



Biobor® EB

Marine Gas Conditioner

Material Safety Data Sheet

1. Product and Company Identification

Common Name	:	Biobor® EB Marine Gas Conditioner
Material Uses	:	Petrochemical Industry: Petrochemicals, Fuel Additive
CAS#	:	Not Applicable - Mixture
Supplier:	:	Hammonds Fuel Additives, Inc. 910 Rankin Road Houston TX 77073
Issue Date	:	July 3, 2009
Information Contact	:	(800)548-9166
Emergency Contact	:	(800)424-9300 (Chemtrec)

2. Hazards Identification

Eyes	:	Can cause eye irritation. Symptoms include stinging, tearing, redness and swelling of eyes.
Skin	:	May cause mild skin irritation. Symptoms may include redness and burning of skin. Passage of this material into the body through the skin is possible and may add to toxic effects from breathing or swallowing.
Swallowing	:	Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts of this material may be harmful.
Inhalation	:	It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 7).
Symptoms of Exposure:	:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), difficulty breathing, blood in the urine, blood abnormalities (breakage of red blood cells), kidney damage, liver damage, coma and death.
Target Organs	:	Acute lethal exposure to this material in animal studies has resulted in congestion of organs including kidney, spleen and lung. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild reversible kidney effects, blood abnormalities.
Developmental Information:	:	This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. The relevance of these findings to humans is uncertain.
Cancer Information:	:	This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. This material has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain.
Primary Route(s) of Entry:	:	Inhalation, skin absorption, skin contact, eye contact and ingestion.

3. First Aid Measures

Eyes:	:	If symptom develops, immediately move individual away from exposure and into fresh air.
-------	---	---

**Biobor® EB – Material Safety Data Sheet**

3. First Aid Measures (Continued)

Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin : Remove contaminated clothing. Wash exposed area with soap and water. If symptom persists, seek medical attention. Launder clothing before reuse.

Swallowing: : Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation : If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, administer oxygen.

Note to Physicians: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: lung (for example, asthma-like conditions), liver and kidney.

4. Fire Fighting Measures

Flash Point : 144°F (62.2°C)TCC

Explosive Limit : Lower 1.1 Upper 10.6

Auto Ignition : 460.0°F (237.7°C)

Hazardous Products of Combustion: May form Carbon Dioxide and Carbon Monoxide

Fire and Explosion Hazards: If product is heated above its Flash Point, it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Never use welding or cutting torch on or near container (even when empty) because product (even the residue) can ignite explosively. May form explosive peroxides of unknown stability.

Extinguishing Media: Alcohol Resistant (AR) Foam, water, fog, Carbon Dioxide, dry chemical.

Fire Fighting Instruction: Wear full firefighting turnout gear (full bunker gear), and respiratory protection (SCBA).

NFPA Rating:

Health	2
Flammability	2
Reactivity	0

5. Accidental Release Measures

Small Spills : Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Absorb onto sand or other absorbent material.

Large Spills : Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent spill from entering drains, sewers or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required by law. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product; transfer contaminated absorbent, soil or other materials to containers for disposal.



Biobor® EB – Material Safety Data Sheet

6. Handling and Storage

Handling : Handle at all times in a well-ventilated working place. When opening the container allow time for harmful/flammable vapors to escape before emptying. Keep away from all sources of ignition. Storage tanks and other containers must be grounded.

Storage : Store in cool, dry ventilated places, preferably in the original package or container. Keep them closed at all times when not in use. Ground container and transfer equipment to eliminate static electrical sparks.

Materials to avoid: May attack some plastics, rubber and coatings.

7. Exposure Controls/Personal Protection

Respiratory Protection : Self-contained breathing apparatus should be worn if working in enclosed area. Do not inhale vapors.

Hand Protection : Use Neoprene or Nitrile gloves.

Eye Protection : Goggles and eyewash station needed.

Skin Protection : Avoid skin contact. Use full working clothes. Contaminated clothing should be laundered before reuse.

Occupational Limits : OSHA PEL 50.0PPM – TWA (Skin); OSHA VPEL 25.0ppm – TWA (Skin); ACGIH TLV 20PPM – TWA

8. Physical & Chemical Properties

Boiling Point : 336-343°F (168.8-172.7°C)@760 mmHg

Vapor Pressure : 0.660 mmHg @ 68.0°F

Specific Vapor Density : 4.1 (Air=1)

Specific Gravity : 0.901 – 0.904@68.0°F

Liquid Density : 7.51 Lbs/Gal @ 68.0°F

0.902 Kg/L @ 20.0°

Percent Volatiles : 100.0%

Volatile Organic Compounds: 100% (VOC)

900.0 G/L

7.51 Lbs/Gal

Evaporation Rate : 0.06 (N-Butyl Acetate)

Odor & Appearance : Mild Ether, Clear Liquid

Viscosity : 6.4 CPS

Freezing Point : -85.0°F (-65.0°C)

Molecular Weight : 118.2

Bulk Density : 1.000 lbs/ft³

Solubility in Water : Miscible

9. Stability & Reactivity

Hazardous Decomposition: In case of thermal decomposition aldehydes, Carbon Dioxide, Carbon Monoxide, Ketones and organic acids may be produced.

Conditions to Avoid: Keep away from heat sparks, open flames and other sources of ignition.

Materials to Avoid: Heat and open flame, salts of strong bases, strong acids, strong alkalis, and strong oxidizing agents.

Hazardous Reactions : Product is stable and no hazardous polymerization will occur.



Biobor® EB – Material Safety Data Sheet

10. Toxicological Information

No data.

11. Ecological Information

No data.

12. Disposal Consideration

Product Disposal: Obtain advice from local authorities.

Packaging Disposal: Empty containers must not be burned due to explosion hazard. Dispose of in accordance with local ordinances using licensed contractors.

13. Transport Information

DOT Description : NA 1993 – Combustible Liquid, N.O.S., contains Glycol Ethers. Not regulated when shipped by ground within the United States in containers less than 120 gallons.

: UN 1993 – Flammable Liquid, N.O.S. (contains Glycol Ethers) when shipping in containers more than 119 gallons by sea, air or outside US borders

Container/Mode : 55-Gallon Drum/Truck Package, Hazard Class 3, Packing Group III

N.O.S. Component : Ethylene Glycol Monobutyl Ether

Reportable Quantity : 49 CFR 172.101 – Not Applicable

Other Transportation Information: The Transportation information may vary with the container and mode of shipment.

14. Regulatory Information

TSCA Status : The intentional components of this product are listed.

CERCLA RQ – 40 CFR 302.4(a): : None listed.

CERCLA RQ – 40 CFR 302.4(b) : Material without a listed RQ may be reportable as an Unlisted Hazardous Substance

SARA 302 Components – 40 CFR 355 : None

Section 311/312 Hazard Class : Immediate, Delayed and Fire

SARA 313 Comps – 40 CFR 372.65 : Ethylene Glycol Monobutyl Ether, CAS# 111-76-2, 20%

OSHA Process Safety Management : 29 CFR 1910, None Listed

EPA Accidental Release Prevention : 40 CFR 68, None Listed

15. Additional Information – Waiver/Disclaimer

The information contained in the Material Safety Data Sheets has been derived from analysis of published data, publicly available, and supplied component Material Safety Data Sheets. This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. While this information is considered accurate, Hammonds Fuel Additives Inc.



makes no warranty, expressed or implied of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or information and recommendations regarding this data or the

Biobor® EB – Material Safety Data Sheet

15. Additional Information – Waiver/Disclaimer *(continued)*

results to be obtained from the use thereof. Hammonds Fuel Additives, Inc. makes no representation as to completeness or accuracy. In no event will Hammonds Fuel Additives, Inc. be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations. Distribution of the Material Safety Data is only one component of your workplace hazard communication program. It is the employer's responsibility to ensure that all employees are properly trained to recognize, evaluate and protect themselves from the risks associated with the storage, use and disposal of this and any other chemical material.



HAMMONDS FUEL ADDITIVES, INC.