

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 07/22/2022

1 Identification

- **Product identifier**

- **Trade name: ECOFUEL**

- **Part number:**

- 00100-F002, 00100-F008, 00100-F032, 00100-G001, 00100-G2.5, 00100-G055, 00100-G275, 00100-G330

- **Application of the substance / the mixture** Fuel Additive

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

- **Manufacturer/Supplier:**

- Energy Technology Group LLC
 - 1660 Kensington Avenue, Unit 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 (Inhalation) - Category 4	H332 Harmful if inhaled.
Skin Irritation - Category 2	H315 Causes skin irritation.
Eye Irritation - Category 2A	H319 Causes serious eye irritation.

- **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-butoxyethanol

- **Hazard statements**

- Combustible liquid.
 - Harmful if swallowed.
 - Harmful if inhaled.
 - Causes skin irritation.
 - Causes serious eye irritation.

- **Precautionary statements**

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - Avoid breathing fume/spray.

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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.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If eye irritation persists: Get medical advice/attention.

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:		WT/WT
111-76-2	2-butoxyethanol	50%-100%
104-76-7	2-Ethyl-1-hexanol	< 2.5 %
112-80-1	oleic acid, pure	< 2.5 %

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.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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

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- **Most important symptoms and effects, both acute and delayed**
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:**
Dilute with plenty of water.
Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
- **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.
Prevent formation of aerosols.
 - **Information about protection against explosions and fires:** No special measures required.
- **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:** Keep receptacle tightly sealed.

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- **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 (95.0%)**

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.

- Immediately remove all soiled and contaminated clothing.

- 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.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

- **Form:**

Fluid

- **Color:**

According to product specification

- **Odor:**

Characteristic

- **Odor threshold:**

Not determined.

- **pH-value:**

Not determined.

- **Change in condition**

- **Melting point/Melting range:**

Undetermined.

- **Boiling point/Boiling range:**

171 °C

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· Flash point:	65 °C
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	240 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
· Lower:	1.1 Vol %
· Upper:	10.6 Vol %
· Vapor pressure at 20 °C:	1.2 hPa
· Density at 20 °C:	0.9 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· Solvent separation test	
· VOC content:	97.00 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **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.

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11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	1,263 mg/kg
Dermal	LD50	2,061 mg/kg
Inhalative	LC50/4 h (vapor)	12.1 mg/L (gpg)

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)

104-76-7 2-Ethyl-1-hexanol

Oral	LD50	2,049 mg/kg (rat)
Dermal	LD50	1,970 mg/kg (rabbit)

112-80-1 oleic acid, pure

Oral	LD50	74,000 mg/kg (rat)
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· Primary irritant effect:

- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

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

Harmful
Irritant

· 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.

12 Ecological information

· Toxicity

· Aquatic toxicity:

112-80-1 oleic acid, pure

LC50 (96 h)	205 mg/L (fish)
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· Persistence and degradability No further relevant information available.

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· Behavior in environmental systems:

· Bioaccumulative potential

112-80-1 oleic acid, pure

Bioaccumulation 7.73 (-) (potential high)

· Mobility in soil No further relevant information available.

· Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· Other adverse effects No further relevant information available.

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.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

· UN-Number

· DOT/TDG, ADR, IMDG, IATA

Not Regulated

· UN proper shipping name

· DOT/TDG, ADR, IMDG, IATA

Not Regulated

· Transport hazard class(es)

· DOT, IMDG, IATA

· Class

Not Regulated

· Packing group

· DOT/TDG, ADR, IMDG, IATA

Not Regulated

· Environmental hazards:

Not applicable.

· Special precautions for user

Not applicable.

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

Not applicable.

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· **UN "Model Regulation":** Not Regulated**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

· **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%)**

All ingredients are listed.

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