



Material Safety Data Sheet

PRO FLO II

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		0
PERSONAL PROTECTION		

1. Product and Company Identification

Material name	PRO FLO II
Patent Number	Not available
Revision date	April-04-2011
Version No.	2
CAS #	Mixture
Product use	Demulsifier
Manufacturer information	Clearwater International LLC 100 Leetsdale Industrial Dr. Leetsdale, PA 15056 US Product Safety (724)-318-1050 Chemtrec 1-800-424-9300
Emergency	Chemtrec 1-800-424-9300
Supplier information	Producers Service Corp. 109 South Graham St. Zanesville, OH 43701 US
Supplier emergency telephone number(s)	24hr customer Service 740-454-6253

2. Hazards Identification

Emergency overview	WARNING Flammable liquid and vapor. Will be easily ignited by heat, spark or flames. Containers may explode when heated. Harmful if swallowed, inhaled or absorbed through skin. Components of the product may be absorbed into the body by inhalation, ingestion and through the skin. Prolonged exposure may cause chronic effects. Harmful to aquatic organisms.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Skin contact. Ingestion. Eye contact.
Eyes	Causes eye irritation. Avoid contact with eyes.
Skin	Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). This product may be harmful if it is absorbed through the skin. Avoid contact with the skin.
Inhalation	Harmful if inhaled. Irritating to respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. Do not breathe dust/fume/gas/mist/vapors/spray.

**Ingestion**

This product may be harmful or fatal if swallowed. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Components of the product may be absorbed into the body by ingestion. May cause delayed lung damage. Do not ingest.

Target organs

Blood. Central nervous system. Eyes. Kidney. Liver. Lungs. Respiratory system. Skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged and may cause blood damage. These effects have not been observed in humans.

Chronic effects

Unconsciousness. Shortness of breath. Liver injury may occur. Kidney injury may occur. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. This product may be harmful if it is absorbed through the skin. May cause delayed lung damage. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

Signs and symptoms

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Unconsciousness. Discomfort in the chest. Shortness of breath. Narcosis. Decrease in motor functions. Behavioral changes. Liver enlargement. Cough.

Potential environmental effects

Harmful to aquatic organisms.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Alcohols, C12-16, Ethoxylated	68551-12-2	40 - 70
2-Butoxyethanol	111-76-2	15 - 40
Methanol	67-56-1	10 - 30

4. First Aid Measures

First aid procedures**Eye contact**

Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Get medical attention immediately.

Skin contact

Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

Inhalation

Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately.

Ingestion

Rinse mouth. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.

Notes to physician

In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.



General advice

Take off contaminated clothing and shoes immediately. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties

Flammable by OSHA criteria. Containers may explode when heated.

Extinguishing media

Suitable extinguishing media

Water. Alcohol foam. Dry chemical. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Specific hazards arising from the chemical

Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment and precautions for firefighters

In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

6. Accidental Release Measures

Personal precautions

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep out of low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Clean up in accordance with all applicable regulations. Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.

Other information

Clean up in accordance with all applicable regulations.



7. Handling and Storage

Handling

Do not handle or store near an open flame, heat or other sources of ignition. All equipment used when handling the product must be grounded. Use only with adequate ventilation. Wear personal protective equipment. Wash thoroughly after handling. Avoid prolonged exposure. Do not empty into drains. Avoid release to the environment.

Storage

Keep away from heat and sources of ignition (spark or flame). The pressure in sealed containers can increase under the influence of heat. Keep containers tightly closed in a cool, well-ventilated place. Store in a closed container away from incompatible materials. Use care in handling/storage. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components

CAS

TWA

STEL

Ceiling

2-Butoxyethanol

111-76-2

20 ppm

Not established

Not established

Methanol

67-56-1

200 ppm

250 ppm

Not established

OSHA

Components

CAS

TWA

STEL

Ceiling

2-Butoxyethanol

111-76-2

50 ppm

Not established

Not established

Methanol

67-56-1

200 ppm

Not established

Not established

Engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection

Wear safety glasses with side shields. Wear chemical goggles.

Skin protection

Protective gloves. Wear suitable protective clothing. Closed-toe shoes recommended.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. If exposure may or does exceed occupational exposure limits use a NIOSH-approved respirator to prevent overexposure.

General hygiene considerations

Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wash hands before breaks and immediately after handling the product. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance

Liquid.

Color

clear - cloudy, light yellow

Odor

Slightly alcoholic.

Odor threshold

Not available

Physical state

Liquid.

Form

Liquid.

pH

6 - 8



Melting point	-11.2 °F (-23.8 °C) estimated
Freezing point	Not available
Boiling point	347 °F (175 °C) estimated
Flash point	112 °F (44.4 °C)
Evaporation rate	Not available
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	0.96 - 0.99
Relative density	0.9749 g/cm3 estimated
Solubility (water)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	345.2 °F (174 °C) estimated
Decomposition temperature	Not available
VOC	30 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks. Avoid high temperatures.
Incompatible materials	Strong oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects	Acute LD50: 7558 mg/kg estimated, Rat, Oral Acute LD50: 9405 mg/kg estimated, Rat, Dermal Acute LC50: 672 mg/l/4h estimated, Rat, Inhalation
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Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

2-Butoxyethanol	111-76-2	Inhalation LC50 Rat: 2.21 mg/L/4H; Inhalation LC50 Rat:450 ppm/4H; Oral LD50 Rat:470 mg/kg; Dermal LD50 Rat:2270 mg/kg; Dermal LD50 Rabbit:220 mg/kg
Methanol	67-56-1	Inhalation LC50 Rat: 83.2 mg/L/4H; Inhalation LC50 Rat:64000 ppm/4H; Oral LD50 Rat:5628 mg/kg; Dermal LD50 Rabbit:15800 mg/kg

Local effects	Liver toxicity. Blood disorder may occur after ingestion. Irritating to eyes, respiratory system and skin.
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Chronic effects

Hazardous by OSHA criteria. This product may be harmful if it is absorbed through the skin. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Subchronic effects

Kidney injury may occur. Blood disorder may occur after ingestion. Blood disorder may occur after prolonged inhalation. Blood disorder may occur after prolonged skin contact.

Carcinogenicity

Not expected to be hazardous by OSHA criteria.

ACGIH - Threshold Limit Values - Carcinogens

2-Butoxyethanol	111-76-2	A3 - Confirmed animal carcinogen with unknown relevance to humans
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Neurological effects

Hazardous by OSHA criteria.

Teratogenicity

Risk of birth defects and reduced fertility cannot be excluded.

Further information

Symptoms may be delayed.

12. Ecological Information

Ecotoxicity

LC50 7258 mg/L estimated, Fish, 96.00 Hours,
Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish Species Data

2-Butoxyethanol	111-76-2	96 Hr LC50 <i>Lepomis macrochirus</i> : 1490 mg/L [static]
Methanol	67-56-1	96 Hr LC50 <i>Pimephales promelas</i> : 28100 mg/L [flow-through]; 96 Hr LC50 <i>Oncorhynchus mykiss</i> : 13200 mg/L

Ecotoxicity - Microtox Data

Methanol	67-56-1	5 min EC50 <i>Photobacterium phosphoreum</i> : 43000 mg/L; 15 min EC50 <i>Photobacterium phosphoreum</i> : 40000 mg/L; 25 min EC50 <i>Photobacterium phosphoreum</i> : 39000 mg/L
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Ecotoxicity - Water Flea Data

2-Butoxyethanol	111-76-2	24 Hr EC50 water flea: 1720 mg/L; 24 Hr LC50 <i>Daphnia magna</i> : 1698-1940 mg/L
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Environmental effects

Harmful to aquatic life.

Ecotoxicity - Freshwater Fish Species Data

2-Butoxyethanol	111-76-2	96 Hr LC50 <i>Lepomis macrochirus</i> : 1490 mg/L [static]
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13. Disposal Considerations

Waste codes

D001: Waste Flammable material with a flash point <140 F

U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics

Methanol	67-56-1	waste number U154 (Ignitable waste)
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**Disposal instructions**

Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.

14. Transport Information**Department of Transportation (DOT) Requirements****Basic shipping requirements:**

Proper shipping name	Flammable liquids, n.o.s. RQ (Methanol) (2-BUTOXYETHANOL)
Hazard class	3
UN number	UN1993
Packing group	III
Marine pollutant	Alcohol C12-16, ethoxylated
Additional information:	
Special provisions	B1, B52, IB3, T4, TP1, TP29
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242
ERG number	128

**Department of Transportation (DOT) Requirements****Bulk****Basic shipping requirements:**

Proper shipping name	Flammable liquids, n.o.s. RQ (Methanol) (2-BUTOXYETHANOL)
Hazard class	3
UN number	UN1993
Packing group	III
Marine pollutant	Alcohol C12-16, ethoxylated
Additional information:	
Special provisions	B1, B52, IB3, T4, TP1, TP29
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242
ERG number	128





Canadian Transportation of Dangerous Goods (TDG) Requirements

Basic shipping requirements:

Proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, 2-BUTOXYETHANOL)
Hazard class	3
UN number	UN1993
Packing group	III
Marine pollutant	Alcohol C12-16, ethoxylated
Additional information:	
Special provisions	16
ERG number	128



IMDG

Basic shipping requirements:

Proper shipping name	FLAMMABLE LIQUID, N.O.S. (METHANOL, 2-BUTOXYETHANOL)
Hazard class	3
UN number	1993
Packing group	III
Marine pollutant	Alcohol C12-16, ethoxylated



IATA

Basic shipping requirements:

Proper shipping name	Flammable liquid, n.o.s. (METHANOL, 2-BUTOXYETHANOL)
Hazard class	3
UN number	1993
Packing group	III



15. Regulatory Information

Labelling

Contains	2-Butoxyethanol, Alcohols, C12-16, Ethoxylated, Methanol
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US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

2-Butoxyethanol	111-76-2	1.0 % de minimis concentration (applies to R-(OCH ₂ CH ₂) _n -OR', where n = 1,2, or 3, R=alkyl C7 or less, or R = phenyl or alkyl substituted phenyl, R' = H or alkyl C7 or less, or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate, Chemical Category N230)
Methanol	67-56-1	1.0 % de minimis concentration

U.S. - FDA - Direct Food Additives

2-Butoxyethanol	111-76-2	21 CFR 173.315
Methanol	67-56-1	21 CFR 173.250

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

Methanol: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - Yes
	Pressure Hazard - No
	Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

International regulations

Canada - WHMIS - Ingredient Disclosure List

2-Butoxyethanol	111-76-2	1 %
Methanol	67-56-1	1 %



State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - Massachusetts - Right To Know List

2-Butoxyethanol	111-76-2	Present
Methanol	67-56-1	Present

U.S. - Minnesota - Hazardous Substance List

2-Butoxyethanol	111-76-2	Skin
Methanol	67-56-1	Skin

U.S. - New Jersey - Right to Know Hazardous Substance List

2-Butoxyethanol	111-76-2	sn 0275
Methanol	67-56-1	sn 1222

U.S. - Pennsylvania - RTK (Right to Know) List

2-Butoxyethanol	111-76-2	Present
Methanol	67-56-1	Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

2-Butoxyethanol	111-76-2	Toxic (skin)
Methanol	67-56-1	Toxic; Flammable

U.S. - Texas - Effects Screening Levels - Long Term

2-Butoxyethanol	111-76-2	5 ppb ESL; 24 µg/m3 ESL
Methanol	67-56-1	200 ppb ESL; 262 µg/m3 ESL

U.S. - Texas - Effects Screening Levels - Short Term

2-Butoxyethanol	111-76-2	50 ppb ESL; 240 µg/m3 ESL
Methanol	67-56-1	2000 ppb ESL; 2620 µg/m3 ESL

16. Other Information

HMIS® ratings

Health: 2*
Flammability: 3
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 3
Instability: 0

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Disclaimer

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Issue date

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MSDS sections updated

This document has undergone significant changes and should be reviewed in its entirety.