

MATERIAL SAFETY DATA SHEET (MSDS)
Booster Fluid BFL-M #11700 for SPIRFLAME®

SECTION 1 -

CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: **Methyl Alcohol / Methanol**
 Catalog Numbers: **BFL-M or SFV/BFL-M** Methyl Alcohol is the major content in Booster fluid BFL-M
 Synonyms: Carbinol, Methanol, methyl hydroxide, Monohydroxymethane, Pyroxylic spirit, wood alcohol, wood spirit.
 Company Identification: SAT address as on headline
 For information, PHONE: **413-788-6191** FAX: 413-788-0490
 Emergency Number: **1-800-535-5053 (Infotrac)**

SECTION 2 -

COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	%	EINECS#
67-56-1	Methyl alcohol	≤ 90	200-659-6
Proprietary	Additives, various	< 7	proprietary
7732-18-5	Water	Balance	231-791-2

Hazard Symbols:	T F
Risk Phrases:	11-23/24/25-39/23/24/25



SECTION 3 -

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
POISON! DANGER!
 VAPOR HARMFUL. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CANNOT BE MADE NONPOISONOUS. FLAMMABLE LIQUID AND VAPOR. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM AND LIVER.

SAF-T-DATA (tm)
 Health Rating: 3 - Severe (Poison)
 Flammability Rating: 3 - Severe (Flammable)
 Reactivity Rating: 1 - Slight
 Contact Rating: 3 - Severe (Life)
 Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER
 Storage Color Code: Red (Flammable)
 Appearance: Clear, colorless liquid. Flash Point: 12 deg C.
 Potential Health Effects
 Inhalation: A slight irritant to the mucous membranes. Toxic effects exerted upon nervous system, particularly the optic nerve. Once absorbed into the body, it is very slowly eliminated. Symptoms of overexposure may include headache, drowsiness, nausea, vomiting, blurred vision, blindness, coma, and death. A person may get better but then worse again up to 30 hours later.
 Ingestion: Toxic. Symptoms parallel inhalation. Can intoxicate and cause blindness. Usual fatal dose: 100 - 125 milliliters.
 Skin Contact: Methyl alcohol is a defatting agent and may cause skin to become dry and cracked. Skin absorption can occur; symptoms may parallel inhalation exposure.
 Eye Contact: Irritant. Continued exposure may cause eye lesions.
 Chronic Exposure: Marked impairment of vision has been reported. Repeated or prolonged exposure may cause skin irritation.
 Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance.

SECTION 4 -

FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
 Ingestion: Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
 Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
 Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

SECTION 5 -

FIRE FIGHTING MEASURES

Fire

Flash point: 12C (54F) CC
Autoignition temperature: 464C (867F)
Flammable limits in air % by volume: lcl:6.0; uel:36
Flammable Liquid and Vapor!

Explosion

Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks or flames. Sensitive to static discharge.

Extinguishing Media:
Special Information:

Use alcohol foam, dry chemical or carbon dioxide. (Water may be ineffective.)
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire. Vapors can flow along surfaces to distant ignition source and flash back

SECTION 6 -

ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

SECTION 7 -

HANDLING and STORAGE

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

SECTION 8 -

EXPOSURE CONTROLS, PERSONAL PROTECTION

Airborne Exposure Limits

For Methyl Alcohol:
- OSHA Permissible Exposure Limit (PEL): 200 ppm (TWA)
- ACGIH Threshold Limit Value (TLV): 200 ppm (TWA), 250 ppm (STEL) skin

Ventilation System

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. 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. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details. Use explosion-proof equipment.

Personal Respirators
(NIOSH Approved)

If the exposure limit is exceeded and engineering controls are not feasible, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus. Breathing air quality must meet the requirements of the OSHA respiratory protection standard (29CFR1910.134). This substance has poor warning properties.

Skin Protection

Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure,.

Eye Protection

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

SECTION 9 -

PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Odor
Solubility
pH
% Volatiles by volume
Vapor Pressure
Vapor Density
Evaporation Rate

Clear, colorless liquid
characteristic odor
Miscible in water
No information found,
100 @ 21C (70F)
97 @ 20C (68F) (mm Hg)
1.1 (Air=1)
5.9 (BuAc=1)

Boiling Point 64.5 deg C (147F)
Freezing/Melting Point -98C (-144F)
Decomposition Not available.
Temperature:
Specific Gravity/Density 0.7910 g/cm3
Molecular Formula CH3OH
Molecular Weight 32.04

SECTION 10 -

STABILITY AND REACTIVITY

Stability Stable under ordinary conditions of use and storage
Hazardous Decomposition Products May form carbon dioxide, carbon monoxide, and formaldehyde when heated to decomposition.
Hazardous Polymerization Will not occur
Incompatibilities Strong oxidizing agents such as nitrates, perchlorates or sulfuric acid. Will attack some forms of plastics, rubber and coatings. May react with metallic aluminum and generate hydrogen gas.
Conditions to Avoid Heat, flames, ignition sources and incompatibles.

SECTION 11 -

TOXICOLOGICAL INFORMATION

Methyl Alcohol (Methanol) Oral rat LD50: 5628 mg/kg; inhalation rat LC50: 64000 ppm/4H; skin rabbit LD50: 15800 mg/kg; Irritation data-standard Draize test: skin, rabbit: 20 mg/24hr. Moderate; eye, rabbit: 100 mg/24hr. Moderate: Investigated as a mutagen, reproductive effector.
Cancer lists NTP Carcinogen:
-Known: No
-Anticipated: No
IARC Category: None

SECTION 12 -

ECOLOGICAL INFORMATION

Environmental Fate When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into the water, this material is expected to have a half-life between 1 and 10 days. When released into water, this material is expected to readily biodegrade. When released into the air, this material is expected to exist in the aerosol phase with a short half-life. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into air, this material is expected to have a half-life between 10 and 30 days. When released into the air, this material is expected to be readily removed from the atmosphere by wet deposition.
Environmental Toxicity This material is expected to be slightly toxic to aquatic life.

SECTION 13 -

DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in an RCRA approved waste 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 -

TRANSPORT INFORMATION

	Shipping Name	Hazard Class	UN Number	Packing Group
Land, D.O.T.	METHANOL	3	1230	II
Water, I.M.O	METHANOL	3, 6.1	1230	II
IATA	METHANOL	3, 6.1	1230	II

Information reported for product/size: 358LB
Information reported for product/size: 358LB

SECTION 15

REGULATORY INFORMATION

Chemical Inventory Status - Part 1 TSCA: Yes
EC: Yes
Japan: Yes
Australia: Yes
Chemical Inventory Status - Part 2 (Canada) Korea: Yes
DSL: Yes
NDSL: Yes
Phil.: Yes
Federal, State & International Regulations -Part 1 SARA 302: RQ: No; TPQ: No
SARA 313: List: Yes; Chemical Catg.: No
Federal, State & International Regulations -Part 2 CERCLA: 5000
RCRA 261.33: U154
TSCA 8(d): No

Chemical Weapon Convention No
 TSCA 12(b) No
 CDTA No
 SARA 311/312: Acute: Yes; Chronic: Yes; Fire: Yes; Pressure: No; Reactivity: No
 Australian Hazchem Code 2PE
 Poison Schedule S6
 WHMIS This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

European/International Regulations / European Labeling in Accordance with EC Directives

Hazard Symbols: T F
 Risk Phrases R 11 Highly flammable.
 R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed
 R 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
 Safety Phrases S 1/2 Keep locked up and out of reach of children
 S 7 Keep container tightly closed. WGK (Water Danger/Protection)
 S 16 Keep away from sources of ignition - No smoking.
 S 36/37 Wear suitable protective clothing and gloves
 S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 Exposure Limits OEL-ARAB Republic of Egypt:TWA 200 ppm (260 mg/m3);Skin. OEL-AUSTRALIA:TWA 200 ppm (260 mg/m3);STEL 250 ppm;Skin.
 CAS# 67-56-1 OEL-BELGIUM: TWA 200 ppm (262 mg/m3);STEL 250 ppm;Skin. OEL-CZECHOSLOVAKIA:TWA 10 0 mg/m3;STEL 500 mg/m3. OEL-DENMARK:TWA 200 ppm (260 mg/m3);Skin. OEL- FINLAND:TWA 200 ppm (260 mg/m3);STEL 250 ppm;Skin. OEL-FRANCE:TWA 200 ppm (260 mg/m3);STEL 1000 ppm (1300 mg/m3). OEL-GERMANY:TWA 200 ppm (2 60 mg/m3);Skin. OEL-HUNGARY:TWA 50 mg/m3;STEL 100 mg/m3;Skin JAN9. OEL -JAPAN:TWA 200 ppm (260 mg/m3);Skin. OEL-THE NETHERLANDS:TWA 200 ppm (260 mg/m3);Skin. OEL-THE PHILIPPINES:TWA 200 ppm (260 mg/m3). OEL-POLAND:TWA 100 mg/m3. OEL-RUSSIA:TWA 200 ppm;STEL 5 mg/m3;Skin. OEL-SWEDEN :TWA 200 ppm (250 mg/m3);STEL 250 ppm (350 mg/m3);Skin. OEL-SWITZERLAND:TWA 200 ppm (260 mg/m3);STEL 400 ppm;Skin. OEL-THAILAND:TWA 200 ppm (260 mg/m3). OEL-TURKEY:TWA 200 ppm (260 mg/m3). OEL-UNITED KINGDOM: TWA 200 ppm (260 mg/m3);STEL 250 ppm;Skin. OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV. OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

SECTION 16 -

NFPA Ratings: **ADDITIONAL INFORMATION**
 Health: 1
 Flammability: 3
 Reactivity: 0
 Label Hazard Warning POISON! DANGER! VAPOR HARMFUL. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CANNOT BE MADE NONPOISONOUS. FLAMMABLE LIQUID AND VAPOR. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM AND LIVER.
 Label Precautions Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Keep away from heat, sparks and flame.
 Label First Aid: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases get medical attention immediately.
 MSDS Creation Date: The information above is believed to be accurate and represents the best information currently available to us. Spirig has searched various database available to the public, like those of Universities and well known chemical supply houses. However, Spirig makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Spirig be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Spirig has been advised of the possibility of such damages.
 12/12/1995 Revision
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 19/06/2001 04/19/2006
 11/03/2008

NFPA-Rating

