



MATERIAL SAFETY DATA SHEET

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Fuel Stick Fuel Conditioner		Worldwide Classification (HS) No: 3811 .19 Based on Organic Materials.	
Product Use: Fuel Fortifier			
Manufacturer's Name: FS Manufacturing Sdn. Bhd.		Supplier's Name FS Manufacturing Sdn. Bhd.	
Street Address: 12, Jalan Cenderai 25 Kawasan Perindustrian Kota Putri Masai		Street Address : 12, Jalan Cenderai 25 Kawasan Perindustrian Kota Putri Masai	
City: Jahor Bahru		Country: Malaysia	
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Postal Code: 81750	Emergency Telephone: +60 197299623	Postal Code 81750	Emergency Telephone +60 197299623
Date MSDS Prepared April 2006		MSDS Prepared By Bio-Marine Solutions (NZ) Ltd.	Phone Number +64 21 828 982

SECTION 2 — STATEMENT OF HAZERDOUSE NATURE

This is a proprietary product and the formula is confidential. It contains no highly flammable, caustic, acidic or reactive ingredients. It is manufactured from 92% renewable organic materials and is fully bio-degradable. It should not be considered to be hazardous when used and handled under normal conditions.

SECTION 3 – HAZARDS IDENTIFICATION

Health rating: Slight	Skin Contact: May Cause Irritation
Flammability Rating: Slight	Eye Contact: May Cause Irritation
Reactivity Rating: None	Skin Absorption: No Information Available
Contact Rating: Slight	Inhalation: May Cause Irritation To The Respiratory Tract.
Storage Color Code : Orange (General)	Ingestion: Large Oral Doses May Cause Stomach Upset.

SECTION 4 — FIRST AID MEASURES

Inhalation: Remove To Fresh Air. If Breathing Is Difficult, Give Oxygen. Get Medical Attention If Irritation Persists.
Ingestion: If Large Amounts Were Swallowed, Give Water To Drink And Seek Medical Attention.
Skin Contact: Wash With Plenty Of Water And Get Medical Attention If Irritation Persists.
Eye Contact: Wash Thoroughly With Running Water. Seek Medical Attention If Irritation Persists.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable: Not under normal conditions.	Flammable Conditions: Contact With Open Flame	
Means of Extinction: Dry Chemical, Alcohol Foam, Carbon Dioxide		
Explosion: Not Explosive		
Autoignition Temperature (°C) Unknown	Explosion Data — Sensitivity to Impact: Not Sensitive To Impact	Explosion Data —Static: Not sensitive to static discharge
Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.		

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

SECTION 7 — HANDLING AND STORAGE

Store in a cool, dry, ventilated area below 50° Celsius. Protect against physical damage. Isolate from incompatible substances. Observe all warnings and precautions listed for the product.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Airborne Exposure Limits:

- OSHA Permissible Exposure Limit (PEL):

15 mg/m³ total dust, 5 mg/m³ respirable fraction for nuisance dusts.

- ACGIH Threshold Limit Value (TLV)

for Particulates (insoluble or poorly soluble) Not Otherwise Specified (PNOS):

3 mg/m³ respirable particles and 10 mg/m³ inhalable particles.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid Above 50C	Odour and Appearance: Dye Added - May Be Any Color. Slight Camphor Odor	
Specific Gravity: 0.925@52C	Vapour Density (air = 1) No Information Available	Vapour Pressure (mmHg) No Information Available
Evaporation Rate: No Information Available	Boiling Point (°C) 215 @ 15mm Hg	Melting Point (°C) 52
pH No Information Available	Solubility: Insoluble in Water: Soluble in hydrocarbons – petrol, diesel, kerosene, bio fuels	

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability - Stable	If no, under which conditions?
Incompatibility with Other Substances Yes	If yes, which ones? Strong oxidizers
Reactivity, and under what conditions? Does Not react with other chemicals	
Hazardous Decomposition Products When heated to decomposition carbon dioxide and carbon monoxide may form	

SECTION 11 — TOXICOLOGICAL INFORMATION

Effects of Acute Exposure May cause slight irritation to skin, eyes and respiratory tract in liquid or powder state. May cause slight skin and respiratory irritation in solid state.	
Effects of Chronic Exposure No information available	
Irritancy of Product	
Skin Sensitization May cause slight irritation at high exposure levels	Respiratory Sensitization May cause slight irritation at high exposure levels
Carcinogenicity — IARC Not anticipated. Not listed	Carcinogenicity — ACGIH Not anticipated. Not listed
Reproductive Toxicity No Information Available	Teratogenicity No Information Available
Embryotoxicity No Information Available	Mutagenicity No Information Available

SECTION 12 – ECOLOGICAL INFORMATION

Environmental Fate: No information found.
Environmental Toxicity: No Information Found.

SECTION 13 — DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 — SPECIAL SHIPPING CONSIDERATIONS

Special Shipping Information Keep in cool environment. Do not exceed 50° Celsius
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SECTION 15 — REGULATORY INFORMATION

[WHMIS Classification]	
[SERA] Acute: Yes Chronic: No Fire: No Pressure: No Reactivity: No Solid	[TSCA] No
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.	

SECTION 16 — OTHER INFORMATION

NFPA Ratings: Health: **1** Flammability: **1** Reactivity: **0**

Label Hazard Warning:

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

Label Precautions:

Use with adequate ventilation.
Wash thoroughly after handling.
Avoid contact with eyes, skin and clothing.
Avoid breathing dust.

Label First Aid:

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. Call a physician if irritation develops or persists. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

Product Use:

Fuel Fortifier

Revision Information:

No Changes

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