

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME (GHS Product Identifier): SDA 3-C
(Other means of Identification): Specially Denatured Alcohol TTB Formula 3-C; Ethanol/Isopropyl Alcohol Mixture

PRODUCT INTENDED USE AND RESTRICTION: General Solvent; NOT for alcoholic beverages

MANUFACTURER:

Green Plains York LLC
 1414 County Rd O
 York, NE 68467
 Phone: 402-362-0088
 Fax: 402-362-7041

CHEMTREC PHONE (24HR Emergency Telephone): 1-800-424-9300 (Within U.S.A)
INTERNATIONAL CHEMTREC CALL: 1-703-527-3887
OTHER CALLS: 1-402-884-8700 (M-F, 8 AM-5 PM, Central time (U.S.A & Canada); within U.S.A)
FAX PHONE: 1-402-884-8776 (M-F, 8 AM-5 PM, Central time (U.S.A & Canada); within U.S.A)

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 Labeling of Chemicals (GHS).

GHS CLASSIFICATION ACCORDING TO ANNEX II:

HEALTH	ENVIRONMENTAL	PHYSICAL
Skin irritation, Category 2 Eye irritation, Category 2B Specific target organ toxicity - single exposure Category 3	Not classified	Flammable Liquids-Category 2
SIGNAL WORD:		DANGER
SYMBOL:		
HAZARD STATEMENT:		Highly flammable liquid and vapor Causes skin and eye irritation May cause respiratory irritation
PRECAUTIONARY STATEMENTS:	PREVENTIVE:	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Use only outdoors or in a well-ventilated area.
	RESPONSE:	IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash before reuse. Rinse skin with water/shower. In case of fire: consider carbon dioxide, dry chemical powder, dry sand, limestone powder, or alcohol resistant foam to extinguish. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
	STORAGE:	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
	DISPOSAL:	Dispose of contents/ container to an approved waste disposal plant..

Any Regional Considerations: N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
Mixture

NAME	CAS#	% WT	OSHA (TWA/STEL) PPM	ACGIH (TWA/STEL) PPM
Ethyl Alcohol	64-17-5	90-100%	1000/NA	1000/NA
Isopropyl Alcohol	67-63-0	1-30%	400/500	200/400

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 first aid procedures by route of exposure:

- Inhalation:** If symptoms are experienced, remove source of contamination or move victim to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion:** Do not induce vomiting. If the material is swallowed, get medical attention or advice.
- Skin:** If irritation is experienced, flush with water. If irritation persists, get medical attention.
- Eyes:** Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, get medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point: (ethyl alcohol) 13°C (55.4°F)
Auto-ignition Temperature: (ethyl alcohol) 363°C (685.4°F)
Lower Explosion Limit: (ethyl alcohol) 3.3% **Upper Explosion Limit: (ethyl alcohol)** 19.0% **Flammability Classification:** Class IB Flammable Liquid

Suitable Extinguishing Media:

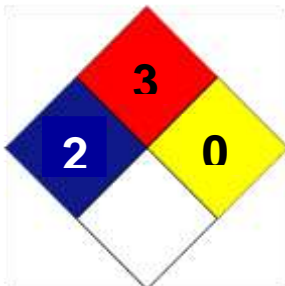
Use methods appropriate for the surrounding fire. Consider water spray or fog, carbon dioxide, dry chemical powder, or alcohol resistant foam.

Products of Combustion:

Upon decomposition this product may emit carbon dioxide, carbon monoxide, and/or low molecular weight hydrocarbons

Fire Fighting Equipment/Instructions:

Wear protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self contained breathing apparatus.

NFPA HAZARD CLASSIFICATION:


HEALTH=2
FLAMMABILITY=3
REACTIVITY=0
OTHER=N/A

HMIS HAZARD CLASSIFICATION (0-4 scale):

Denatured Alcohol	
HEALTH	1
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H
Splash goggles, gloves, chemical apron, vapor respirator	

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Protection: For large spills wear gloves, Tyvek suits, safety glasses, and appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Special Properties: Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is not properly cooled, it can rupture in the heat of a fire.

Environmental Precautions: Prevent discharge to open bodies of water, municipal sewers, and watercourses. **Method for Containment:** Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth.

Methods for Clean-up: Ventilate area of leak or spill. Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container. Wash spill area with water.

SECTION 6 NOTES: Do not move mobile equipment or vehicles into the area without first checking for flammable atmosphere.

SECTION 7: HANDLING AND STORAGE

Handling:

Keep away from heat, sparks and flame. Use only with adequate ventilation.

To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Storage:

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protective Equipment (PPE)

Respiratory Protection: Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Eye/Face Protection: Safety glasses with side shields are recommended as minimum protection in industrial settings.

Hand Protection: Butyl rubber gloves

Body: Avoid skin contact. If product comes in contact with clothing, immediately remove soaked clothing and shower.

Other Protective Equipment:

Facilities storing or utilizing this material should be equipped with eyewash and safety shower facilities.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance, State	Clear liquid
Color	Colorless
Odor	Not available
pH (1% soln/water)	Not Available
Vapor Density (Ethyl Alcohol)	1.6
Boiling Point (Ethyl Alcohol)	78.5°C
Vapor Pressure (Ethyl Alcohol)	57.3 hPa at 20°C
Melting Point (Ethyl Alcohol)	-114.1°C
Freezing Point (Ethyl Alcohol)	Not Available
Flash Point (See Section 5)	
Flammability Properties (See section 5)	
Solubility (in water)	Soluble
Specific Gravity (Ethyl Alcohol)	0.78-0.8
Evaporation Rate	Not Available
Octanol/Water partition coefficient (Kow)	(Ethyl Alcohol) -0.32
Auto-ignition temperature:	(Ethyl Alcohol) 363°C
Decomposition temperature:	Not Available
Viscosity:	Not Available

SECTION 10: STABILITY AND REACTIVITY

Stability: This material is considered stable at ambient temperatures 70°C (21°C).

Condition to Avoid: Flames, sparks, electrostatic discharge, heat and other ignition sources.

Incompatible Materials: This product reacts with strong acid, strong bases, and oxidizing agents.

Hazardous Decomposition: Upon decomposition, this product evolves carbon monoxide, carbon dioxide, and/or low weight hydrocarbons.

Hazardous Reactions: This product will not undergo polymerization.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Analysis LD50

Ethyl Alcohol (64-17-5)
Oral LD50 Rat: 7060 mg/kg

Isopropyl Alcohol (67-63-0)
Inhalation LC50 Rat: 72.6 mg/L/4H
Oral LD50 Rat: 4396 mg/kg
Dermal LD50 Rat: 12800 mg/kg
Dermal LD50 Rabbit: 12870 mg/kg

CHRONIC EFFECTS:

Ethyl Alcohol (64-17-5)

Carcinogenic Effects: A4 - Not classifiable for human or animal by ACGIH.

Mutagenic Effects: Not Available.

Teratogenic Effects: Not Available.

Developmental Toxicity: Ethyl alcohol is a developmental toxin when consumed during pregnancy **Target Organs:** When consumed, ethyl alcohol can target the respiratory system, skin, eyes, CNS, liver, blood, and reproductive system. **Inhalation:** May cause irritation to the mucous membranes of the upper respiratory tract. Exposure over 1000 ppm may cause headache, drowsiness, lassitude, loss of appetite, inability to concentrate, throat irritation **Ingestion:** Can cause depression of Central Nervous System, nausea, vomiting, diarrhea, intoxication, and in acute cases, death **Eye:** Liquid and vapor may cause irritation. Splashes may cause temporary pain and blurred vision **Skin:** May cause irritation, cracking, flaking, and defatting of skin on prolonged contact **Chronic Exposure:** Prolonged skin contact causes drying and cracking of skin. May affect nervous system, liver, blood, reproductive system. **Signs and Symptoms:** Headache, drowsiness, lassitude, loss of appetite, inability to concentrate, irritation of throat/eye/skin, depression of central nervous system, nausea, vomiting, diarrhea, skin defatting.

Isopropyl Alcohol (67-63-0)

Carcinogenicity: No known hazards

Mutagenicity: Not available.

Reproductive: Not available.

Developmental: Not available.

Target Organs: skin, eyes, CNS, and respiratory system. **Eye:** Contact with eyes may cause redness and pain. **Skin:** Contact with skin may cause dry skin. **Inhalation:** Inhalation of this material may cause: cough, dizziness, drowsiness, headache, sore throat, abdominal pain, labored breathing, nausea, vomiting, and unconsciousness. **Ingestion:** Ingestion of this material may cause: cough, dizziness, drowsiness, headache, sore throat, abdominal pain, labored breathing, nausea, vomiting, and unconsciousness.

Methyl Ethyl Ketone (78-98-3)

Carcinogenicity: No information available

Neurotoxicity: No information available

Mutagenicity: No information available

Reproductive: Has shown teratogenic effects in laboratory animals.

Developmental: No information available

Target Organs: Prolonged exposure may cause central nervous system effects.



SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Ethyl Alcohol (64-17-5)

96 hour LC50 Oncorhynchus mykiss: 12,900 mg/L (flow-through) (30days old)
96 hour LC50 Pimephales promelas 14.2 mg/L
5 min EC50 Photobacterium phosphoreum: 35,470 mg/L
30 min EC50 Photobacterium phosphoreum: 34,634 mg/L
48 hour EC50 Daphnia magna: 9,268 mg/L
24 hour EC50 Daphnia magna: 10,800 mg/L

Ecotoxicity: Isopropyl Alcohol (67-63-0)

LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h EC50 -
Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h Immobilization EC50 -
Daphnia magna (Water flea) - 6,851 mg/l - 24 h
Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h
EC50 - Algae - > 1,000.00 mg/l - 24 h

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, and federal regulations.

SECTION 14: TRANSPORT INFORMATION

U.N. GHS TRANSPORT REQUIREMENT

UN NUMBER: UN 1987
PROPER SHIPPING NAME: Alcohols n.o.s.
TRANSPORT HAZARD CLASS: 3 (Flammable Liquid)
PACKING GROUP: II
LABEL STATEMENT: None listed

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

TSCA Inventory This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

SARA 302/304 The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

CERCLA The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: No components were identified.

SARA 311/312 Hazard The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: fire, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard



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 the company 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 the company 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 Single Exposure
- TSCA-Toxic Substance Control Act
- U.N.-United Nation
- UNCED-United Nations Conference on Environment and Development
- VOL-Volume
- WT-Weight