



Safety Data Sheet

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

Section 1 - Chemical Product and Company Identification

Product Name: Ethanol Shield

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

Recommended Use: Fuel system treatment

RESTRICTIONS on USE

THIS STABILIZER

IS FOR

GASOLINE ENGINES ONLY

Emergency Response Number: INFOTRAC 800-535-5053

International Emergency Telephone Number: +1-353-323-3500

Section 2 - Hazards Identification

GHS HAZARD

Hazard Classes

Hazard Categories

Flammable liquid/vapor

Category 4

Eye Irritation

Category 2A

Skin Irritation

Category 2

Specific Target Organs toxicity single exposure

Category 3

Specific Target Organs repeated exposure

Category 2

Acute Toxicity (Oral)

Category 4

Acute Toxicity (Inhalation)

Category 3

Acute Toxicity (Dermal)

Category 4

Signal Word: Danger



Pictograms:

Toxic

Irritant

Health

Hazard Statements

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PHYSICAL HAZARDS:	H227: Combustible liquid and vapor
HEALTH HAZARDS:	H301: Toxic if swallowed H315: Causes skin irritation H312: Harmful in contact with skin H319: Causes serious eye irritation H331: Toxic if inhaled H336: May cause drowsiness or dizziness
ENVIRONMENTAL HAZARDS:	H413: May cause long lasting harmful effects to aquatic life.
PRECAUTIONARY STATEMENTS:	P102: Keep out of reach of children P202: Do not handle until all safety precautions have been read and understood P210: Keep away from sparks and open flames- No smoking P260: Do not breathe vapors P280: Wear protective gloves, clothing and eye protection
RESPONSE STATEMENTS:	P301 +310+ P331: IF SWALLOWED: <u>USA</u> Immediately call the National POISON CENTER at 800-222-1222 . <u>OUTSIDE USA</u> Immediately call poison center or doctor.DD 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 clothing P370: In case of fire use foam, carbon dioxide, dry chemical to extinguish fire P376: Stop leaks if safe to do so. See section 6 for proper clean up
STORAGE STATEMENTS:	P403: Keep Cool Store in a well-ventilated place
DISPOSAL STATEMENTS:	P501: Dispose of content and/or container in accordance with local, regional, national or international regulations

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Section 3 - Composition / Information on Ingredients

CAS#	EC#	Chemical Names	Percent	Other Identifiers
111-76-2	203-905-0	2-Butoxyethanol	94 -97%	Ethylene glycol monobutyl ether
73398-61-5	277-452-2	Glycerides, mixed decanoyl and octanoyl	2 - 3%	Caprylic-Capric Acid
128-37-0	204-881-4	2,6-Di-tert-butyl-4-methylphenol	.75 – 1.6%	None
6683-19-8	229-722-6	Pentaerythritol tetrakis(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)	.20 - .30%	Pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)
29385-43-1	249-596-6	Tolyltriazole	.05-.1%	1H-Benzotriazole,4-methyl

Section 4 - First Aid Measures

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.

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

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.

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.

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.

After first aid, get appropriate paramedic, or community medical support.

Note to Physicians: The severity of outcome following ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested. Therefore, there is a need for rapid treatment of any ingestion exposure.

Section 5 - Fire-Fighting Measures

General Fire Hazards

Use water to cool containers exposed to fire

Hazardous Combustion Products

Avoid fumes of burning product.

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Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog

Fire Fighting Equipment/Instructions Large fires evacuate area and fight fire from a safe distance or protected location. Approach fire from upwind to avoid exposure to this material and its toxic decomposition products. Wear full protective gear if exposure is possible.

Section 6 - Accidental Release Measures

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.

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.

Section 7 - Handling and Storage

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.

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

Chemical Incompatibilities: Strong oxidizing agents and strong reducing agents.

Section 8 - Exposure Controls / Personal Protection

Chemical Names	ACGIH- TLV	OSHA - PEL
2-Butoxyethanol	25 ppm	*50 ppm
Glycerides, mixed decanoyl and octanoyl	Not Established	Not Established
2,6-Di-tert-butyl-4-methylphenol	2 mg/m3	*10 mg/m3
Pentaerythritol tetrakis(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)	Not Established	Not Established
Tolyltriazole	Not Established	Not Established

STEL = Short-term Exposure Limit.

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."

*Listed on the OSHA Z1 Table

Ventilation: Provide general or local exhaust ventilation systems 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.

Contaminated Equipment: Separate contaminated work clothes from street clothes and launder before reuse. Remove this material from your shoes and clean personal protective equipment.

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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: Nitrile rubber

Splash contact: Nitrile rubber

This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use. It should not be construed as offering an approval for any specific use scenario.

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

Protective Clothing Pictograms



Splash Goggles



Gloves



Protective Apron



Vapor Respirator

A respirator is not needed under normal conditions of product use

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Various

Odor: Petroleum solvent order

Vapor Pressure: 329.9 mmHg@21°C

Vapor Density (Air=1): .4.1

Specific Gravity (H₂O=1,): 0.90 @ 68°F / 20°C

pH: None

Water Solubility: Soluble

Flash Point: 159°F (76°C) closed cup

Boiling Point: 366°F (169°C)

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

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

Melting Point: 103°F (75°C)

Viscosity: 3.26 mPa.s at 20 deg C

Auto ignition Temperature: Not Available

Section 10 - Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Polymerization: Hazardous polymerization has not been reported.

Chemical Incompatibilities: Strong oxidizing agents and Perchloric Acid

Hazardous Decomposition Products: Peroxides

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

Corrosivity to Metals: Attacks some stainless steels, Light metals giving off hydrogen

Corrosivity to Non-Metals: Attacks some plastics, like chlorinated polyvinyl chloride (CPVC), polyvinyl chloride (PVC), polyethylene terephthalate, high-density polyethylene, and ethylene vinyl acetate; elastomers, like Viton (FKM), nitrile

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Buna-N (NBR), chloroprene, isoprene, natural rubber, polymethacrylate (acrylic) and silicone; and coatings, such as coal tar epoxy, epoxy general purpose and epoxy chemical resistant.

Section 11- Toxicological Information

Product Name	Results	Species	Dose	Exposure
2-Butoxyethanol	Oral LD50	Rat	530 mg/kg	4 hours
2-Butoxyethanol	Inhalation LC50	Rat	925 ppm	4 hours
2-Butoxyethanol	Dermal LC50	Rabbit	500 mg/kg	Non Listed
Glycerides, mixed decanoyl and octanoyl	Oral LD50	Rat	>5,000 mg/kg	Non Listed
2,6-Di-tert-butyl-4-methylphenol	Oral LD50	Rat	890 mg/kg	Non Listed
Pentaerythritol tetrakis(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)	Oral LD50	Rat	Not Established	Not Established
Tolyltriazole	Oral LD50	Rat	675 mg/kg	Non Listed
Tolyltriazole	Inhalation LC50	Rat	1.7 mg/l	1 hour
Tolyltriazole	Dermal LC50	Rabbit	>4,000 mg/kg	Non Listed

The calculated Acute Toxicity Estimate Value (ATE) for this mixture:

ATE oral = 554 mg/kg

ATE dermal = 500 mg/kg

ATE inhalation (vapors) = 925 ppm

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

Aspiration Hazard: None

Inhalation Hazard: Toxic if inhaled

Ingestion Hazard: Toxic if swallowed

Skin Corrosion/Irritation: Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Serious Eye Damage/Irritation: Causes serious eye irritation

Specific Target Organ Toxicity (Single Exposure): May cause drowsiness and dizziness.

Specific Target Organ Toxicity (Repeated Exposure): Contains material which may cause damage to the following organs Blood, Kidneys, Liver Central nervous system (i.e. brain, spinal cord).

Signs and Symptoms: Effects of overexposure can include cause headache, nausea, dizziness, vomiting, drowsiness, incoordination and confusion. Symptoms may be delayed.

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Carcinogenicity:

Chemical Name	IARC	ACGIH	NTP	OSHA
2-Butoxyethanol	3 not classifiable as a carcinogenicity to humans	A3 - Confirmed animal with unknown relevance to humans	Not listed	Not Listed
Glycerides, mixed decanoyl and octanoyl	Not listed	Not Listed	Not listed	Not Listed
2,6-Di-tert-butyl-4-methylphenol	Not listed	Not Listed	Not listed	Not Listed
Pentaerythritol tetrakis(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)	Not listed	Not listed	Not listed	Not listed
Tolyltriazole	Not listed	Not listed	Not listed	Not listed

Section 12 - Ecological Information

Product Name	Results	Species	Exposure
2-Butoxyethanol	LC220 mg/l	Fish	96 hours
2-Butoxyethanol	EC50 1,815 mg/l.	Daphnia	24 hours
2-Butoxyethanol	LC50 900 mg/l	Algae	72 hours
Glycerides, mixed decanoyl and octanoyl	LC50 >100 mg/L	Fish	96 hours
Glycerides, mixed decanoyl and octanoyl	EC50 >100 mg/L	Algae	72 hours
2,6-Di-tert-butyl-4-methylphenol	LC50 5.3 mg/l	Fish	48 hours
2,6-Di-tert-butyl-4-methylphenol	EC50 1.44 mg/l	Daphnia	48 hours
Pentaerythritol tetrakis(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)	Not Established	Not Established	Not Established
Tolyltriazole	LC50 65 mg/l	Fish	96 hours
Tolyltriazole	EC50 35.4 mg/l	Daphnia	48 hours
Tolyltriazole	EC50 32 mg/L	Algae	72 hours

Toxicity: These substances is not regarded as toxic to aquatic organisms

Mobility: Floats on water, absorbs into soil and has low mobility.

Persistence/degradability: Oxidizes rapidly by photo-chemical reactions in air.

Bioaccumulation: Has the potential to bioaccumulate.

Section 13 - Disposal Considerations

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

Regulatory Information	UN #	Proper Shipping Name	Hazard Class	PG	Label	Additional Information
DOT Classification		Not Regulated				
TDG Classification		Not Regulated				
RID/ARD Classification		Not Regulated				
IMDG Classification		Not Regulated				
ICAO/IATA Classification		Not Regulated				
Australian Classification		Not Regulated				

Section 15 - Regulatory Information

US Regulations:

TSCA: 2-Butoxyethanol, Glycerides, mixed decanoyl and octanoyl, Tolyltriazole

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: 2-Butoxyethanol, Glycerides, mixed decanoyl and octanoyl, Tolyltriazole

New Jersey: 2-Butoxyethanol, Glycerides, mixed decanoyl and octanoyl, Tolyltriazole

Pennsylvania: 2-Butoxyethanol, Glycerides, mixed decanoyl and octanoyl, Tolyltriazole

Section 16 - Other Information

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.

SDS Preparation Date 1/7/2014

SDS Previous issue Date: 2/16/2015

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