

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
 - **Product name: Terraclean Optima Fuel System Cleaner**
 - **Part number:** 201235
 - **Application of the substance / the mixture** Pour in tank gas additive engine cleaner
- **1.3 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
 - **email of person responsible:** customerservice@terraclean.net
- **1.4 Emergency telephone number:** CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 3	H226	Flammable liquid and vapour.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	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.

- **2.2 Label elements**
 - **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
 - **Hazard pictograms**



- **Signal word** Danger
- **Hazard-determining components of labelling:**
Solvent naphtha (petroleum), light arom.
- **Hazard statements**
 - H226 Flammable liquid and vapour.
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H317 May cause an allergic skin reaction.
 - H340 May cause genetic defects.
 - H350 May cause cancer.
 - H304 May be fatal if swallowed and enters airways.
 - H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product name: Terraclean Optima Fuel System Cleaner

(Contd. of page 1)

· **Precautionary statements**

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264	Wash thoroughly after handling.
P261	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P363	Wash contaminated clothing before reuse.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P331	Do NOT induce vomiting.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

Restricted to professional users.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

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

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

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

· **Dangerous components:**

CAS: 64742-95-6 EINECS: 265-199-0	Solvent naphtha (petroleum), light arom. Flam. Liq. 3, H226; Muta. 1B, H340; Carc. 1B, H350; Asp. Tox. 1, H304	50-100%
CAS: 111-76-2 EINECS: 203-905-0	2-butoxyethanol Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	10-<20%
CAS: 64741-86-2 EINECS: 265-088-7	Distillates (petroleum), sweetened middle Acute Tox. 1, H330; Carc. 1B, H350; Asp. Tox. 1, H304	2.5-<10%
CAS: 61791-44-4 EINECS: 263-177-5	Ethanol, 2,2'-iminobis-, N-tallow alkylderivs. Met. Corr.1, H290; Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400; Acute Tox. 4, H302; Skin Sens. 1, H317	0.1-<1%
CAS: 64742-54-7 EINECS: 265-157-1	Distillates (petroleum), hydrotreated heavy paraffinic Carc. 1B, H350	0.1-<1%
CAS: 94-91-7 EINECS: 202-374-2	n,n'-Disalicylidene-1,2-propanediamine Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1, H317	0.1-<1%
CAS: 95-63-6 EINECS: 202-436-9	1,2,4-trimethylbenzene Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.1-<1%
CAS: 91-20-3 EINECS: 202-049-5	naphthalene Carc. 2, H351; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302	0.25-<1%

(Contd. on page 3)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product name: Terraclean Optima Fuel System Cleaner

(Contd. of page 2)

CAS: 100-41-4	ethylbenzene	0.1-<1%
EINECS: 202-849-4	Flam. Liq. 2, H225; Carc. 2, H351; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332	

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 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:

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. Get immediate medical attention.

A person vomiting while laying 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.

· 4.2 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

Disziness

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.

· **Information for doctor:** Treat Symptomatically

· 4.3 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.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water

· 5.2 Special hazards arising from the substance or mixture

See section 10 for additional information.

(Contd. on page 4)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product name: Terraclean Optima Fuel System Cleaner

(Contd. of page 3)

· 5.3 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.

SECTION 6: Accidental release measures

· 6.1 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.

· 6.2 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.

· 6.3 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

· 6.4 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.

SECTION 7: Handling and storage

· 7.1 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 fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

· 7.2 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 container tightly sealed.

· 7.3 Specific end use(s) No further relevant information available.

GB

(Contd. on page 5)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product name: Terraclean Optima Fuel System Cleaner

(Contd. of page 4)

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters

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

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

WEL	Short-term value: 246 mg/m ³ , 50 ppm Long-term value: 123 mg/m ³ , 25 ppm Sk, BMGV
-----	---

· **Ingredients with biological limit values:**

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

BMGV	240 mmol/mol creatinine Octanol-Water: urine 0.1: post shift 7.3: butoxyacetic acid
------	--

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 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.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Chemical resistant protective gloves (EN 374)

· **Eye protection:**



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

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· **General Information**

· **Appearance:**

· **Form:**

Liquid

· **Colour:**

yellow to light orange

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

(Contd. on page 6)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product 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.
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
· Lower:	0.7 Vol %
· Upper:	10.6 Vol %
· Vapour 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 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
 - **Thermal decomposition / conditions to be avoided:**
Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat, open flames, sparks.
- **10.5 Incompatible materials:** Strong Oxidizers
- **10.6 Hazardous decomposition products:** May include, and are not limited to: oxides of carbon.

GB

(Contd. on page 7)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product name: Terraclean Optima Fuel System Cleaner

(Contd. of page 6)

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
 - Acute toxicity

· LD/LC50 values 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:

- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Inhalation:**
Do not inhale , can cause respiratory system irritation.
coughing
- **Ingestion:** May be fatal if swallowed and enter airways.
- **Respiratory or skin sensitisation** May produce an allergic reaction.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Carcinogenic.

SECTION 12: Ecological information

· 12.1 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)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 8)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product name: Terraclean Optima Fuel System Cleaner

(Contd. of page 7)

- **Ecotoxicological effects:**
 - **Remark:** Harmful to fish
- **Additional ecological information:**
 - **General notes:**



Water hazard class 2 (German Regulation) (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
- **12.5 Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **12.6 Other adverse effects** Avoid release to the environment.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
 - **Recommendation**

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

SECTION 14: Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN1268 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA | UN1268 PETROLEUM DISTILLATES, N.O.S.
PETROLEUM DISTILLATES, N.O.S. |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR | <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label |
| | |
| <ul style="list-style-type: none"> · IMDG, IATA | <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | 3 (F1) Flammable liquids.
3

3 Flammable liquids.
3

III |

(Contd. on page 9)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product name: Terraclean Optima Fuel System Cleaner

(Contd. of page 8)

· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	
· Danger code (Kemler):	Warning: Flammable liquids. 30
· EMS Number:	F-E,S-E
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Not applicable.	
· Transport/Additional information:	
· ADR	
· 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
· Transport category	3
· Tunnel restriction code	D/E
· 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

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No REACH Annex XVII restrictions
Contains no REACH candidate substance
 - **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **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.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.

- **Issue Date:** June 22, 2015

(Contd. on page 10)

Safety data sheet
according to Regulation (EU) No. 453/2010

Issue date: 22.06.2015

Version 1

Revision: 22.06.2015

Product name: Terraclean Optima Fuel System Cleaner

(Contd. of page 9)

· **Relevant phrases**

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H340 May cause genetic defects.
- H350 May cause cancer.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

· **Contact:** Engineering Department

- **Revision Changes:** v1.0 - original release (June 22, 2016)

· **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. 2: Flammable liquids, Hazard Category 2
- Flam. Liq. 3: Flammable liquids, Hazard Category 3
- Met. Corr. 1: Corrosive to metals, Hazard Category 1
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Acute Tox. 1: Acute toxicity, Hazard Category 1
- Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
- Carc. 1B: Carcinogenicity, Hazard Category 1B
- Carc. 2: Carcinogenicity, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
- Asp. Tox. 1: Aspiration hazard, Hazard Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
- Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3