



Safety Data Sheet

Conforms to OSHA CFR 29 1910.1200 and aligns to the United Nations Globally Harmonized System
Conforms to The United Nations Regulation Globally Harmonized System

Date of Revision: 02/15/2019

Revision: 03

Section 1 - Chemical Product and Company Identification

Product Name: **Ethanol Shield**

1.2 Synonym: Blend

1.3 B3C Fuel Solutions LLC, 108 Daytona Street, Conway, SC 29526, 843-347-0482

1.4 Recommended Use: Fuel system treatment

1.5 **RESTRICTIONS on USE** THIS STABILIZER IS FOR GASOLINE ENGINES ONLY

1.6 Emergency Response Number: INFOTRAC 800-535-5053

International Emergency Telephone Number: +1-352-323-3500

Section 2 - Hazards Identification

2.1 GHS HAZARD

Hazard Classes

Flammable liquid/vapor

Eye Irritation

Skin Irritation

Acute Toxicity (Oral)

Acute Toxicity (Inhalation)

Acute Toxicity (Dermal)

Harmful to aquatic life with long lasting effects

Hazard Categories

Category 4

Category 2A

Category 2

Category 4

Category 4

Category 3

Category 3

2.2 Signal Word: **Danger**



2.3 Pictograms:

Irritant

Health

Toxic

Ethanol Shield

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2.4 Hazard Statements

PHYSICAL HAZARDS:

H227: Combustible liquid and vapor

HEALTH HAZARDS:

H302: Harmful if swallowed
H315: Causes skin irritation
H311: Toxic in contact with skin
H319: Causes serious eye irritation
H332: Harmful if inhaled

ENVIRONMENTAL HAZARDS:

H412: Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS:

P102: Keep out of reach of children
P201: Obtain special instructions before use.
READ SDS BEFORE USE
P202: Do not handle until all safety precautions have been read and understood
P210: Keep away from sparks and open flames- No smoking
P261: Avoid breathing vapors
P264: Wash hands thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P271: Use only outdoors or in well ventilated area
P273: Avoid release to the environment
P280: Wear protective gloves, clothing, respiratory and eye protection

RESPONSE STATEMENTS:

P301 +310+ P331: IF SWALLOWED: USA
Immediately call the National POISON CENTER at **800-222-1222**. OUTSIDE USA Immediately call poison center or doctor. DO NOT induce vomiting
P303+P361+353: IF ON SKIN Take off immediately all contaminated clothing. Rinse skin with water
P304+340: IF INHALED, remove to fresh air and keep comfortable for breathing
P305+P351: IF IN EYES rinse cautiously with water for at least 15 minutes
P306+P361: IF ON CLOTHING, Take off contaminated
P308+P313: If exposed or concerned get medical attention
P312: Call doctor if you feel unwell
P313+P332+P337: If skin or eye irritation persists get medical attention

Ethanol Shield

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P362+P364: IF ON CLOTHING, take off contaminated clothing and wash it before reuse
H314: Get medical attention if you feel unwell
P330: Rinse mouth
P370: In case of fire use foam, carbon dioxide, dry chemical to extinguish fire
P376: Stop leaks if safe to do so

STORAGE STATEMENTS:

P403+P405+P235: Store in a well-ventilated place, store locked up and keep cool

DISPOSAL STATEMENTS:

P501: Dispose of content and/or container in accordance with local, regional, national or international regulations

2.5 Hazards not otherwise classified (HNOC) or not covered by GHS: Repeated exposure may cause skin dryness or cracking.

Section 3 - Composition / Information on Ingredients

3.1

CAS#	EC#	Chemical Names	Percent	Classification
N/A	N/A	Blend of alkoxyated alcohol, alkoxyated cresol, saturated fatty acid and modified glycol ether	100%	None

3.2 Blend Contains

Chemical Names	CAS#	EC/List#	Classification
3-Oxa-1-heptanol	111-76-2	203-905-0	Acute Tox. 4 H302, Acute Tox. 3 H311 Skin Irrit. 2 H315, Eye Irrit 2, H319, Acute Tox. 4 H332
Saturated fatty acid	73398-61-5	277-452-2	Eye Irrit 2 H319
BHT	128-37-0	204-881-4	Aquatic Chronic 3 H412
Alkoxyated alcohol	204336-40-3	606-555-0	Aquatic Chronic 3 H412

3.3 Trade Secret Provision and Chemical Concentration Disclosure: In accordance with OSHA and GHS Regulations we have withheld specific percentages of the chemicals in this mixture. The chemical concentrations have been disclosed as a blend and are applicable to the hazards as identified in this Safety Data Sheet.

Section 4 - First Aid Measures

4.1 Eye: Contact with the eyes can cause serious irritation. Symptoms may include discomfort or pain and redness. Severe overexposure can result in swelling of the conjunctiva along with tissue damage.

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

4.2 Skin: Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.

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Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

4.3 Ingestion: Liquid ingestion can cause inebriation, headache, gastrointestinal pain, nausea, and vomiting leading to central nervous system depression. Aspiration of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonia, pulmonary edema and even death.

Ingestion: Do NOT induce vomiting. Get medical aid immediately.

4.4 Inhalation: Prolonged breathing of high vapor concentrations can produce headache, dizziness, nausea, and impaired vision. Excessive overexposure can cause central nervous system depression, loss of consciousness, liver damage and death resulting from respiratory failure.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult and **IF TRAINED**, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation without protection.

4.5 After first aid, get appropriate paramedic, or community medical support. The severity of outcome following an exposure may be more related to the time between the exposure and treatment, rather than the amount of the exposure. Therefore, there is a need for rapid treatment of any exposure.

4.6 Note to Physicians: If you determine that a medical emergency exists and the specific chemical identity is necessary for emergency or first-aid treatment we will immediately disclose the specific chemical identity. Call INFOTRAC 800-535-5053 or +1-352-323-3500. We will require a written statement of need and confidentiality agreement, in accordance with OSHA's Trade Secret Regulations as soon as circumstances permit. In non-emergency situations, we will upon written request disclose the specific chemical percentages.

Section 5 - Fire-Fighting Measures

5.1 General Fire Hazards: Use water to cool containers exposed to fire.

5.2 Hazardous Combustion Products: Avoid fumes of burning product.

5.3 Extinguishing Media: Carbon dioxide, dry chemical, foam.

5.4 Fire Fighting Equipment/Instructions: Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

Section 6 - Accidental Release Measures

6.1 Spill /Leak Procedures: Ventilate area. Wear adequate protective equipment. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition away from the spill.

6.2 Spills: Avoid direct contact with material. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers or waterways. Contain and collect spillage with non-combustible, absorbent material such as sand, earth, vermiculite or diatomaceous earth and place in a container for disposal.

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Section 7 - Handling and Storage

7.1 Handling Precautions: Keep away from ignition sources such as heat, sparks and open flames NO SMOKING Take precautionary measures against static discharge. Non-sparking tools should be used. Wear protective gloves, clothing and eye protection. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment. Empty containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death.

7.2 Storage Requirements: Store in original manufacture container tightly closed container in a cool, dry and well-ventilated area.

7.3 Chemical Incompatibilities: Strong oxidizing agents and strong reducing agents.

Section 8 - Exposure Controls / Personal Protection

8.1

Chemical Names	ACGIH- TLV	OSHA - PEL
Blend of alkoxyated alcohol, alkoxyated cresol, saturated fatty acid and modified glycol ether	25 ppm	50 ppm

8.2

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value.

OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits.

NOTE: TWA Means "TWA is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded."

8.3 Ventilation: Provide a general or local exhaust ventilation system to maintain airborne concentrations below TLV/PELs Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

8.4 Contaminated Equipment: Separate contaminated work clothes from street clothes and launder before reuse.

Remove this material from your shoes and clean personal protective equipment.

8.5 Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use. Select gloves tested to the **ANSI/ISEA 105-2011** or European EN374 Standard.

Full contact: Viton

Splash contact: Viton

Viton is a Registered Trademark of DuPont Company.

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Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

8.6 Protective Clothing Pictograms



Section 9 - Physical and Chemical Properties

9.1

Physical State: Liquid

Appearance: Various

Odor: Characteristic order

Vapor Pressure: Not Available

Vapor Density (Air=1): >1

Specific Gravity (H₂O=1,): 0.75

Relative Density: Not Available

Odor Threshold: Not Available

Flammability (solid, gas): Not applicable.

Evaporation rate: Not Available

Partition coefficient octanol/water: Not Available

pH: None

Water Solubility: Insoluble in water
143.6°F (62°C) closed cup

Boiling Point/Range: 275-410°F (135-210°C)

Lower Explosive Limits (vol % in air): 1%

Upper Explosive Limits (vol % in air): 10%

Melting Point: Not Available

Viscosity: 2.03cSt @104°F, 40°C

Auto ignition Temperature: Not Available

Decomposition temperature: Not Available

Section 10 - Stability and Reactivity

0.1 Stability: Stable under ordinary conditions of use and storage.

10.2 Polymerization: Hazardous polymerization has not been reported.

10.3 Chemical Incompatibilities: Strong oxidizing agents and Perchloric acid.

10.4 Hazardous Decomposition Products: Peroxides

10.5 Conditions to Avoid: Temperatures above 62°C, heat, sparks, open flames, other ignition sources.

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Section 11- Toxicological Information

11.1

Product Name	Results	Species	Dose	Exposure
Blend of alkoxyated alcohol, alkoxyated cresol, saturated fatty acid and modified glycol ether	Oral LD50	Rat	554.9 mg/kg	None Listed
Blend of alkoxyated alcohol, alkoxyated cresol, saturated fatty acid and modified glycol ether	Inhalation LC50	Rat	3.358mg/l	None Listed
Blend of alkoxyated alcohol, alkoxyated cresol, saturated fatty acid and modified glycol ether	Dermal LC50	Rabbit	524.9 mg/kg	None Listed

11.1.1 OECD Guideline Test results found in the European Chemical Agency Data Base shows that components of this product to cause Oral Toxicity.

11.1.2 OECD Guideline Test results found in the European Chemical Agency Data Base shows that components of this product to cause Inhalation Toxicity.

11.1.3 OECD Guideline Test results found in the European Chemical Agency Data Base shows that components of this product to cause Dermal Toxicity.

11.2 Route of Entry: Inhalation, Ingestion, Absorption, Skin and/or Eye Contact

11.3 Aspiration Hazard: European Chemical Agency Data Base shows that components of this product may be fatal if swallowed and enters airways. However a test of this product shows that it is an aspiration hazard.

11.4 Mutagenicity: European Chemical Agency Data Base show no components of this product to cause genetic defects.

11.5 Skin Corrosion/Irritation: OECD Guideline Tests results found in the European Chemical Agency Data Base shows that components of this product to cause skin irritation. Repeated exposure may cause skin dryness or cracking.

11.6 Serious Eye Damage/Irritation: OECD Guideline Tests results found in the European Chemical Agency Data Base shows that components of this product to cause serious eye irritation.

11.7 Specific Target Organ Toxicity (Single Exposure): European Chemical Agency Data Base shows that no components of this product may cause damage central nervous system (CNS). Human exposure above 200 ppm can be expected to cause narcosis, damage to the kidney and liver and present an abnormal blood picture showing erythropenia, reticulocytosis, granulocytosis, leukocytosis, and would be likely to cause fragility of erythrocytes and hematuria.

11.8 Reproductive toxicity: European Chemical Agency Data Base show no components of this product to cause damage to fertility or the unborn child.

11.9 Skin Sensitisation OECD Guideline Tests results found in the European Chemical Agency Data Base show no components of this product to cause skin sensitively.

11.10 Respiratory Sensitisation OECD Guideline Tests results found in the European Chemical Agency Data Base show no components of this product to cause respiratory sensitively.

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11.11 Target Organ Toxicity (Repeated Exposure): Contains material which may cause damage to the following organs: kidneys, lungs, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).

11.12 Signs and Symptoms: Effects due to exposure may include: Headache, Dizziness, Drowsiness, Metabolic Acidosis, Coma, Seizures. Symptoms may be delayed.

11.13 Carcinogenicity: European Chemical Agency Data Base shows that no components of this product to cause cancer in humans.

Chemical Name	IARC	ACGIH	NTP	OSHA
Blend of alkoxyated alcohol, alkoxyated cresol, saturated fatty acid and modified glycol ether	Not classified as a carcinogenicity to humans	Confirmed animal with unknown relevance to humans	Not listed	Not Listed

Section 12 - Ecological Information

12.1

Product Name	Results	Species	Exposure
Blend of alkoxyated alcohol, alkoxyated cresol, saturated fatty acid and modified glycol ether	Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment		

Toxicity: OECD Guideline Test results found in the European Chemical Agency Data Base show components of this product to harmful and can cause long-term toxicity to aquatic life.

12.2 Mobility: Floats on water

12.3 Persistence/degradability: Inconclusive technical data.

12.4 Bioaccumulation: Inconclusive technical data.

12.5 Other adverse effects: Inconclusive technical data.

Section 13 - Disposal Considerations

13.1 Disposal: DO NOT REUSE EMPTY CONTAINER! Container should be completely emptied prior to discard. Container with residues should be considered to be hazardous wastes. Contact a licensed contractor for detailed recommendations. Follow applicable federal, state, and local regulations.

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Section 14 - Transport Information

14.1 DOT Transport Information



ID No.: UN 2810

Shipping Name: Toxic, liquids, organic, n.o.s.(3-Oxa-1-heptanol)

Hazard Class:6.1

Packing Group: III

Label: Toxic

Placard: Toxic

14.2 TDG Canadian Transport Information



ID No.: UN 2810

Shipping Name: Toxic, liquids, organic, n.o.s.(3-Oxa-1-heptanol)

Hazard Class:6.1

Packing Group: III

Label: Toxic

Placard: Toxic

14.3 IMDG Transport Information



ID No.: UN 2810

Shipping Name: TOXIC, LIQUIDS, ORGANIC, N.O.S.(3-Oxa-1-heptanol)

Hazard Class: 6.1

Packing Group: III

Flash Point: None

EmS Number: F-A, S-A

Label: Toxic

Placard: Toxic

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14.4 UN Transport Information



ID No.: UN 2810

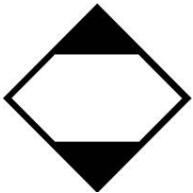
Shipping Name: Toxic, liquids, organic, n.o.s.(3-Oxa-1-heptanol)

Hazard Class:6.1

Packing Group: III

Label: Toxic

Placard: Toxic



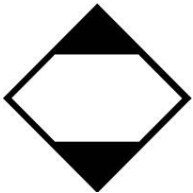
Use marking when shipping as a consumer commodity ground in the US

14.5 DOT Transport Limited Quantity/Consumer Commodity

Inner packaging not over

5.0L (1.3 gallons) net capacity each.

Outer Package not over 30kg (66lbs) each



Use marking when shipping as a limited quantity ground in the Canada

14.6 TDG Canada Transport Limited Quantity

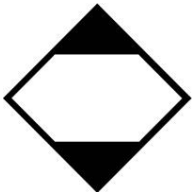
Inner packaging not over

5.0L (1.3 gallons) net capacity each.

Outer Package not over 30kg (66lbs) each

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Use marking when shipping as a limited quantity by vessel.

14.7 IMDG Transport Limited Quantity

Inner packaging not over

5.0L (1.3 gallons) net capacity each.

Outer Package not over 30kg (66lbs) each

Shipping Name: TOXIC, LIQUIDS, ORGANIC, N.O.S.(3-Oxa-1-heptanol) LTD.QTY.

Hazard Class: 6.1

Packing Group: III

Flash Point: None

EmS Number: F-A, S-A

Section 15 - Regulatory Information

15.1 US Regulations:

TSCA: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CERCLA Hazardous Substances and corresponding RQs: None

SARA Community Right-to-Know Program: None

Clean Water Act: None

Clean Air Act: None

OSHA: All ingredients are listed in 1910.1200

State Regulations

California prop. 65: None

Chemicals on the following State Right to Know Lists:

Massachusetts: All components of this product are on the Massachusetts Inventory or are exempt from Inventory requirements.

New Jersey: All components of this product are on the New Jersey inventory or are exempt from Inventory requirements.

Pennsylvania: All components of this product are on the Pennsylvania Inventory or are exempt from Inventory requirements.

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15.2 International Regulations:

Australian Inventory of Chemical Substance: All components of this product are on the Inventory or are exempt from Inventory requirements.

National Existing Chemical Inventory in Taiwan: All components of this product) are on Inventory or are exempt from Inventory requirements.

Philippine Inventory of Chemicals and Chemical Substances All components of this product are on the Inventory or are exempt from Inventory requirements.

China Existing Chemical Inventory: All components of this product are on the Inventory or are exempt from Inventory requirements.

Section 16 - Other Information

16.1 Disclaimer: The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above is furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use.

16.2 References: CHEMpendium data base of Canadian Centre for Occupational Health and Safety (CCOHS), JJ Keller on Line, European Chemical Agency Data Base and MSDS and SDS of chemicals in this mixture.

16.3 SDS Preparation Date 08/16/2016

SDS Previous Issue Date: 08/14/2014

SDS Revision Date: 06/13/2017 Revised sections 2,4,5,9,11,12

SDS Revision Date: 01/11/2018 Revised sections 1, 3,11,14

SDS Revision Date: 02/15/2019 Revised sections 2,11

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