLYMERIZATION:** Will not occur.

### Section 11 – TOXICOLOGICAL INFORMATION

**ROUTES OF EXPOSURE:** Inhalation, ingestion, skin and eye contact.

#### TOXICOLOGICAL DATA:

LC50, ppm/4h	LD50, mg/kg Rat, Inhale	LD50, mg/kg Rat, Oral	Rabbit, Skin
Corn Germ	Not Applicable	Not Applicable	Not Applicable
Water (remainder)	Not Applicable	Not Applicable	Not Applicable

### Section 12 – ECOLOGICAL INFORMATION

#### ECOTOXICOLOGICAL INFORMATION

**ECOTOXICITY:** Not Applicable.

**PERSISTENCE/BIODEGRADATION:** Readily biodegradable in the environment

**BIOACCUMULATION:** Not Applicable.

**MOBILITY IN ENVIRONMENT:** Not Applicable.

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**Section 13 – DISPOSAL CONSIDERATION**

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**SPILL PROCEDURES:** Sweep into container.

**WASTE DISPOSAL PROCEDURES:** Waste material should be disposed of using conventional methods, in compliance with all federal, provincial and local government regulations.

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**Section 14 – TRANSPORT INFORMATION**

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**DOT PROPER SHIPPING NAME:** Not Applicable

**DOT HAZARD CLASS:** Not Applicable

**DOT IDENTIFICATION NUMBER:** Not Applicable

**DOT EMERGENCY RESPONSE GUIDE NUMBER:** Not Applicable

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**Section 15 – REGULATORY INFORMATION**

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**FEDERAL REGULATIONS:** Not Applicable

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**Section 16 – OTHER INFORMATION**

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**Prepared By:** Cardinal Ethanol, LLC

**Revision Date:** April 29, 2012

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