



Green Plains

GHS SAFETY DATA SHEET

CARBON DIOXIDE

SDS DATE: 09/28/2017

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME (GHS Product Identifier): Carbon Dioxide
(Other means of Identification): CO₂, Carbonic Acid Gas, Carbon Oxide, Carbonic Anhydride

PRODUCT INTENDED USE AND RESTRICTION: Used in the manufacture of dry ice and carbonation of soft drinks

MANUFACTURER: Green Plains, Inc.
DIVISION:

Green Plains Atkinson LLC. 87590 Hill Crest Rd. Atkinson, NE 68713 P.O. Box 391, Atkinson, NE 68713 Phone: 402-925-5570 Fax: 402-925-2988 <input type="checkbox"/>	Green Plains Bluffton LLC. 1441 S. Adams St., Bluffton, IN 46714 Phone: 260-353-1212 Fax: 260-353-1100 <input type="checkbox"/>	Green Plains Central City LLC. 214 20 th St., Central City, NE 68826 Phone: 308-946-9700 Fax: 308-946-2623 <input type="checkbox"/>	Green Plains Fairmont LLC. 1125 N Bixby Road, Fairmont, MN 56031 Phone: 507-238-3600 Fax: 507-238-3624 <input type="checkbox"/>	Green Plains Hereford LLC 4300 County Road 8 Hereford, TX 79045 Phone: 806-258-7800 Fax: 806-258-7801 <input type="checkbox"/>
Green Plains Holdings II LLC.-Lakota 1660 428 th St., Lakota, IA 50451 Phone: 515-886-2222 Fax: 515-886-2127 <input type="checkbox"/>	Green Plains Holdings II LLC.-Riga 7025 Siberhorn Hwy, Blissfield, MI 49228 P.O. Box 12, Riga, MI 49276 Phone: 517-486-6190 Fax: 517-486-6192 <input checked="" type="checkbox"/>	Green Plains Hopewell LLC 701 South 6th Avenue Hopewell, VA 23860 Phone: 804-668-0010 Fax: 804-668-0020 <input checked="" type="checkbox"/>	Green Plains Madison LLC 395 Bissell St Madison, IL 63060 Phone: 618-451-4420 Fax: 618-452-8946 <input type="checkbox"/>	Green Plains Mt Vernon LLC 8999 W Franklin Rd Mt Vernon, IN 47620 Phone: 812-985-4023 Fax: 812-985-9983 <input type="checkbox"/>
Green Plains Obion LLC. 2098 McDonald Rd., Rives, TN 38253/P.O. Box 95, Obion, TN 38240 Phone: 731-536-1286 Fax: 731-536-1434 <input type="checkbox"/>	Green Plains Ord LLC. 48267 Val-E Road, Ord, NE 68862 Phone: 308-496-4823 Fax: 308-496-4890 <input type="checkbox"/>	Green Plains Otter Tail LLC. 24096 170th Ave., Fergus Falls, MN 56537 Phone: 218-998-4301 Fax: 218-998-4302 <input type="checkbox"/>	Green Plains Shenandoah LLC. 4124 Airport Rd., Shenandoah, IA 51601 Phone: 712-246-2932 Fax: 712-246-3988 <input type="checkbox"/>	Green Plains Superior LLC. 1495 320th Ave, Superior, IA 51363 Phone: 712-858-4666 Fax: 712-858-4684 <input type="checkbox"/>
Green Plains Wood River LLC. 7874 South 140th Road, Wood River, NE 68883 Phone: 308-385-1200 Fax: 308-385-9990 <input type="checkbox"/>	Green Plains York LLC 1414 County Rd O York, NE 68467 Phone: 402-362-2285 Fax: 402-362-7041 <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Green Plains Grain Company LLC. Archer 2132 Archer Road Archer, NE 68816 Phone: 308-795-2211 <input type="checkbox"/>	Green Plains Grain Company LLC. Cimarron 19016 Road I Kismet, KS 67859 Phone: 620-624-6296 Fax: 620-624-4411 <input type="checkbox"/>	Green Plains Grain Company LLC. Essex 411 North Street, Essex, IA 51638 Phone: 712-379-3155 Fax: 712-379-3175 <input type="checkbox"/>	Green Plains Grain Company LLC. Hopkins 200 N. Railroad Hopkins, MO 64461 Phone: 660-778-3331 Fax: 660-778-3676 <input type="checkbox"/>	<input type="checkbox"/>

CHEMTREC PHONE (24HR Emergency Telephone): 1-800-424-9300 (Within U.S.A)

INTERNATIONAL CHEMTREC CALL: 1-703-527-3887

OTHER CALLS: 1-517-486-6190 (M-F, 8AM-5PM, Eastern Time, Within U.S.A)

FAX PHONE: 517-486-6192 (M-F, 8AM-5PM, Eastern Time, Within U.S.A)

SECTION 1 NOTES: None Available

SECTION 2: HAZARDS IDENTIFICATION

GHS LABELING AND CLASSIFICATION: This product meets the definition of the following hazard classes as defined by the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).



Green Plains

GHS SAFETY DATA SHEET

CARBON DIOXIDE

SDS DATE: 09/28/2017

GHS CLASSIFICATION ACCORDING TO ANNEX II:

HEALTH		ENVIRONMENTAL	PHYSICAL
Acute toxicity (inhalation)-Category 5		Not Classified	Gas under pressure-Category 5- Refrigerated liquefied gas
SIGNAL WORD:		WARNING	
SYMBOL:			
HAZARD STATEMENT:		H333: May be harmful if inhaled H281: Contains refrigerated gas; may cause cryogenic burns or injury	
PRECAUTIONARY STATEMENTS:	PREVENTIVE:	P103: Read label before use P282: Wear cold insulating gloves/face shield/eye protection	
	RESPONSE:	P304 + P312-IF INHALED: Call a POISON CENTER/doctor/.../if you feel unwell	
	STORAGE:	P410 + P403:Protect from sunlight. Store in a well-ventilated place	
	DISPOSAL:	Not applicable	

Any Regional Considerations: N/A

SECTION 2 NOTES: None available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME: Carbon Dioxide
COMMON NAME: Carbon Dioxide
CHEMICAL FAMILY: Gas
CHEMICAL FORMULA: CO₂
SYNONYMS: Carbonic anhydride; dry ice; carbonica

INGREDIENT: Carbon Dioxide

NAME	CAS#	EC#	ICSC#	% WT	% VOL
Carbon Dioxide	124-38-9	204-696-9	0021	N/A	99.0%-100.0%

CARCINOGENICITY

OSHA: NO DATA

ACGIH: NO DATA

NTP: NO DATA

IARC: NO DATA

OTHER: None

IMPURITIES/STABILIZING ADDITIVES IDENTIFICATION: May contain traces of hydrogen sulfide and sulfur dioxide.

IMPURITIES/STABILIZING ADDITIVES CLASSIFICATION (if applicable): N/A

SECTION 3 NOTES: None available

SECTION 4: FIRST AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

EMERGENCY OVERVIEW: Carbon Dioxide gas is colorless. At low concentrations, the gas is odorless. At higher concentrations it has a sharp, acidic odor. It will act as an asphyxiant and an irritant.

ROUTES OF ENTRY/FIRST AID: Skin contact, eye contact, inhalation, and ingestion

EYES CONTACT: Flush eyes with fresh water for minimum 15 minutes; get medical attention if necessary

SKIN CONTACT: N/A

INGESTION: N/A

INHALATION: Remove victim to fresh air; supply oxygen if necessary; seek medical attention

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals



GHS SAFETY DATA SHEET

CARBON DIOXIDE

SDS DATE: 09/28/2017

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically

SECTION 4 NOTES: None available

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Use appropriate media for surrounding fire. Move containers from fire area if you can do it without risk. Damaged cylinders should be handled only by specialists.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS: Use self-contained breathing apparatus; usual protective fire-fighting gear; cool fire-exposed containers with water spray; remove containers from fire area if possible without risk; evacuate personnel upwind, if necessary

UNUSUAL FIRE AND EXPLOSION HAZARDS:

(Define specific hazards arising from the chemical e.g., nature of any hazardous combustion products)

Closed containers may rupture or explode due to pressure buildup when exposed to extreme heat. Carbon dioxide is not effective for use on fires involving chemicals that have their own oxygen supply (i.e., cellulose nitrate); or on fires involving reactive metals (such as, potassium, sodium, magnesium, aluminum, titanium and zirconium) or their hydrides as these materials decompose carbon dioxide.

HAZARDOUS DECOMPOSITION PRODUCTS: The substance decomposes on heating above 2000 deg C producing toxic carbon monoxide.

FLAMMABLE LIMITS IN AIR (% by volume):

UPPER: Not flammable

LOWER: Not flammable

FLASH POINT: Not flammable

F:

C:

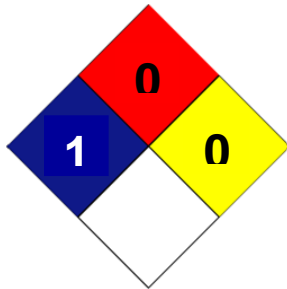
METHOD USED: N/A

AUTOIGNITION TEMPERATURE: Not flammable

F:

C:

NFPA HAZARD CLASSIFICATION:



HEALTH=1
FLAMMABILITY=0
REACTIVITY=0
OTHER=N/A

HMIS HAZARD CLASSIFICATION (0-4 scale):

Carbon dioxide	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B
Safety glasses; gloves	

SECTION 5 NOTES: None Available

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Evacuate all non-essential personnel. Stop leak without risk. Wear gloves and goggles. Use a self-contained breathing apparatus. Ventilate area. Monitor the surrounding area for Carbon Dioxide and Oxygen levels. Carbon Dioxide must be below the TLV/PEL level shown in Section 2 and Oxygen must be at least 19.5% before personnel may be allowed into the area without self-contained breathing apparatus. A portion of released high pressure gas may form dry ice. Clear the area and allow the solid to sublime/ evaporate and dissipate. If the area must be entered by emergency personnel, self-contained breathing apparatus, Kevlar gloves, and appropriate foot and leg protection must be worn. Solid pieces of dry ice may be picked up with tongs and gloves, placed into a thermally insulated and vented container and moved to a safe disposal location.



Green Plains

GHS SAFETY DATA SHEET

CARBON DIOXIDE

SDS DATE: 09/28/2017

ENVIRONMENTAL PRECAUTIONS: Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, state, and local regulations. If necessary, call your local supplier for assistance.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Ventilate area of leak to disperse gas; stop flow of gas. If source of leak is cylinder & leak cannot be stopped in place, remove to safe place in open air, & repair leak or allow cylinder to empty. Water spray may be used to convert any form of carbon dioxide to carbonic acid which may then be neutralized with alkali.

SECTION 6 NOTES: None Available

SECTION 7: HANDLING AND STORAGE

PRECAUTION FOR SAFE HANDLING: When handling provide adequate ventilation. CO₂ is heavier than air and will accumulate in low points, use forced ventilation if needed.

CONDITIONS FOR SAFE STORAGE (any incompatibilities): Store in accordance with all current regulations and standards. Protect from physical damage. Store in a well-ventilated area. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances. Dry carbon dioxide can be handled in most common structural materials. Moist carbon dioxide is generally corrosive by its formation of carbonic acid. For applications with moist Carbon Dioxide, 316, 309 and 310 stainless steels may be used as well as Hastelloy® A, B, & C, and Monel®. Ferrous Nickel alloys are slightly susceptible to corrosion. At normal temperatures carbon dioxide is compatible with most plastics and elastomers.

SECTION 7 NOTES: None Available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

INGREDIENTS	ACGIH	NIOSH	OSHA-FINAL PELs
Carbon Dioxide	ACGIH TLV-TWA: 5000 ppm; ACGIH TLV STEL: 30,000 ppm	N/A	OSHA PEL-TWA: 5000 ppm, 9000 mg/m ³ ; OSHA PEL STEL: 30,000 ppm, 54,000 mg/m ³

ENGINEERING CONTROLS:

VENTILATION : Use local exhaust to prevent accumulation of high concentrations so as to reduce the oxygen level in the air to less than 19.5% and the carbon dioxide concentration below the exposure limit

PERSONAL PROTECTION EQUIPMENT (PPE):

EYE PROTECTION: Safety goggles or glasses as appropriate for the job

SKIN PROTECTION: Protective gloves of any material appropriate for the job

RESPIRATORY PROTECTION: Positive pressure air line with full-face mask and escape bottle or self-contained breathing apparatus should be available for emergency use

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety shoes

SECTION 8 NOTES: None Available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Invisible gas/vapor

PHYSICAL STATE: Gas

COLOR: Colorless

ODOR: Pungent odor, especially at increased concentrations

pH AS SUPPLIED: Not available

pH (Other): The pH of saturated CO₂ solutions varies from 3.7 at 101 kPa (1 atm) to 3.2 at 2370 kPa (23.4 atm)



GHS SAFETY DATA SHEET

CARBON DIOXIDE

SDS DATE: 09/28/2017

FREEZING POINT:

F: -69.8 °F
C: -56.6 °C

BOILING POINT: CO₂ sublimes

F: -109.3
C: -78.5

MELTING POINT:

F: -169.84 °F
C: -56.58°C (triple point)

FLASH POINT: Not flammable

F:
C:

EVAPORATION RATE (BASIS=1): Not available

FLAMMABILITY (by %volume):

UPPER FLAMMABILITY LIMIT: Not flammable
LOWER FLAMMABILITY LIMIT: Not flammable

VAPOR PRESSURE (mmHg): 4.83x10+4 mm Hg

@
F: 77.0°F
C: 25.0°C

VAPOR DENSITY (AIR = 1): 1.53

@
F: 70 °F
C: 21 °C

SOLUBILITY IN WATER: (ml CO₂/100 ml H₂O at 760 mm Hg): 171 at 0 deg C; 88 at 20 deg C; 36 at 60 deg C; 1.501 g/L at 25 deg C

PARTITION COEFFICIENT n-octanol/water: 0.83

AUTO-IGNITION TEMPERATURE: Not flammable

F:
C:

DECOMPOSITION TEMPERATURE:

F: >3632°F
C: >2000°C

SPECIFIC GRAVITY (H₂O = 1): 1.56

@
F: -110.2 °F
C: -79.0°C

PERCENT SOLIDS BY WEIGHT: Not available

PERCENT VOLATILE: N/A

BY WT/BY VOL @
F:
C:

VOLATILE ORGANIC COMPOUNDS (VOC): VOCs may be present in trace amounts

WITH WATER: LBS/GAL
WITHOUT WATER: LBS/GAL

MOLECULAR WEIGHT: 44 (CO₂)

VISCOSITY: 14.9 uPa-sec

@
F: 77°F
C: 25 °C

SECTION 9 NOTES: None Available



SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Dusts of magnesium, lithium, potassium, sodium, zirconium, titanium, and some magnesium-aluminum alloys, and heated aluminum, chromium, and magnesium when suspended in carbon dioxide are ignitable and explosive. This is especially true in the presence of strong oxidizers, such as peroxides. The presence of carbon dioxide in solutions of aluminum hydride in ether can cause violent decomposition on warming the residue. Dangers arising from the use of carbon dioxide in the fire prevention and extinguishing systems of confined volumes of air and flammable vapors are examined. The hazard associated with its use centers around the fact that large electrostatic discharges may be created that initiate explosion. Contact of very cold liquid/solid carbon dioxide with water may result in vigorous or violent boiling of the product and extremely rapid vaporization due to the large temperature differences involved. If the water is hot, there is the possibility that a liquid "superheat" explosion may occur. Pressures may build to dangerous levels if liquid gas contacts water in a closed container. Forms weak carbonic acid in nonhazardous reaction with water.

STABILITY: Stable

CONDITIONS TO AVOID (STABILITY): Avoid extremes of temperature when gas is stored in pressurized cylinder or container.

POSSIBILITY OF HAZARDOUS REACTIONS: Containers may explode when heated

INCOMPATIBILITY MATERIAL: Alkali metals, chromium, metal acetylides, alkaline earth metals, titanium (above 550 degrees C), and uranium (above 750 degrees C)

HAZARDOUS DECOMPOSITION PRODUCTS: An electrical discharge can cause Carbon Dioxide to decompose into carbon monoxide and oxygen. Carbon Dioxide will combine with water vapor or liquid to form carbonic acid

SECTION 10 NOTES: None Available

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals. Exposure of female rats to 60,000 ppm carbon dioxide for 24 hours has produced toxic effects to the embryo and fetus in pregnant rats. Toxic effects to the reproductive system have been observed in other mammalian species at similar concentrations. Carbon dioxide is the most powerful cerebral vasodilator known. Inhaling large concentrations causes rapid circulatory insufficiency leading to coma and death. Chronic, harmful effects are not known from repeated inhalation of low (3 to 5 molar %) concentrations.

ROUTES OF EXPOSURE: Inhalation or skin contact

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

CONTACT WITH EYES: Vapor may cause stinging sensation

CONTACT WITH SKIN: No adverse effects anticipated

INHALATION: Carbon dioxide is the most powerful cerebral vasodilator known. Inhaling large concentrations causes rapid circulatory insufficiency leading to coma and death. Asphyxiation is likely to occur before the effects of carbon dioxide overexposure. Chronic, harmful effects are not known from repeated inhalation of low concentrations. Low concentrations of carbon dioxide cause increased respiration and headache. Effects of oxygen deficiency resulting from simple asphyxiants may include: rapid breathing, diminished mental alertness, impaired muscular coordination, faulty judgment, depression of all sensations, emotional instability, and fatigue. As asphyxiation progresses, nausea, vomiting, prostration, and loss of consciousness may result, eventually leading to convulsions, coma, and death. Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.

INGESTION: No adverse effects anticipated

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE:

ACUTE HEALTH HAZARDS: Oxygen deficiency resulting in asphyxiation. Carbon dioxide is the most powerful cerebral vasodilator known. Inhaling large concentrations causes rapid circulatory insufficiency leading to coma and death.

CHRONIC HEALTH HAZARDS: Damage to retinal ganglion cells and nervous system may occur due to the presence of carbon dioxide. Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals. Chronic, harmful effects are not known from repeated inhalation of low (3 to 5 molar %) concentrations.

NUMERICAL MEASURES OF TOXICITY:

LD50/LC50: No data available

IRRITATION DATA: No data available



Green Plains GHS SAFETY DATA SHEET

CARBON DIOXIDE

SDS DATE: 09/28/2017

CARCINOGENICITY: No data available

EPIDEMIOLOGY: No data available

TERATOGENICITY: No data available

REPRODUCTIVE EFFECTS: Exposure of female rats to 60,000 ppm carbon dioxide for 24 hours has produced toxic effects to the embryo and fetus in pregnant rats. Toxic effects to the reproductive system have been observed in other mammalian species at similar concentrations.

NEUROTOXICITY: No data available

MUTAGENICITY: No data available

OTHER: No data available

SECTION 11 NOTES: None Available.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY (AQUATIC AND TERRESTRIAL, WHERE AVAILABLE): None

PERSISTENCE AND DEGRADABILITY: Carbon dioxide evolution is one of the major end points used in biodegradability tests. Ready biodegradability describes the conversion of test substances to carbon dioxide; thus recognizing that usually there will not be any further degradation.

BIOACCUMULATIVE POTENTIAL: Because CO₂ is a naturally occurring substance that all living organisms are exposed to, and which plays a vital role in the normal maintenance of life, bioaccumulation is not anticipated.

MOBILITY IN SOIL: Due to its gaseous nature, CO₂ will attain equilibrium with air spaces in soil through passive diffusion

OTHER ADVERSE EFFECTS: Carbon dioxide is asphyxiate to human being

SECTION 12 NOTES: None available

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Flush area with water to reduce vapors or divert vapor cloud in case of spill or accidental release. Gas should dissipate in air.

RCRA HAZARD CLASS: Not listed

DESCRIPTION OF WASTE RESIDUES AND INFORMATION ON THEIR SAFE HANDLING AND METHODS OF DISPOSAL, INCLUDING ANY CONTAMINATED PACKAGING: Waste should be disposed of in accordance to local, state and federal regulations.

SECTION 13 NOTES: None Available

SECTION 14: TRANSPORT INFORMATION

U.N. GHS TRANSPORT REQUIREMENT

UN NUMBER: 1013 (Carbon Dioxide gas); 1845 (Carbon dioxide, solid); 2187 (Carbon dioxide, refrigerated liquid)

PROPER SHIPPING NAME: Carbon Dioxide

TRANSPORT HAZARD CLASS: 2

PACKING GROUP: None

LABEL STATEMENT: Nonflammable gas

MARINE POLLUTANT: No

SPECIAL PRECAUTIONS FOR USER: N/A

SECTION 14 NOTES: None available

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TOXIC SUBSTANCE CONTROL ACT (TSCA): Carbon dioxide is listed on the TSCA inventory



Green Plains GHS SAFETY DATA SHEET

CARBON DIOXIDE

SDS DATE: 09/28/2017

OCCUPATIONAL, SAFETY AND HEALTH ADMINISTRATION (OSHA): N/A

COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT (CERCLA): N/A

CLEAN WATER ACT (CWA): N/A

CLEAN AIR ACT (CAA): N/A

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III INFORMATION:

SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: None

SARA SECTION 311/312 (40 CFR 370) HAZARD CATEGORIES: Require submission of MSDSs and reporting of chemical inventories with identification of EPA hazard categories. The hazard categories for this product are IMMEDIATE and PRESSURE.

SARA 313 REPORTABLE INGREDIENTS: None

STATE REGULATIONS:Carbon dioxide gas appears on or more of the following state hazardous substances list: California, Maine, Minnesota, New Jersey, Pennsylvania, and Rhode Island. Not regulated under California Proposition 65.

INTERNATIONAL REGULATIONS:This material is considered as dangerous goods, per regulations of Transport Canada. Use the above U.S. DOT information in Section 14 for part of the information needed in the preparation of Canadian Shipments

SECTION 15 NOTES:.None Available

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Green Plains Inc. be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Green Plains Inc. has been advised of the possibility of such damages.

REFERENCES:

GHS Annex II
GHS SDS Instruction

ACRONYMS/ABBREVIATIONS:

ACGIH-American Conference of Governmental Industrial Hygienists
CAA-Clean Air Act
CAS-Chemical Abstracts Service
CERCLA-Comprehensive Response Compensation, and Liability Act
CHEMTREC-It serves as a round-the-clock resource for obtaining immediate response information for incidents involving hazardous material and dangerous goods.
CWA-Clean Water Act
EC-European Commission
GHS-Globally Harmonized System of Classification and Labelling of Chemicals
IARC-International Agency for the Research on Cancer
ICSC-International Chemical Safety Cards
LC50-The concentration of a chemical in air or of a chemical in water which causes the death of 50% of a group of test animals.
LD50-The amount of a chemical, given all at once, which causes the death of 50% of a group of test animals.
NIOSH-The National Institute for Occupational Safety and Health
NTP-National Toxicology Program
OSHA-Occupational Safety and Health Administration
RCRA-Resource Conservation and Recovery Act
SARA-Superfund Amendments and Reauthorization Act
STOST-SE-Specific Target Organ Toxicity Singal Exposure
TSCA-Toxic Substance Control Act
U.N.-United Nation
UNCED-United Nations Conference on Environment and Development
VOL-Volume
WT-Weight

