

BIOBOR JF®

Material Safety Data Sheet

Effective 1/1/2004

Emergency Telephone Number 1-800-424-9300

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Information: Biobor JF®
Generic Description: Substituted Dioxaborinanes
Product Use: Biocide

TSCA NO.: n/a

Pesticide-exempt from TSCA
Inventory under TSCA § (2) (B) (ii)
CAS NO: 8063-89-6
EPA REG. NO.652217-1

For customer service/technical information, contact:

Hammonds Fuel Additives, Inc.
15760 West Hardy, Suite 400
Houston TX 77060-3147
(800)548-9166

ChemTrec Emergency
(800)424-9300

HAZARD RATINGS

	HMIS	NFPA
Health	1	1
Fire	2	2
Reactivity	0	0

*=Chronic

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name	CAS#	Approximate % (w/w)
Substituted dioxaborinanes	See below*	95.0
Naphtha	8030-30-6	4.5
Non-hazardous and other ingredients below reportable levels		Balance

*2,2' - (1-methyltrimethylenedioxy) bis - (4-methyl-1, 3, 2-dioxaborinane);
2,2' - oxybis (4, 4, 6 - trimethyl-1, 3, 2-dioxaborinane) (CAS No.: 8063-89-6).

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: COMBUSTIBLE LIQUID AND VAPOR (FLAMMABLE IF SHIPPED BY AIR/VESSEL). INHALATION MAY CAUSE DIZZINESS, HEADACHE AND INCOORDINATION. INGESTION CAN CAUSE DIZZINESS, FAINTNESS, HEADACHE AND INCOORDINATION. MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY CAUSE DIGESTIVE TRACT IRRITATION. INGESTION MAY CAUSE NAUSEA, VOMITING, PAIN, UPSET STOMACH, DIARRHEA. INHALATION MAY CAUSE NAUSEA, VOMITING, UPSET STOMACH. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. See sections 3, 5, & 6.

PRIMARY ROUTE OF EXPOSURE: Eye. Skin. Inhalation (breathing).

EYE CONTACT: May cause slight to mild irritation. May cause corneal opacity (clouding of the eye surface). Can cause burning sensation, tearing, and redness.

SKIN CONTACT: May cause slight to mild irritation. Prolonged or repeated contact may dry the skin and lead to irritation (i.e. dermatitis).

INHALATION (Breathing): (Irritating to the eyes, nose and respiratory tract. Can cause dizziness, headaches, and incoordination. Nausea, vomiting and stomach upset can occur.

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INGESTION (Swallowing): (Irritating to the mouth, throat and stomach. May cause nausea, vomiting, pain and stomach upset (e.g., diarrhea). Can cause dizziness, faintness, headache and incoordination.)

TARGET ORGANS/CHRONIC EFFECTS: Eyes. Skin.

CONDITIONS AGGRAVATED BY EXPOSURE: Skin.

CARCINOGENICITY:

	ACGIH	IARC	NTP	OSHA
Substituted dioxaborinanes	No	No	No	No
Naphtha	No	No	No	No

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

SKIN CONTACT: Immediately flush with water. Remove contaminated clothing and shoes. Get medical attention if irritation persists. Professionally wash clothing and shoes before re-use.

INHALATION (Breathing): Remove to fresh air. If symptoms develop, seek immediate medical attention. If not breathing, give artificial respiration.

INGESTION (Swallowing): Seek medical attention. Immediately induce vomiting, as directed by medical personnel. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIANS: Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

5. FIRE FIGHTING METHODS

Flash Point.....102° F 38.8° C

Method.....: Tagliabue Closed Cup

Explosive limits: LEL (%) Not Determined UEL (%) Not Determined

Autoignition.....Not determined

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Smoke, soot, and toxic/irritating fumes (i.e., carbon dioxide, carbon monoxide, etc.).

FIRE AND EXPLOSION HAZARDS: High temperatures can cause sealed containers to rupture due to a buildup of internal pressure. Cool with water. Vapors can travel to a source of ignition (flame, electric motor, hot surface, cigarette etc.) and flash back. During a fire, irritating and highly toxic gases may be generated during combustion or decomposition.

FIRE FIGHTING PROCEDURES/EQUIPMENT: Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH-approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

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6. ACCIDENTAL RELEASE MEASURES

EVACUATION: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all sources of ignition.

CONTAINMENT: Safely stop discharge. Contain material, as necessary, with a dike or barrier. Stop material from contaminating soil, or from entering sewers or bodies of water.

CLEAN-UP/PERSONAL PROTECTION EQUIPMENT: Appropriate safety measures and protective equipment should be used. Use supplied air respirator or self-contained breathing apparatus in enclosed spaces, or if airborne exposure limits can be exceeded. See Section 8.

COLLECTION AND DISPOSAL: Stop discharge, if safe to do so. Use proper protective equipment. Use non-sparking tools and/or explosion-proof equipment. Stop ignition sources. Cover spills with absorbent clay or sawdust and place in closed chemical waste containers. Dispose of according to applicable local, state and federal regulations.

REPORTING: Spills of this material in excess of a component's RQ must be reported to the National Response Center (800-424-8802) and to the appropriate state and local emergency response organizations.

7. HANDLING AND STORAGE

STORAGE CONDITIONS: Store in cool, dry, well ventilated area away from heat, ignition sources, and direct sunlight. Keep containers tightly closed. **WARNING:** Hot organic chemical vapors or mists can suddenly, and without warning, combust when mixed with air. Ignition can occur at typical elevated temperature process conditions. Any use in such processes should be evaluated thoroughly to assure safe operating conditions.

TRANSFER: Containers should be supported and grounded before opening, dispensing, mixing, pouring and emptying. Open with non-sparking tools. If container is warm, open bung slowly to release internal pressure.

PERSONAL HYGIENE: Wash thoroughly after handling, especially before eating, drinking, smoking and using restroom facilities. Wash contaminated goggles, faceshield and gloves. Professionally launder contaminated clothing before re-use.

EMPTY CONTAINER PRECAUTIONS: Attention! This container hazardous when empty. Follow label warnings even after container is emptied since empty containers may retain product residues. Do not use heat, sparks, open flames, torches, cigarettes on or near empty container. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption or where skin contact can occur.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

ACGIH - TLV - No regulated ingredients.

OSHA - PEL
Naphtha

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ENGINEERING CONTROLS/VENTILATION: Local exhaust ventilation is recommended when vapors, mists or dusts can be released in excess of established airborne exposure limits (TLVs or PELs).

EYE PROTECTION: Wear chemical splash goggles. An eye wash facility should be readily available.

SKIN PROTECTION: Wear protective clothing and appropriate impervious gloves. Because a variety of protective gloves exist, consult glove manufacturer to determine the proper type for a specific operation.

RESPIRATORY PROTECTION: Avoid breathing vapor and/or mists. Wear NIOSH/MSHA-approved equipment. Determine the appropriate type of consulting the respirator manufacturer. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Yellow	Odor	: Aromatic
Physical State	: Liquid	Solubility	: Moderately soluble
pH	: Not Applicable	Boiling Point	: 529° F 276.1° C
Vapor Density	: > 1 Air = 1	Evaporation Rt.	: < 1 (n-Butyl alcohol)
VOC Material	: Not Determined	Specific Gravity:	1.05
%Non-Vol (w/w):	95		

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under normal conditions of use.
HAZARDOUS POLYMERIZATION:	Will not occur.
CONDITIONS TO AVOID:	High temperatures.
INCOMPATIBILITY WITH OTHER MATERIALS:	Water. Oxidizers.

11. TOXICITY INFORMATION

COMPONENTS:

Substituted dioxaborinanes:

Eye, skin, and respiratory tract irritant.

Oral LD ₅₀	Rat	3.16 ml/Kg
Dermal LD ₅₀	Rabbit	9.1 ml/Kg

Naphtha:

Eye, skin, and respiratory tract irritant.

12. ECOLOGICAL INFORMATION

No data are available on this product.

13 DISPOSAL CONSIDERATIONS

DISPOSAL: When a decision is made to discard this material as supplied, it meets RCRA's characteristic definition of ignitability.

GENERAL STATEMENTS: Federal regulations may apply to empty container. State and/or local regulations may be different.

GENERAL RECOMMENDATIONS: Of the methods of disposal currently available, it is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) recycle or rework, if feasible; (2) incinerate at an authorized facility; or (3) treat at an acceptable waste treatment facility.

SPECIAL INSTRUCTIONS: Be sure to contact the appropriate government environmental agencies if further guidance is required.

14. TRANSPORT INFORMATION

	Flammable liquids, n.o.s. (petroleum naphtha)	49 CFR Y	IATA Y	IMO Y
DOT Label :	Flammable Liquid	UN/NA Id Num:	UN 1993	
DOT Label No. :	L152 (For Canadian Shipments F 154)			
Hazard Class :	3 (IATA/49 CFR) 3.3 (IMO)			
Packing Group :	III	WHMIS Label :	F 152	

15. REGULATORY INFORMATION

FEDERAL:

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III - Section 311/312 - Hazard Categories:

- Y- Fire Hazard
- N - Sudden Release of Pressure Hazard
- N - Reactivity Hazard
- Y - Immediate (acute) Health Hazard
- N - Delayed (chronic) Health Hazard

Ozone-Depleting Chemicals - No regulated ingredients.

SARA Section 302 Extremely Hazardous Mat - No regulated ingredients.

SARA Section 313 Toxic Chemicals - No regulated ingredients.

STATE RIGHT-TO-KNOW:

Pennsylvania - New Jersey R-T-K		
Substituted dioxaborinanes	8063-89-6	95.0
Naphtha	8030-30-6	4.5
Non-hazardous trade secret ingredient(s)	Proprietary Balance	
California - California Proposition 65		
WARNING: This product contains a chemical(s) known to the State of California to cause cancer.		
Arsenic	7440-38-2	Trace *
Cancer Hazard.		

*Trace = present at less than 0.01 percent.

CONEG - No data available.

CANADA:

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).

Class B Division 3

Class D Division 2 Sub-division B

CEPA - NPRI - No regulated ingredients.

16. OTHER INFORMATION

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER OF LIABILITY: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.