



Green Plains

GHS SAFETY DATA SHEET

SDA 40-B

SDS DATE: 1/18/2024

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME (GHS Product Identifier): SDA 40-B

(Other means of Identification):

Specially Denatured Alcohol TTB Formula 40-B; SDA 40-B, 200 proof; SDS 40-B, 190 Proof
Special Denatured Alcohol Grade 3 [SDAG-3]; Canada

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

NAME, ADDRESS & TELEPHONE NUMBER OF THE RESPONSIBLE PARTY:

Company
Green Plains York LLC
1414 County Rd O, York, NE 68467
Phone: 402-362-0088
Email: EHSS@gpreinc.com

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
Serious eye damage/eye irritation-2A	Not classified	Flammable Liquids-Category 2
SIGNAL WORD:		DANGER
SYMBOL:		
HAZARD STATEMENT:		H225: Highly flammable liquid and vapor. H319: Causes serious eye irritation.
PRECAUTIONARY STATEMENTS:	PREVENTIVE:	P210: Keep away from heat/sparks/open flames/hot surfaces.—No smoking. P233: Keep container tightly closed P240: Ground/bond container and receiving equipment P241: Use explosion-proof electrical/ventilating/light/.../equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P280: Wear protective gloves/protective clothing/eye protection/face protection. P264: Wash hands thoroughly after handling.
	RESPONSE:	P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/ attention.
	STORAGE:	P403+235: Store in a well ventilated place. Keep cool.
	DISPOSAL:	P501: Dispose of contents/container to relevant local and national regulations.

Any Regional Considerations: N/A



Green Plains

GHS SAFETY DATA SHEET

SDA 40-B

SDS DATE: 1/18/2024

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

NAME	CAS#	% VOL	Note
Ethyl Alcohol	64-17-5	95-100.0%	
Water	7732-18-5	0-5.0%	
Tert-butyl alcohol	75-65-0	0-0.13%	
Denatonium Benzoate	3734-33-6	Note	Denatonium Benzoate applied at a rate of one-sixteenth avoirdupois ounce per 100 gallons of ethyl alcohol (27 CFR 21.76) OR 0.7 grams per 100 liters (Canada SDAG-3)

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

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.

- Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.
- Inhalation** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen. Call a physician immediately.
- Ingestion** If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

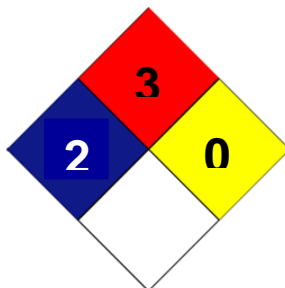
SECTION 5: FIRE-FIGHTING MEASURES

Fire/explosion: Flash back possible over considerable distance. NFPA Class IB flammable liquid.

Suitable extinguishing media: Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO₂)

Protective equipment and precautions for firefighters: Wear self-contained breathing apparatus and protective suit. Keep containers and surroundings cool with water spray.

NFPA HAZARD CLASSIFICATION:



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

HMIS HAZARD CLASSIFICATION (0-4 scale):

Denatured Alcohol	
HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H
Splash goggles, gloves, chemical apron, vapor respirator	



Green Plains

GHS SAFETY DATA SHEET

SDA 40-B

SDS DATE: 1/18/2024

SECTION 6: ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up: Evacuate personnel to safe areas. Remove all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

Spill precautions: Material can create slippery conditions.

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

SECTION 7: HANDLING AND STORAGE

Safe handling advice: Ensure all equipment is electrically grounded before beginning transfer operations. Keep away from heat and sources of ignition.

Storage/Transport Pressure: Ambient

Load/Unload Temperature: Ambient

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below permissible exposure limits.

Components Exposure limit(s)

Ethanol ACGIH STEL 1,000 ppm
 OSHA PEL 1,000 ppm 1,900 mg/m³

Tert-Butyl Alcohol OSHA PEL 100 ppm 300 mg/m³
 ACGIH TLV (8-hour) 100 ppm

PEL= Permissible Exposure Limits
 TLV= Threshold Limit Value
 EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)
 STEL= Short Term Exposure Limit (15 min.)
 WEEL= Workplace Environmental Exposure Level

ENGINEERING CONTROLS:

VENTILATION : Ensure adequate ventilation, especially in confined areas.

PERSONAL PROTECTIVE EQUIPMENT(PPE):

RESPIRATORY PROTECTION: Follow the OSHA respirator regulations found in 29 CFR 1910.134, Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

EYE PROTECTION: Wear appropriate protective eyeglasses or chemical safety goggles.

SKIN PROTECTION: Wear appropriate protective gloves and clothing to prevent skin exposure.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: In case of large spill, splash goggles, chemical suit, vapor respirator, rubber boots, chemical-resistant gloves and a self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient: consult a specialist BEFORE handling this product.



Green Plains

GHS SAFETY DATA SHEET

SDA 40-B

SDS DATE: 1/18/2024

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, Colorless

PHYSICAL STATE: Liquid

COLOR: Colorless

ODOR: Characteristic

pH: Not Available

FREEZING POINT:

F: -174.0 °F

C: -114.3 °C

BOILING POINT:

F: 176 °F

C: 79 °C

MELTING POINT:

F: -173.4 °F (NTP, 1992)

C: -114.1 °C

FLASH POINT:

F: 63 °F

C: 17 °C

EVAPORATION RATE (BASIS=1): Not Available.

FLAMMABILITY (by %volume):

UPPER FLAMMABILITY LIMIT: 3.3% (NTP, 1992)

LOWER FLAMMABILITY LIMIT: 19.0% (NTP, 1992)

VAPOR PRESSURE (mmHg): 59.3 mmHg

@

F: 68°F

C: 20 °C

VAPOR DENSITY (AIR = 1): 1.59

@

F: Ambient air temperature

C: Ambient air temperature

PARTITION COEFFICIENT n-octanol/water:-0.32 (logPow)

AUTO-IGNITION TEMPERATURE:

F: 689 °F (USCG, 1999)

C: 365 °C

DECOMPOSITION TEMPERATURE: No data available

F: No data available

C: No data available

SPECIFIC GRAVITY (H2O = 1):

Range: 0.790 – 0.811

190 Proof: 0.811

200 Proof: 0.790

@**F:** 68°F

@**C:** 20 °C

PERCENT SOLIDS BY WEIGHT: Not Available



PERCENT VOLATILE:

BY WT/ BY VOL @

F: Not Available

C: Not Available

VOLATILE ORGANIC COMPOUNDS (VOC):

WITH WATER: Not Available

LBS/GAL

WITHOUT WATER: Not Available

LBS/GAL

VISCOSITY: 1.200 cP

@

F: 68°F

C: 20 °C

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Ethanol rapidly absorbs moisture from the air. Can react vigorously with oxidizers.

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID (STABILITY): Incompatible materials. Heat, source of ignition.

POSSIBILITY OF HAZARDOUS REACTIONS: No dangerous reaction known under conditions of normal use

INCOMPATIBILITY MATERIAL: Strong Oxidizers, Inorganiz Acids, Halogens

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute dermal toxicity LD50 rabbit: > 2,000 mg/kg; OECD Test Guideline 402 (literature value)

Acute inhalation toxicity LC50 mouse (4 hours): > 20 mg/l (literature value)

Acute oral toxicity LD50 rat: 2,000 mg/kg; OECD Test Guideline 401 (literature value)

Skin corrosion/irritation (rabbit): OECD Test Guideline 404, Not irritating, (literature value)

Eye damage/irritation (rabbit): OECD Test Guideline 405 irritating, (literature value)

Respiratory or skin sensitization guinea pig: not sensitizing; Maximisation Test (literature value)

Germ cell mutagenicity

Genotoxicity in vitro:

Type: Ames test; OECD Test Guideline 471

System: Salmonella typhimurium; with and without metabolic activation

Result: In vitro tests did not show mutagenic effects. (literature value)

Genotoxicity in vivo:

no data available

Assessment Mutagenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity no data available

Assessment Reproductive toxicity: no data available

Teratogenicity: no data available

Assessment teratogenicity: no data available

STOT - single exposure no data available

STOT - repeated exposure rat; Oral; 90-day; NOAEL: 1,730 mg/kg LOAEL: 3,160 mg/kg
Based on available data, the classification criteria are not met.



GHS SAFETY DATA SHEET

SDA 40-B

SDS DATE: 1/18/2024

Aspiration toxicity no data available

Assessment Carcinogenicity Contains no ingredient listed as a carcinogen

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; flow-through test (literature value)

Toxicity to aquatic invertebrates EC50 (Ceriodaphnia Dubia (water flea)) 48 hours: > 100 mg/l; static test (literature value)

Toxicity to algae EC50 (Chlorella vulgaris) 72 hours: > 100 mg/l; static test; OECD Test Guideline 201 (literature value)

Chronic toxicity to aquatic invertebrates NOEC (Ceriodaphnia Dubia (water flea)) 10 d: 9.6 mg/l; semi-static test (literature value)

Biodegradation Readily biodegradable.
OECD Test Guideline 301B (28 d): > 60 % (literature value)

Bioaccumulation No bioaccumulation is to be expected (log Pow <= 4).

Mobility in soil no data available

Other adverse effects no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Code: D001 - Ignitability (RQ 100 LB). This product has the RCRA characteristic of ignitability. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.

Disposal Methods: Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Empty Containers: Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

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

U.S. FEDERAL REGULATIONS**OSHA Hazards (HCS 1994)**

Flammable liquid, Eye irritation, Skin irritation

TSCA Inventory Listing

Components

Ethanol

Tert-Butyl Alcohol

CAS-No.

64-17-5

75-65-0

SARA 302 Status



Green Plains

GHS SAFETY DATA SHEET

SDA 40-B

SDS DATE: 1/18/2024

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Classification

"Fire hazard", "Immediate (acute) health hazard"

SARA 313 Chemical: This product contains the following chemicals subject to the reporting requirements of section 313 of Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information must be included in all SDS that are copied and distributed for this material:

<u>Components</u>	<u>CAS-No.</u>	<u>Weight percent</u>
Tert-Butyl Alcohol	75-65-0	0.1 %

US. EPA CERCLA Hazardous Substances (40 CFR 302)

None

INTERNATIONAL REGULATIONS

WHMIS Classification

Class B, Division 2: Flammable liquid.
Class D, Division 2, Subdivision B: Toxic material.

European Union

Classification according to Regulation (EU) 1272/2008.

Flammable liquids, Category 2
Eye irritation, Category 2

Australia. Inventory of Chemical Substances (AICS)	Listed
Japan. Inventory of Existing and New Chemical Substances (ENCS)	Listed
Japan. Industrial Safety & Health Law (ISHL) Inventory	Listed
Canada. Domestic Substances List (DSL) Inventory	Listed
Canadian Non-Domestic Substance Listing (NDSL)	Not listed
European Inventory of Existing Commercial Chemical Substances (EINECS) Listing	Listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS)	Listed
Korea. Existing Chemicals Inventory (KECI)	Listed
China. Inventory of Existing Chemical Substances (IECSC)	Listed
Mexico. National Inventory of Chemical Substances (INSQ)	Listed
New Zealand. Inventory of Chemicals (NZIoC)	Listed
Switzerland. Inventory of Notified New Substances (CHINV)	Listed
Taiwan. National Existing Chemical Inventory (NECI)	Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65

Does not contain ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm.



Green Plains

GHS SAFETY DATA SHEET

SDA 40-B

SDS DATE: 1/18/2024

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