

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

1 Identification

- **Product identifier**

- **Trade name: C-SHOT**

- **Application of the substance / the mixture** Diesel fuel additive

- **Details of the supplier of the safety data sheet**

Energy Technology Group LLC
 1660 Kensington Avenue, Suite 6
 Cheektowaga NY 14215
 ((716) 240-4989

- **Manufacturer/Supplier:**

Energy Technology Group LLC
 1660 Kensington Avenue. Suite 6
 Cheektowaga NY 14215
 ((716) 240-4989

- **email of person responsible:** amousa@etgpro.com

- **Emergency telephone number:**

CHEMTREC International +1 (703) 527-3887 (outside the US), 1-800-424-9300 (in the US) 24 hr

2 Hazard identification

- **Classification of the substance or mixture**

Flammable Liquids - Category 4	H227 Combustible liquid.
Acute Toxicity (Oral) - Category 4	H302 Harmful if swallowed.
Acute Toxicity (Dermal) – Category 4	H312 Harmful in contact with skin.
Acute Toxicity (Inhalation) - Category 4	H332 Harmful if inhaled.
Skin Irritation - Category 2	H315 Causes skin irritation.
Eye Irritation - Category 2A	H319 Causes serious eye irritation.
Aquatic Acute 1	H400 Very toxic to aquatic life.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



- **Signal word** Warning

- **Hazard-determining components of labeling:**

2-ethylhexyl nitrate
 2-butoxyethanol

- **Hazard statements**

Combustible liquid.
 Harmful if swallowed.
 Harmful in contact with skin.

(Contd. on page 2)

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

Trade name: C-SHOT

(Contd. of page 1)

Harmful if inhaled.
 Causes skin irritation.
 Causes serious eye irritation.
 Very toxic to aquatic life.
 Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Avoid breathing fume/spray.
 Wash thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If swallowed: Call a poison center/doctor if you feel unwell.
 Rinse mouth.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Specific measures (see on this label).
 Take off immediately all contaminated clothing.
 Wash contaminated clothing before reuse.
 Store in a well-ventilated place.
 Dispose of contents in accordance with local regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2
 Fire = 2
 Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 2
 Fire = 2
 Reactivity = 0

3 Composition/Information on ingredients

- **Chemical characterization: Mixtures**

- **Chemical components:**

27247-96-7	2-ethylhexyl nitrate	50-100%
111-76-2	2-butoxyethanol	10-25%

* Actual concentration ranges are withheld as a trade secret.

4 First-aid measures

- **Description of first aid measures**

- **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 3)

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

Trade name: C-SHOT

(Contd. of page 2)

- **After eye contact:**
Rinse cautiously with water. Remove contact lenses, if present and easy to do. Get medical attention if eye irritation develops or persists.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:** Treat Symptomatically
 - **Most important symptoms and effects, both acute and delayed**
May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
See section 11.
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** See section 10 for additional information.
- **Advice for firefighters**
 - **Protective equipment:**
Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots. Do not use a water jet.

6 Accidental release measures

- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
Take precautions to avoid release to the environment. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
 - **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 4)

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

Trade name: C-SHOT

(Contd. of page 3)

- Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Protect from heat.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
See section 10 for incompatible materials.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/ Personal protection· **Control parameters**· **Components with limit values that require monitoring at the workplace:****111-76-2 2-butoxyethanol (19.0%)**

EL TWA: 20 ppm

EV TWA: 20 ppm

Skin

- **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Chemical resistant protective gloves

· **Eye protection:**

Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.

(Contd. on page 5)

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

Trade name: C-SHOT

(Contd. of page 4)

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:

Fluid

· Color:

colorless to pale yellow

· Odor:

Characteristic

· Odor threshold:

Not determined.

· pH-value:

Not determined.

· Change in condition

· Melting point/Melting range:

Undetermined.

· Boiling point/Boiling range:

184.7 °C

· Flash point:

76 °C

· Flammability (solid, gaseous):

Not applicable.

· Ignition temperature:

215 °C

· Decomposition temperature:

Not determined.

· Auto igniting:

Product is not selfigniting.

· Danger of explosion:

Not determined.

· Explosion limits:

· Lower:

1.8 Vol %

· Upper:

12.7 Vol %

· Vapor pressure at 20 °C:

0.4 hPa

· Density at 20 °C:

0.95 g/cm³

· Relative density

Not determined.

· Vapor density

Not determined.

· Evaporation rate

Not determined.

· Solubility in / Miscibility with

· Water:

Not miscible or difficult to mix.

· Partition coefficient (n-octanol/water):

Not determined.

· Viscosity:

· Dynamic:

Not determined.

· Kinematic:

Not determined.

· Solvent separation test

· VOC content:

19.25 %

· Other information

No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

(Contd. on page 6)

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

Trade name: C-SHOT

(Contd. of page 5)

- **Chemical stability**
 - **Thermal decomposition / conditions to be avoided:**
Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Heat, open flames, sparks.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** May include, and are not limited to: oxides of carbon.

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	569 mg/kg
Dermal	LD50	1,216 mg/kg
Inhalative	LC50/4 h (vapor)	11.2 mg/L

27247-96-7 2-ethylhexyl nitrate

Oral	LD50	500 mg/kg (ATE)
Dermal	LD50	1,100 mg/kg (ATE)
Inhalative	LC50/4 h (vapor)	11 mg/L (ATE)

111-76-2 2-butoxyethanol

Oral	LD50	1,200 mg/kg (ATE)
		1,414 mg/kg (gpg)
Dermal	LD50	2,000 mg/kg (gpg)
Inhalative	LC50/4 h (vapor)	11.5 mg/L (gpg)

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** May cause eye irritation.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

111-76-2	2-butoxyethanol	3
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

Trade name: C-SHOT

(Contd. of page 6)

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
 - **Remark:** Very toxic for fish
- **Additional ecological information:**
 - **General notes:**
 - Water hazard class 2 (Self-assessment): hazardous for water
 - Do not allow product to reach ground water, water course or sewage system.
 - Danger to drinking water if even small quantities leak into the ground.
 - Also poisonous for fish and plankton in water bodies.
 - Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **Other adverse effects** Avoid release to the environment.

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:**
 - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|-----------------------------------|---|
| · UN-Number | |
| · DOT/TDG, ADR, IMDG, IATA | UN3082 |
| · UN proper shipping name | |
| · DOT/TDG | Environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate) |
| · ADR | UN3082 Environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate) |
| · IMDG | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ethylhexyl nitrate, 2-Ethyl-1-hexanol), MARINE POLLUTANT |
| · IATA | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ethylhexyl nitrate) |

(Contd. on page 8)

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

Trade name: C-SHOT

(Contd. of page 7)

· Transport hazard class(es)

· DOT, IMDG, IATA



· Class

9 Miscellaneous dangerous substances and articles

· Label

9

· Packing group

· DOT/TDG, ADR, IMDG, IATA

III

· Environmental hazards:

Product contains environmentally hazardous substances: 2-ethylhexyl nitrate

· Marine pollutant:

Yes (DOT)

· Special precautions for user

Warning: Miscellaneous dangerous substances and articles

· Hazard identification number (Kemler code):

90

· EMS Number:

F-A,S-F

· Stowage Category

A

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· DOT/TDG

· Quantity limitations

On passenger aircraft/rail: 450 L

On cargo aircraft only: 450 L

· IMDG

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ETHYLHEXYL NITRATE), 9, III

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

No REACH Annex XVII restrictions

Contains no REACH candidate substance

(Contd. on page 9)

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

Trade name: C-SHOT

(Contd. of page 8)

· **Sara**· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

111-76-2 | 2-butoxyethanol

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Canadian substance listings:**· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

111-76-2 | 2-butoxyethanol

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:** Engineering Department· **Date of the latest revision of the safety data sheet** 07/22/2022 / -· **Issue Date** 07/22/2022· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health