

Safety Data Sheet

Issue date: 07/22/2022

v 1

Last Revision Date: 11/22/2021

1 Identification

- **Product identifier**

- **Trade name:** OPTIPLEX FBC FUEL SYSTEM CLEANER

- **Part number:**

- 01107-F002, 01107-F012, 01107-F032, 01107-G001, 01107-G2.5, 01107-G055, 01107-G270, 01107-G320

- **Application of the substance / the mixture** Pour in tank gasoline additive engine cleaner

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

- **Manufacturer/Supplier:**

- Energy Technology Group
 - 1660 Kensington Ave - Suite 6
 - Cheektowaga, NY 14215
 - USA
 - (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 3 | H226 Flammable liquid and vapour. |
| Skin Irritation - Category 2 | H315 Causes skin irritation. |
| Eye Irritation - Category 2A | H319 Causes serious eye irritation. |
| Skin Sensitizer - Category 1 | H317 May cause an allergic skin reaction. |
| Germ Cell Mutagenicity - Category 1B | H340 May cause genetic defects. |
| Carcinogenicity - Category 1B | H350 May cause cancer. |
| Aspiration Hazard - Category 1 | H304 May be fatal if swallowed and enters airways. |
| Aquatic Chronic 3 | H412 Harmful 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** Danger

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

- Solvent naphtha (petroleum), light arom.
 - Distillates (petroleum), sweetened middle ethylbenzene
 - Distillates (petroleum), hydrotreated heavy paraffinic n,n'-Disalicylidene-1,2-propanediamine

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· Hazard statements

Flammable liquid and vapour.
 Causes skin irritation.
 Causes serious eye irritation.
 May cause an allergic skin reaction.
 May cause genetic defects.
 May cause cancer.
 May be fatal if swallowed and enters airways.
 Harmful to aquatic life with long lasting effects.

· Precautionary statements

Obtain special instructions before use.
 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: Immediately call a poison center/doctor.
 Specific treatment (see on this label).
 Do NOT induce vomiting.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Take off contaminated clothing and wash it before reuse.
 Store locked up.
 Dispose of contents in accordance with local regulations.

· Additional information:

For Professional Use Only
 Restricted to professional users.

· 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:**

| | | |
|------------|---|---------|
| 64742-95-6 | Solvent naphtha (petroleum), light arom. | 25-50% |
| 111-76-2 | 2-butoxyethanol | 10-25% |
| 64741-86-2 | Distillates (petroleum), sweetened middle | 2.5-10% |
| 91-20-3 | naphthalene | 2.5-10% |

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| | | |
|------------|--|-------|
| 94-91-7 | n,n'-Disalicylidene-1,2-propanediamine | ≤2.5% |
| 100-41-4 | ethylbenzene | ≤2.5% |
| 64742-54-7 | Distillates (petroleum), hydrotreated heavy paraffinic | ≤2.5% |

* 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.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation continues, consult a doctor.

· 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:

A person vomiting while lying on their back should be turned onto their side.

Rinse mouth with water.

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If conscious, give small quantities of water to drink.

Stop if victim feels sick.

Do not induce vomiting.

If symptoms persist consult doctor.

· Information for doctor:

· Most important symptoms and effects, both acute and delayed

May cause eye irritation. Symptoms may include discomfort or pain, excessive blinking and tear production, with possible redness and swelling.

Headache

Dizziness

Disorientation

Coughing

Nausea

Harmful if swallowed. May be fatal if swallowed and enters airways. Swallowing a small quantity of this material will result in serious health hazard.

May cause respiratory tract irritation.

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.

See section 11.

· Indication of any immediate medical attention and special treatment needed

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Treat Symptomatically

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5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
 - **For safety reasons unsuitable extinguishing agents:** Water
- **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

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Particular danger of slipping on leaked/spilled product.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Do not touch or walk through spilled material.
- **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.
Prevent from spreading (e.g. by damming-in or oil barriers).
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.
Do not flush with water or aqueous cleansing agents
- **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**
Open and handle receptacle with care.
Use only in well ventilated areas.
Avoid contact with the eyes and skin.
Avoid contact with clothing.
Avoid splashes or spray in enclosed areas.
Keep in the original containers.
See section 8 for personal protective equipment.
Do not reuse container.

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- **Information about protection against explosions and fires:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
 - Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
 - See section 10 for incompatible materials.
 - 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.
 - **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 (15.0%)**

| | |
|----|-------------|
| EL | TWA: 20 ppm |
| EV | TWA: 20 ppm |
| | Skin |

91-20-3 naphthalene (0.5%)

| | |
|----|-------------------------------------|
| EL | TWA: 10 ppm |
| | Skin; IARC 2B |
| EV | STEL: 78 mg/m ³ , 15 ppm |
| | TWA: 52 mg/m ³ , 10 ppm |

100-41-4 ethylbenzene (0.5%)

| | |
|----|---------------------------------------|
| EL | TWA: 20 ppm |
| | IARC 2B |
| EV | STEL: 540 mg/m ³ , 125 ppm |
| | TWA: 435 mg/m ³ , 100 ppm |

· **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.
- Store protective clothing separately.
- Do not eat, drink, smoke or sniff while working.

· **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.

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· **Protection of hands:**

Chemical resistant protective gloves

· **Eye protection:**

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

· **Body protection:** Protective work clothing**9 Physical and chemical properties**· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**· **Form:**

Liquid

· **Color:**

yellow to light orange

· **Odor:**

Characteristic

· **Odor threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**· **Melting point/Melting range:**

Undetermined.

· **Boiling point/Boiling range:**

162 °C

· **Flash point:**

45 °C

· **Flammability (solid, gaseous):**

Not applicable.

· **Ignition temperature:**

240 °C

· **Decomposition temperature:**

Not determined.

· **Auto igniting:**

Product is not selfigniting.

· **Danger of explosion:**

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**· **Lower:**

0.7 Vol %

· **Upper:**

10.6 Vol %

· **Vapor pressure at 20 °C:**

5 hPa

· **Density:**

Not determined.

· **Relative density**

Not determined.

· **Vapor density**

Not determined.

· **Evaporation rate**

Not determined.

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| | |
|---|--|
| · 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: | 93.00 % |
| · 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:** Strong Oxidizers
- **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 | 8,000 mg/kg |
| Dermal | LD50 | 13,333 mg/kg |
| Inhalative | LC50/4 h (vapor) | >11.4 mg/L |
| 64742-95-6 Solvent naphtha (petroleum), light arom. | | |
| Oral | LD50 | >6,800 mg/kg (rat) |
| Dermal | LD50 | >3,400 mg/kg (rab) |
| Inhalative | LC50/4 h (vapor) | >10.2 mg/L (rat) |
| 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) |
| 64741-86-2 Distillates (petroleum), sweetened middle | | |
| Inhalative | LC50/4 h (vapor) | 4.6 mg/L (rat) |

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91-20-3 naphthalene

| | | |
|--------|------|-------------------|
| Oral | LD50 | 490 mg/kg (rat) |
| Dermal | LD50 | 5,000 mg/kg (rat) |

94-91-7 n,n'-Disalicylidene-1,2-propanediamine

| | | |
|--------|------|--------------------|
| Oral | LD50 | 1,350 mg/kg (rat) |
| Dermal | LD50 | >2,000 mg/kg (rat) |

100-41-4 ethylbenzene

| | | |
|------------|------------------|-----------------------|
| Oral | LD50 | 3,500 mg/kg (rat) |
| Dermal | LD50 | 17,800 mg/kg (rabbit) |
| Inhalative | LC50/4 h (vapor) | 17.8 mg/L (rat) |

· **Primary irritant effect:**· **on the skin:** Irritant to skin and mucous membranes.· **on the eye:**

May cause eye irritation. Symptoms may include discomfort or pain, excessive blinking and tear production, with possible redness and swelling.

· **Inhalation:**Do not inhale, can cause respiratory system irritation.
coughing· **Ingestion:** May be fatal if swallowed and enter airways.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

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

Carcinogenic.

· **Carcinogenic categories**

| · IARC (International Agency for Research on Cancer) | | |
|---|-----------------|----|
| 111-76-2 | 2-butoxyethanol | 3 |
| 91-20-3 | naphthalene | 2B |
| 100-41-4 | ethylbenzene | 2B |
| 1330-20-7 | xylene | 3 |

· **NTP (National Toxicology Program)**

| | | |
|---------|-------------|---|
| 91-20-3 | naphthalene | R |
|---------|-------------|---|

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

None of the ingredients is listed.

12 Ecological information· **Toxicity**· **Aquatic toxicity:** Harmful to aquatic life with long lasting effects.· **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:** Harmful to fish

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- **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.
 - Harmful to 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 | UN1268 |
| · UN proper shipping name | |
| · DOT/TDG | Petroleum distillates, n.o.s. |
| · ADR | UN1268 Petroleum distillates, n.o.s. |
| · IMDG, IATA | PETROLEUM DISTILLATES, N.O.S. |
| · Transport hazard class(es) | |
| · DOT/TDG (Transport dangerous goods): | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |

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| | |
|---|--|
| · Packing group · DOT/TDG, ADR, IMDG, IATA | III |
| · Environmental hazards: · Marine pollutant: | No |
| · Special precautions for user · Hazard identification number (Kemler code): 30 · EMS Number: · Stowage Category | Warning: Flammable liquids F-E,S-E 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: 60 L On cargo aircraft only: 220 L |
| · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |
| · UN "Model Regulation": | UN 1268 PETROLEUM DISTILLATES, N.O.S., 3, 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

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

None of the ingredients is listed.

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

| | |
|-----------|------------------------|
| 111-76-2 | 2-butoxyethanol |
| 91-20-3 | naphthalene |
| 95-63-6 | 1,2,4-trimethylbenzene |
| 100-41-4 | ethylbenzene |
| 1330-20-7 | xylene |

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

All components have the value ACTIVE.

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· **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%) | |
| 95-63-6 | 1,2,4-trimethylbenzene |
| 100-41-4 | ethylbenzene |
| · Canadian Ingredient Disclosure list (limit 1%) | |
| 111-76-2 | 2-butoxyethanol |

· **National regulations:**· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

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** 11/22/2021

· **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