MATERIAL SAFETY DATA SHEET
For FireFilm-premix 3%
AQUEOUS FILM FORMING FOAM (AFFF) Liquid Concentrate

Section 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION
Material Identification
Product: FireFilm-premix 3% Fire Fighting Foam Concentrate
Synonyms: Aqueous Film Forming Foam (AFFF)
CAS No: Mixture - No single CAS # applicable

Company Identification
Manufacturer:
Shanghai Waysmos Fire Suppression Co., Ltd.
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Section 2. COMPOSITION / INFORMATION ON INGREDIENTS
Water, 7732-18-5
Synthetic Detergents Proprietary Mixture, no single CAS Number applicable
Butyl Carbitol 112-34-5
Fluoroalkyl Surfactant Confidential

Section 3. HAZARDS IDENTIFICATION
Potential Health Effects
Inhalation
Vapors are minimal at room temperature. If product is heated or sprayed as an aerosol, airborne material may cause respiratory irritation.

Skin Contact
Contact with liquid may cause moderate irritation or dermatitis due to removal of oils from the skin.

Eye Contact
Product is an eye irritant.

Ingestion
Not a hazard in normal industrial use. Small amounts swallowed during normal handling operations are not likely to cause injury; swallowing large amounts may cause injury or irritation.

Additional Health Effects
Existing eye or skin sensitivity may be aggravated by exposure.

Carcinogenicity Information
No data available.

Section 4. FIRST AID MEASURES
Inhalation
No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of airborne aerosol mists, remove to fresh air. Seek medical attention if effects occur.

Skin Contact
In case of skin contact, wash off in flowing water or shower. Launder clothing before reuse.
Eye Contact
In case of eye contact, flush eyes promptly with water for 15 minutes. Retract eyelids often to ensure thorough rinsing. Consult a physician if irritation persists.

Ingestion
Swallowing less than an ounce is not expected to cause significant harm. For larger amounts, do not induce vomiting. Give milk or water. Never give anything by mouth to an unconscious person. Seek medical attention.

Section 5. FIRE FIGHTING MEASURES
Flammable Properties
Flash Point – Not applicable

Fire and Explosion Hazards
Avoid contact with water reactive materials, burning metals and electrically energized equipment.

Extinguishing Media
Product is an extinguishing media. Use media appropriate for surrounding materials.

Special Fire Fighting Instructions
This product will produce foam when mixed with water.

Section 6. ACCIDENTAL RELEASE MEASURES
Safeguards (Personnel)
NOTE: Review FIRE FIGHTING MEASURES and HANDLING (Personnel) sections before proceeding with clean-up. Use appropriate Personal Protective Equipment during clean-up.

Accidental Release Measures
Concentrate
Stop flow if possible. Use appropriate protective equipment during clean up. For small volume releases, collect spilled concentrate with absorbent material; place in approved container. For large volume releases, contain and collect for use where possible. Flush area with water until it no longer foams. Exercise caution, surfaces may be slippery. Prevent discharge of concentrate to waterways. Disposal should be made in accordance with federal, state and local regulations.

Foam/Foam Solution
See above. Flush with water. Prevent discharge of foam/foam solution to waterways. Do not discharge into biological sewer treatment systems without prior approval. Disposal should be made in accordance with federal, state and local regulations.

Section 7. HANDLING AND STORAGE
Handling (Personnel)
Avoid contact with eyes, skin or clothing. Avoid ingestion or inhalation. Rinse skin and eyes thoroughly in case of contact. Review HAZARDS and FIRST AID sections.

Storage
Recommended storage environment is between 2°C and 49°C. Store product in original shipping container or tanks designed for product storage.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Engineering Controls
Special ventilation is not required.

Personal Protective Equipment
Respiratory
Recommended exposure limits have not been determined for this material. The need for respiratory protection should be evaluated by a qualified health specialist.

Protective Clothing
Rubber or PVC gloves recommended.

Eye Protection
Safety glasses, face shield or chemical splash goggles must be worn when possibility exists for eye contact. Contact lenses should not be worn. Eye wash facilities are recommended.

**Other Hygienic Practices**
Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before re-use.

### Section 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical Data
- **Boiling Point:** Not applicable
- **Vapor Pressure:** Not applicable
- **Vapor Density:** Not applicable
- **Melting Point:** Not applicable
- **Evaporation Rate:** <1 (Butyl Acetate = 1.0)
- **Solubility in Water:** 100%
- **pH:** 8.0
- **Specific Gravity:** 1.03 @ 25°C
- **Odor:** Mild, pleasant
- **Form:** Liquid
- **Color:** Straw yellow

### Section 10. STABILITY AND REACTIVITY

#### Chemical Stability
Stable.

**Incompatibility, Materials to Avoid**
Avoid use of product on burning metals, electrically-energized equipment and contact with water reactive materials.

**Polymerization**
Will not occur.

### Section 11. TOXICOLOGICAL INFORMATION

#### Mammalian Toxicity
**Ingestion**
This material was not toxic when administered to Wistar Albino rats at an acute oral dose of 5g/kg body weight.

**Eye**
Animal testing indicates this material is a primary eye irritant when tested undiluted on New Zealand Albino Rabbits.

**Skin**
Animal testing indicates this material is not a primary skin irritant when tested undiluted on New Zealand Albino Rabbits.

**Inhalation**
No data available at this time.

**Carcinogenic, Developmental, Reproductive, Mutagenic Effects**
No data available on this material.

### Section 12. ECOLOGICAL INFORMATION

#### Ecotoxicological Information
**Aquatic Toxicity**
96 hr. Flow Through LC50 for Fathead Minnows (pimephales promelas) is reported to be greater than 1000 ppm.

### Section 13. DISPOSAL CONSIDERATIONS
FireFilm-premix 3%, as sold, is not a RCRA-listed waste or hazardous waste as characterized by 40 CFR 261. However, State and local requirements for waste disposal may be more restrictive or
otherwise different from Federal regulations. Therefore, applicable local and state regulatory agencies should be contacted regarding disposal of waste foam concentrate or foam/foam solution.

**Concentrate**
Do not discharge into biological sewer treatment systems without prior approval. Specific concerns are high BOD load and foaming tendency. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance with federal, state and local regulations.

**Foam/Foam Solution**
FireFilm-premix 3% foam solution can be treated by waste water treatment facilities. Discharge into biological sewer treatment facilities may be done with prior approval. Specific concerns are high BOD load. Dilution will reduce BOD and COD factors proportionately. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance with federal, state and local regulations.

NOTE: As a service to our customers, Waysmos Fire Suppression can also provide information on the disposal of drums and liquid. Please contact Waysmos Fire Suppression at 021-36307198 for additional information.

Section 14. TRANSPORTATION INFORMATION
Shipping Information
Hazard Class: None

Section 15. REGULATORY INFORMATION
OTHER REGULATORY INFORMATION
None.

Section 16. OTHER INFORMATION
NFPA Rating
Health 0
Flammability 0
Reactivity 0
For further information, see Waysmos Fire Suppression Product Data Sheet for FireFilm-premix 3%.

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March 10, 2016