



SAFETY DATA SHEET

1. Product and Company Identification

Material name HULL CLEANER
Revision date 01-29-2014
Version # 04
MSDS Number 7-1096, 7-1097
Product use Boat Hull Cleaning Compound.
Manufacturer/Supplier DONOVAN MARINE INC.
 6316 Humphries Street, New Orleans, LA
 70123
 1-800-347-4464

Emergency 24-Hour Emergency: CHEMTREC: (703) 527-3887
 or (800) 424-9300

2. Hazards Identification

Physical state Liquid.
Appearance Clear liquid.
Emergency overview DANGER

Combustible liquid. Corrosive. Causes skin and eye burns. Harmful in contact with skin and if swallowed. Prolonged exposure may cause chronic effects.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes Causes eye burns. Risk of serious damage to eyes.
Skin Causes skin burns. May be harmful if absorbed through skin.
Inhalation Causes burns. Prolonged inhalation may be harmful.
Ingestion Harmful if swallowed. Components of the product may be absorbed into the body by ingestion. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

Target organs Blood. Eyes. Liver. 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.

Kidneys. Central nervous system.

Chronic effects Kidney injury may occur. Liver 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. Unconsciousness. Edema. Jaundice. Cyanosis (blue tissue condition, nails, lips, and/or skin).

Signs and symptoms Irritation of nose and throat. Irritation of eyes and mucous membranes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Potential environmental effects May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Water	7732-18-5	60-100
Oxalic acid	144-62-7	5-10
Alcohols, C9-C11, exthoxylated	68439-46-3	1-5
Ethylene glycol n-butyl ether	111-76-2	1-5

Composition comments	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
4. First Aid Measures	
First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms persist.
Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Oxygen or artificial respiration if needed. 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 if symptoms persist.
Ingestion	Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If material is ingested, immediately contact a poison control center. If swallowed, seek medical advice immediately and show this container or label.
Notes to physician	Treat symptomatically. The effects might be delayed.
General advice	Take off contaminated clothing and shoes immediately. Get medical attention if any discomfort develops.
5. Fire Fighting Measures	
Flammable properties	The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures.
Extinguishing media	
Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Protection of firefighters	
Protective equipment and precautions for firefighters	Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In the event of fire, cool tanks with water spray. Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.
Specific methods	In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.
Hazardous combustion products	May include oxides of nitrogen.
6. Accidental Release Measures	
Personal precautions	Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Local authorities should be advised if significant spillages cannot be contained. Wear protective clothing as described in Section 8 of this safety data sheet. Ensure adequate ventilation. Ventilate closed spaces before entering them. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Large Spills: Dike far ahead of 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. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Never return spills to original containers for re-use. This material and its container must be disposed of as hazardous waste. Following product recovery, flush area with water. Clean surface thoroughly to remove residual contamination.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not eat, drink or smoke when using the product. Avoid breathing mist or vapor. Do not get this material on clothing. Do not use in areas without adequate ventilation. Keep away from heat, spark, open flames and other sources of ignition. Wear personal protective equipment. Avoid prolonged exposure. Wash thoroughly after handling. Avoid release to the environment. Handle and open container with care.

Storage

Keep locked-up. Store in a well-ventilated place. Keep container tightly closed. Store in a closed container away from incompatible materials. Keep out of the reach of children. Do not handle or store near an open flame, heat or other sources of ignition. Use care in handling/storage. Keep away from food, drink and animal feedingstuffs.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethylene glycol n-butyl ether (111-76-2)	TWA	20 ppm
Oxalic acid (144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethylene glycol n-butyl ether (111-76-2)	PEL	240 mg/m3
		50 ppm
Oxalic acid (144-62-7)	PEL	1 mg/m3

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Ethylene glycol n-butyl ether (111-76-2)	TWA	97 mg/m3
		20 ppm
Oxalic acid (144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Ethylene glycol n-butyl ether (111-76-2)	TWA	20 ppm
Oxalic acid (144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Ethylene glycol n-butyl ether (111-76-2)	TWA	20 ppm
Oxalic acid (144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Ethylene glycol n-butyl ether (111-76-2)	TWA	97 mg/m3
		20 ppm
Oxalic acid (144-62-7)	STEL	2 mg/m3
	TWA	1 mg/m3

Mexico. Occupational Exposure Limit Values

Components	Type	Value
Ethylene glycol n-butyl ether (111-76-2)	STEL	360 mg/m3
		75 ppm
	TWA	120 mg/m3
		26 ppm

Mexico. Occupational Exposure Limit Values

Components	Type	Value
Oxalic acid (144-62-7)	STEL	2 mg/m ³
	TWA	1 mg/m ³

Engineering controls Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

Eye / face protection Wear chemical goggles. Face-shield.

Skin protection Anti-static and flame-retardant protective clothing is recommended. Wear chemical protective equipment that is specifically recommended by the manufacturer.

Respiratory protection Wear positive pressure self-contained breathing apparatus (SCBA). Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Seek advice from local supervisor.

General hygiene considerations Do not get this material in contact with skin. Do not get in eyes. Do not get this material on clothing. When using, do not eat, drink or smoke. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practices. Always observe national occupational health and hygiene requirements including requirements for medical surveillance.

9. Physical & Chemical Properties

Appearance	Clear liquid.
Color	Clear.
Odor	Sweet. Pleasant.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	1 Approx. Melting
point	Not available.
Freezing point	Not available.
Boiling point	212 °F (100 °C)
Flash point	153.9 °F (67.7 °C)
Evaporation rate	Similar to water.
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	1.01 @ 20 °C
Solubility (water)	Completely soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Percent volatile	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, sparks, flames, elevated temperatures. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Chlorites and hypochlorites.

Hazardous decomposition products	Nitrogen oxides (NOx).
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components

Test Results

Ethylene glycol n-butyl ether (111-76-2)

Acute Dermal LD50 Rabbit: 400 mg/kg
 Acute Inhalation LC50 Mouse: 700 mg/l 7 Hours
 Acute Inhalation LC50 Rat: 450 mg/l 4 Hours
 Acute Oral LD50 Guinea pig: 1.2 g/kg
 Acute Oral LD50 Mouse: 1519 mg/kg
 Acute Oral LD50 Mouse: 1.2 g/kg
 Acute Oral LD50 Rabbit: 0.32 g/kg
 Acute Oral LD50 Rat: 560 mg/kg
 Acute Oral LD50 Rat: 1.48 g/kg
 Acute Other LD50 Mouse: 1130 mg/kg
 Acute Other LD50 Rabbit: 280 mg/kg
 Acute Other LD50 Rat: 340 mg/kg
 Acute Oral LC50 Rat: 375 mg/kg

Oxalic acid (144-62-7)

Acute effects

Causes eye and skin burns.

Local effects

Blood disorder may occur after ingestion. Liver toxicity.

Sensitization

Not available.

Chronic effects

Hazardous by OSHA criteria. Prolonged exposure may cause chronic effects. May be harmful if absorbed through skin. Prolonged inhalation may be harmful. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.

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

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH Carcinogens

Ethylene glycol n-butyl ether (CAS 111-76-2)

A3 Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Ethylene glycol n-butyl ether (CAS 111-76-2)

3 Not classifiable as to carcinogenicity to humans.

Epidemiology

Not available.

Mutagenicity

Not available.

Neurological effects

Hazardous by OSHA criteria.

Reproductive effects

Not available.

Teratogenicity

Not available.

Further information

Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

Components

Test Results

Ethylene glycol n-butyl ether (111-76-2)

LC50 Inland silverside (Menidia beryllina): 1250 mg/l 96 hours

Oxalic acid (144-62-7)

EC50 Water flea (Daphnia magna): 125 - 150 mg/l 48 hours

Alcohols, C9-C11, ethoxylated (68439-46-3)

EC50 Water flea (Daphnia magna): 2.9 - 8.5 mg/l 48 hours

LC50 Fathead minnow (Pimephales promelas): 6 - 12 mg/l 96 hours

Ecotoxicity

Contains a substance which causes risk of hazardous effects to the environment.

Environmental effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and degradability	Not available.
Bioaccumulation / Accumulation	No data available.
Partition coefficient (n-octanol/water)	Not available.
Mobility in environmental media	The product is soluble in water.

13. Disposal Considerations

Waste codes	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
Disposal instructions	This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not dispose of waste into sewer. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose in accordance with applicable federal, state, and local regulations.

14. Transport Information

Product Specific Note:	This product meets the limited quantities exception as follows: DOT: Not regulated as dangerous goods except when shipped in bulk. Otherwise, the following descriptions apply:
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DOT

Basic shipping requirements:

UN number	NA1993
Proper shipping name	Combustible liquids, n.o.s. (Ethylene glycol n-butyl ether)
Hazard class	Combustible Liquid
Packing group	III
Labels required	3

Additional information:

Special provisions	B1, B52, IB3, T4, TP1, TP29
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242
ERG number	128

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

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.
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CERCLA/SARA Hazardous Substances - Not applicable.

TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D)

Oxalic acid (CAS 144-62-7) 1.0 % One-Time Export Notification only.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Ethylene glycol n-butyl ether (CAS 111-76-2) 1.0 % N230

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ethylene glycol n-butyl ether (CAS 111-76-2) N230 Listed.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

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 (40 CFR 355, Appendix A)	No
Section 311/312 (40 CFR 370)	No
Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)	Not controlled
Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled
WHMIS classification	B3 - Flammable/Combustible D1A - Immediate/Serious-VERY TOXIC D1B - Immediate/Serious-TOXIC D2B - Other Toxic Effects-TOXIC E - Corrosive

WHMIS labeling



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 Existing Commercial Chemical Substances (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)

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

US - California Hazardous Substances (Director's): Listed substance

Ethylene glycol n-butyl ether (CAS 111-76-2)	Listed.
Oxalic acid (CAS 144-62-7)	Listed.

US - Massachusetts RTK - Substance: Listed substance

Ethylene glycol n-butyl ether (CAS 111-76-2)	Listed.
Oxalic acid (CAS 144-62-7)	Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

Ethylene glycol n-butyl ether (CAS 111-76-2)	500 LBS
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US - New Jersey RTK - Substances: Listed substance

Ethylene glycol n-butyl ether (CAS 111-76-2)	Listed.
Oxalic acid (CAS 144-62-7)	Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Ethylene glycol n-butyl ether (CAS 111-76-2)	Listed.
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16. Other Information**Further information**

HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 2*
Flammability: 2
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 2
Instability: 0

Disclaimer

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Donovan Marine Inc. assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Donovan Marine Inc. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

Issue date

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