

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

1 Identification

- **Product identifier**

- **Trade name: Terraclean Optima Fuel System Cleaner**

- **Part number:** 201235

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

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

- **Manufacturer/Supplier:**

- Terraclean, division of, CPS Products Canada Ltd.

- 1324 Blundell Road

- Mississauga, ON, L4Y 1M5

- Canada

- Phone: (905) 615-8620

- **Emergency telephone number:**

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

2 Hazard(s) identification

- **Classification of the substance or mixture**

Flam. Liq. 3 H226 Flammable liquid and vapor.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.

Asp. Tox. 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**



GHS02 GHS07 GHS08

- **Signal word** Danger

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

- Solvent naphtha (petroleum), light arom.

- **Hazard statements**

- Flammable liquid and vapor.

- 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.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 1)

Wash thoroughly after handling.

Avoid breathing mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Immediately call a poison center/doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

Do NOT induce vomiting.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:** Restricted to professional users.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 2
Reactivity = 1

· **HMIS-ratings (scale 0 - 4)**



HEALTH 2 Health = 2
FIRE 2 Fire = 2
REACTIVITY 1 Reactivity = 1

· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture: consisting of the following hazardous components.

· **Chemical components:**

64742-95-6	Solvent naphtha (petroleum), light arom.	50-100%
111-76-2	2-butoxyethanol	10-<20%
64741-86-2	Distillates (petroleum), sweetened middle	2.5-<10%
61791-44-4	Ethanol, 2,2'-iminobis-, N-tallow alkylderivs.	0.1-<1%
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic	0.1-<1%
94-91-7	n,n'-Disalicylidene-1,2-propanediamine	0.1-<1%
95-63-6	1,2,4-trimethylbenzene	0.1-<1%
91-20-3	naphthalene	0.25-<1%
100-41-4	ethylbenzene	0.1-<1%

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.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 2)

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

· **After skin contact:**

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:**

Do not induce vomiting; immediately call for medical help.

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.

· **Information for doctor:** Treat Symptomatically

· **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.

· **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.

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.

Do not touch or walk through spilled material.

(Contd. on page 4)

US

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 3)

- **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.
 - **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.
 - **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

- **Engineering Controls**
Ensure adequate ventilation in the workplace.
eye wash station
safety shower
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

111-76-2 2-butoxyethanol (10-<20%)

PEL	TWA: 240 mg/m ³ , 50 ppm
	Skin

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 4)

REL	TWA: 24 mg/m ³ , 5 ppm Skin
TLV	TWA: 97 mg/m ³ , 20 ppm BEI

91-20-3 naphthalene (0.25-<1%)

PEL	TWA: 50 mg/m ³ , 10 ppm
REL	STEL: 75 mg/m ³ , 15 ppm TWA: 50 mg/m ³ , 10 ppm
TLV	TWA: 52 mg/m ³ , 10 ppm Skin; BEI

Ingredients with biological limit values:

111-76-2 2-butoxyethanol (10-<20%)

BEI	200 mg/g creatinine Medium: urine Time: end of shift Parameter: Butoxyacetic acid with hydrolysis
-----	--

· **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.

· **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
- **Odour threshold:** Not determined.

· **pH-value:** Not determined.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 5)

· 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.
· Vapour 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 content:	
· Organic solvents:	96.5 %
· VOC content:	96.5 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
 - **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.

US

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 6)

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

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

ATE (Acute Toxicity Estimates)

Oral	LD50	3133 mg/kg (rat)
Dermal	LD50	2667 mg/kg (rab)
Inhalative	LC50/4 h	5.88 mg/l (rat)

64742-95-6 Solvent naphtha (petroleum), light arom.

Oral	LD50	>6800 mg/kg (rat)
Dermal	LD50	>3400 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat)

111-76-2 2-butoxyethanol

Oral	LD50	470 mg/kg (rat)
Dermal	LD50	400 mg/kg (rab)
Inhalative	LC50/4 h	2.2 mg/l (rat)

64741-86-2 Distillates (petroleum), sweetened middle

Inhalative	LC50/4 h	4.6 mg/l (rat)
------------	----------	----------------

64742-54-7 Distillates (petroleum), hydrotreated heavy paraffinic

Inhalative	LC50/4 h	0.4 mg/l (rat)
------------	----------	----------------

91-20-3 naphthalene

Oral	LD50	490 mg/kg (rat)
Dermal	LD50	5000 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Causes serious eye irritation.

- **Inhalation:**

- Do not inhale , can cause respiratory system irritation.
coughing

- **Ingestion:** May be fatal if swallowed and enter airways.

- **Sensitization:** May produce an allergic reaction.

- **Route of Exposure** inhaltive, eyes, skin, ingestion

- **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
1330-20-7	xylene	3
100-41-4	ethylbenzene	2B

- **NTP (National Toxicology Program)**

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

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 7)

· **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.

111-76-2 2-butoxyethanol

EC50 (48 h)	>1000 mg/L (daphnia)
LC50 (96 h) (static)	1490 mg/l (Lepomis macrochirus)

- **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

- **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, IMDG, IATA**

UN1268

- **UN proper shipping name**

- **DOT**

Petroleum distillates, n.o.s.

- **IMDG, IATA**

PETROLEUM DISTILLATES, N.O.S.

(Contd. on page 9)

US

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 8)

· **Transport hazard class(es)**

· **DOT**



· **Class** 3 Flammable liquids
· **Label** 3

· **IMDG, IATA**



· **Class** 3 Flammable liquids
· **Label** 3

· **Packing group**

· **DOT, IMDG, IATA** III

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user**

Warning: Flammable liquids

· **Danger code (Kemler):** 30

· **EMS Number:** F-E,S-E

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

Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 60 L
On cargo aircraft only: 220 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":**

UN1268, Petroleum distillates, n.o.s., 3, III

15 Regulatory information

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

· **Sara**

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

None of the ingredients is listed.

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 9)

· Section 313 (Specific toxic chemical listings):

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

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

91-20-3	naphthalene
100-41-4	ethylbenzene

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

111-76-2	2-butoxyethanol	NL
91-20-3	naphthalene	C, CBD
1330-20-7	xylene	I
100-41-4	ethylbenzene	D

· TLV (Threshold Limit Value established by ACGIH)

111-76-2	2-butoxyethanol	A3
91-20-3	naphthalene	A4
1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· GHS label elements

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

· Hazard pictograms



GHS02 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

Solvent naphtha (petroleum), light arom.

· Hazard statements

Flammable liquid and vapor.

Causes skin irritation.

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA 29 CFR 1910.1200 HCS

Issue date: 06/25/2015

v 1

Revision Date: 06/25/2015

Trade name: Terraclean Optima Fuel System Cleaner

(Contd. of page 10)

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.
Wash thoroughly after handling.
Avoid breathing mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Immediately call a poison center/doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
Do NOT induce vomiting.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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

- **Issue Date** June 25, 2015
- **Revision Changes:** v1.0 - original release (June 25, 2015)

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
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
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
Carc. 1B: Carcinogenicity, Hazard Category 1B
Asp. Tox. 1: Aspiration hazard, Hazard Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3