



SAFETY DATA SHEET

Issue Date 4/25/2016

Revision Date 4/25/2016

Version 1

1. IDENTIFICATION

Product identifier

Product Name: Heavy Duty Cleaner

Other means of identification

Product code: F-805

Synonyms: None

Recommended use of the chemical and restrictions on use

Recommended Use: Cleaner

Uses advised against: No information available

Details of the supplier of the safety data sheet

Supplier Address

FRONTIER PERFORMANCE LUBRICANTS INC

PO BOX 1777

LODI, CA 95241

Phone: (800)-807-4496

Fax: (209)-334-6408

Emergency telephone number

Emergency Telephone: PERS (800)-633-8253

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	Category 4
Acute toxicity (Oral)	Category 4
Acute toxicity (Inhalation)	Category 4
Acute toxicity (Dermal)	Category 4
Skin irritation	Category 2
Eye irritation	Category 2A

GHS Label element

Hazard pictograms



Signal Word

Warning

Hazard statements

H227 Combustible liquid.
 H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.

Precautionary statements

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
 P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER

or doctor/ physician if you feel unwell.
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Storage:
Disposal:

Potential Health Effects Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
 ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
 OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
 NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview

Appearance liquid
 Color BLUE/GREEN LIQUID
 Odor mild, sweet, ester-like, ether-like
 Hazard Summary No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Hazardous components

INGREDIENT	% BY WEIGHT	TLV/PEL	UNITS	AGENCY	TYPE
BUTYL CELLOSOLVE CAS # 111-76-2	1-10	50	PPM	OSHA	TWA

4. FIRST AID MEASURES

General advice Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Carbon dioxide (CO₂)
Unsuitable extinguishing media High volume water jet
Hazardous combustion products No hazardous combustion products are known
Specific extinguishing methods Use a water spray to cool fully closed containers.
Further information For safety reasons in case of fire, cans should be stored separately in closed containments.
Special protective equipment for firefighters Wear self-contained breathing apparatus for fire-fighting if necessary.
NFPA Flammable and Combustible Liquids Classification
 Combustible Liquid Class IIIA

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Environmental precautions Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal

7. HANDLING AND STORAGE

Advice on safe handling

Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage

No smoking. Keep in a well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS/ PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters/Permissible concentration	Basis
111-76-2	2-Butoxy ethanol	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m3	NIOSH REL
		TWA	50 ppm 240 mg/m3	OSHA Z-1
		TWA	25 ppm 120 mg/m3	OSHA PO

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-Butoxy ethanol	111-76-2	Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g Creatinine	ACGIH BEI

Personal protective equipment

Respiratory protection In the case of vapor formation use a respirator with an approved filter.
 Hand protection Remarks The suitability for a specific workplace should be discussed with the producers of the protective gloves
 Eye protection Eye wash bottle with pure water. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.
 Skin and body protection Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
 Hygiene measures When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212°F
 % SOLUBILITY IN WATER: COMPLETE
 SPEC F C GRAVITY (60F/60F): 1.083
 APPEARANCE: BLUE/GREEN LIQUID
 ODOR: MILD ODOR
 VAPOR PRESSURE: .5 MM HG @ 20°C
 VOC: 86 GR/LITRE

10. STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No hazards to be specially mentioned.
Conditions to avoid	Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Aldehydes Ketones Organic acids

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

111-76-2:

Acute oral toxicity	LD50 (Rat): 745 mg/kg. Assessment: The component/mixture is moderately toxic after single ingestion.
Acute inhalation toxicity	LCSO (Rat): 550 ppm Exposure time: 4 h. Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity	LD50 (Rat): 1,250 mg/kg. Assessment: The component/mixture is moderately toxic after single contact with skin.

Skin corrosion/ irritation

Components:

111-76-2:

Species:	Rabbit
Result	Irritating to skin.

Serious eye damage/eye irritation

Components:

111-76-2:

Species:	Rabbit
Result:	Irritating to eyes.

Respiratory or skin sensitization Components:

111-76-2:

Test Type:	Maximization test
Species:	Guinea pig
Result:	Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Components:

111-76-2:

Genotoxicity in vitro	
Test Type:	Mammalian cell gene mutation assay.
Test species:	Chinese hamster ovary (CHO)
Metabolic activation:	With and without metabolic activation.
Result:	Negative

Genotoxicity in vivo

Test Type:	In vivo micronucleus test
Test species:	Mouse (male)
Application Route:	Intraperitoneal
Result:	Negative

Germ cell mutagenicity- Assessment

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Components:

111-76-2:

Species	Mouse
Application Route:	Inhalation
Exposure time:	2 years

Activity duration: 6 hours
 Frequency of Treatment: 5 days/week NOAEL: 125 ppm
 Result: Limited evidence of carcinogenic effects with no relevance to humans

Carcinogenicity assessment Not classifiable as a human carcinogen.

STOT - single exposure

Product: No data available

Components:

111-76-2: No data available

STOT - repeated exposure

Product: No data available

Components:

111-76-2: No data available

Repeated dose toxicity Components:

111-76-2:

Species: Rat

NOAEL: 30

Application Route: Inhalation Exposure time: 14 week.

Number of exposures: 6 h/d, 5 day/week

Aspiration toxicity Components:

111-76-2:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

12. ECOLOGICAL INFORMATION**Eco toxicity**

Components: 111-76-2:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 1,474 mg/l

Exposure time: 96 h Test Type: static test

Method: OECD Test Guideline 203

GLP: No

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 1,800 mg/l

Exposure time: 48 h

Test Type: Static test

Method: OECD Test Guideline 202

GLP: No

Toxicity to algae EC50 (Pseudokirchneriella subcapitata (green algae)): 911 mg/l

End point: Biomass

Exposure time: 72 h

Test Type: Static test

Analytical monitoring: Yes

Method: OECD Test Guideline 201

GLP: No

Persistence and degradability

Components:

111-76-2:

Biodegradability Aerobic

Inoculum: Activated sludge, domestic, adaption not specified

Result: Readily biodegradable Biodegradation: 90.4 %

Exposure time: 28 d

Method: OECD Test Guideline 3018

GLP: No

Bioaccumulative potential

Components:

111-76-2:

Partition coefficient: Noctanol/water

Log Pow: 0.83

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Sub- stances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological in- formation No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact NEXEO's Environmental Services Group at 800-637-7922.

Contaminated packaging

Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION**IATA (International Air Transport Association):**

Not regulated as a dangerous good

IMDG-Code:

Not regulated as a dangerous good

DOT (Department of Transportation):

NON-REGULATED

Special Notes:

The flash point for this material is greater than 100°F (38 C). Therefore, in accordance with 49 CFR 173. SO(f) non-bulk containers (<450L or <119 gallon capacity) of this material may be shipped as non-regulated when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

15. REGULATORY INFORMATION**OSHA Hazards**

Combustible Liquid, Harmful by inhalation. Harmful by ingestion. Harmful by skin absorption, Moderate skin irritant, moderate eye irritant.

WHMIS ClassificationB3: Combustible Liquid. D1A: Very Toxic Material Causing Immediate and Serious Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity** This material does not contain any components with a CERCLA RQ.**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

Fire Hazard. Immediate (Acute) Health Hazard

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

The following components are subject to reporting levels established by SARA Title II, Section 313:

111-76-2 2-Butoxy ethanol 100 %

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). The following chemical(s) are listed under the U.S. Clean Air Act Section 111SOcMI

Intermediate or Final VOC's (40 CFR 60.489):

111-76-2 2-Butoxy ethanol 100 %

Clean Water Act	This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, and Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. Clean- Water Act, Section 311, and Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307	
US State Regulations		
Massachusetts Right to Know	111-76-2	2-Butoxy ethanol 90 - 100 %
Pennsylvania Right to Know	111-76-2	2-Butoxy ethanol 90 - 100 %
New Jersey Right to Know	111-76-2	2-Butoxy ethanol 90 - 100 %
California Prop 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	

The components of this product are reported in the following inventories

United States TSCA Inventory	y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL)	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	y (positive listing) (On the inventory, or in compliance with Inventory)
New Zealand. Inventory of Chemical Substances	y (positive listing) (On the inventory, or in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory	y (positive listing) (On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	y (positive listing) (On the inventory, or in compliance with the inventory)

16. OTHER INFORMATION

NFPA:

Health:	2	Moderate
Flammability:	2	Moderate
Reactivity:	0	Negligible

Special hazard.

HMIS III:

0 = not significant,

1=Slight,

2 = Moderate,

3 = High

4 =Extreme,

* = Chronic

Issue Date	4/25/2016
Revision Date	4/25/2016
Revision Note	Not applicable

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Key or Legend to abbreviations and acronyms used in the SDS			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand inventory of Chemicals
EC50	Effective Concentration 50%	NOAEL	No Observable Adverse Effect Level
EGEST	EOSCA Generic Exposure Scenario Tool	NOEC	No Observed Effect Concentration
EOSCA	European Oilfield Specialty	OSHA	Occupational Safety & Health Administration
EINECS	European Inventory of Existing Chemical Substances	PEL	Permissible Exposure
MAK	Germany Maximum Concentration Toxic Values	PICCS	Philippines inventory of Commercial Chemical Substances
GHS	Globally Harmonized System	PRNT	Presumed Not
>=	Greater Than or Equal To	RCRA	Resource Conservation Recovery Act
C50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	STEL	Short-term Exposure Limit
IECSC	Inventory of Existing Chemical Substances in China	TLV	Threshold Limit Value
ENCS	Japan, Inventory of Existing and New Chemical Substances	TWA	Time Weighted Average
KECI	Korea, Existing Chemical inventory	TSCA	Toxic Substance Control Act
<=	Less Than or Equal To	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
ILCSO	Lethal Concentration 50%	WHMIS	Workplace Hazardous Materials information System