

MATERIAL SAFETY DATA SHEET

Section 1. Chemical product and company identification

Product Name: Liquid Foam Concentrate
Synonym: Film Forming Foam Fluoroprotein/
FFFP Concentrate
Manufacturer: AMEREX CORPORATION
Internet Address: www.amerex-fire.com
Address: 7595 Gadsden Highway
P.O. Box 81
Trussville, AL 35173-0081
Telephone: (205) 655-3271
Emergency Contacts: Chemtrec 1(800) 424-9300 or
(703) 527-3887
Revised: August, 2003

Section 2. Hazard identification and emergency overview

Emergency overview: dark brown, viscous liquid with an organic odor.

Adverse health effects and symptoms: Irritating to the eyes and skin, and may cause gastric distress. Symptoms may include eye pain, skin redness, and irritation. Ingestion, although unlikely, may cause cramps, nausea and diarrhea.

Exposure guidelines:

Ingredients	OSHA PEL	ACGIH TLV	DFG MAK *
Water	NR	NR	NR
Hydrolyzed Protein	NR	NR	NR
Hexylene Glycol	25 ppm, ceiling	25 ppm, ceiling	10 ppm, 8 hr.TWA
Preservatives, Fluorosurfactants and Surface Active Agents	NR	NR	NR

*German regulatory limits NR = Not Regulated

Hazard symbols: WHMIS (Canadian workplace hazardous materials identification system)

D2B – Product may irritate skin or mucous membranes

Section 3. Composition/information on ingredients

Name/Compound	Weight %	CAS #
Water	>53%	7732-18-5
Hydrolyzed Protein	<30 %	None
Hexylene Glycol	<10%	107-41-5
Preservatives, Fluorosurfactants and Surface Active Agents	Balance	Proprietary

Section 4. First Aid Measures

Eye Exposure: Irrigate eyes at eye wash station for 15 minutes or until pain free. Seek medical attention if irritation develops or persists, or if visual changes occur.

Skin Exposure: In case of contact, wash with plenty of soap and water. Seek medical attention if irritation develops or persists.

Inhalation: If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if irritation develops or persists.

Ingestion: If victim is conscious and alert, give 2-3 glasses of water or milk to drink. Do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

Medical conditions possibly aggravated by exposure: Skin contact may aggravate existing skin conditions such as dermatitis.

Section 5. Fire fighting measures

Extinguishing media: non combustible and non flammable – product is an extinguishing agent

Unusual fire/explosion hazards: in a fire this concentrate may decompose, releasing oxides of sulfur, nitrogen, and carbon as well as hydrogen cyanide, hydrogen sulfide,

and ammonia (see Section 10). At usage concentrations thermal decomposition does not produce these hazards.

Insensitive to mechanical impact or static discharge.

HMIS Hazard Ranking:

health = 1, flammability = 0, reactivity = 0, personal protective equipment: ½ mask APR w/organic vapor cartridges, eye and skin protection (see Section 8)

Section 6. Accidental release measures

Large spills (one drum or more) should be addressed by hazardous materials technicians following a site-specific emergency response plan and trained in the appropriate use of PPE. Clean up released concentrate using sorbent socks for containment, followed by sorbent material inside containment. Wear appropriate APR for glycols (Section 8). Bag and drum for disposal. If product is contaminated, for example if mixed with fuel, use PPE and containment appropriate to the nature of the mixture. Prevent concentrate from entering storm sewer. Handle and dispose of as a hazardous waste unless testing indicates otherwise. Decontaminate with detergent and water.

Section 7. Handling and storage

Avoid eye, respiratory, and skin exposure. Use appropriate PPE (personal protective equipment) when handling, and wash thoroughly after handling (Section 8). Keep product in original container until use by trained personnel. Clean used equipment with soap and water before storage. Use this product only in well ventilated areas. Do not mix with other extinguishing agents.

Section 8. Exposure controls/ personal protection

During the application of this product against fires, exhaust gases and the products of incomplete combustion (PICs) are the principal respiratory hazards. In the manufacture of extinguishers, automated systems and point source ventilation controls sufficiently minimize respiratory exposure. Employers and employees must use their collective judgment in determining occupational settings where the use of an air

purifying respirator is prudent. The need for respiratory protection is not likely for short-term use in well ventilated areas.

Respiratory protection: use ½ mask air purifying respirator (APR) with organic vapor or universal cartridges for limited exposure, use powered air-purifying respirator (PAPR) with organic vapor canisters for prolonged exposure.

Eye protection: wear chemical goggles.

Skin protection: use nitrile, latex, or similar gloves and coveralls. Good personal hygiene practices essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Section 9. Physical and chemical properties

Appearance: dark brown, viscous liquid with organic vapor.

Specific gravity: ~ 1.1

Solubility: soluble in water

Non –flammable

Flash point: none

Vapor pressure: < 10 mm Hg at room temperature

pH: approximately 6.5 – 7.5

Boiling point: ~100° C

No explosive or oxidizing properties

Section 10. Stability and reactivity

Stability: stable

Incompatibles: strong acids, strong alkalis, and strong oxidizers such as calcium or sodium hypochlorite (bleach).

Decomposition products: heat of fire may release from concentrate carbon monoxide, carbon dioxide, sulfur dioxide, nitrogen oxides, hydrogen cyanide, hydrogen sulfide, and ammonia. Usable, diluted product does not generate these emissions.

Possibility of hazardous reactions: none

Section 11. Toxicological information

Acute toxicity: Hexylene glycol: LD₅₀ oral rat: 3700 mg/kg body weight

Target organs in man: DFG MAK: local irritant to the respiratory system, eyes, and skin.

TCLo (lowest published toxic concentration):

Inhalation – human, 50 ppm/15 minutes - changes in olfaction, respiration, conjunctiva

Chronic toxicity: This product's ingredients are not considered as "probable" or "suspected" carcinogens by OSHA, IARC, or ACGIH. Product is not known to cause sensitization, however, repeated or prolonged contact with skin may cause dermatitis.

Reproductive toxicity: This product's ingredients are not known to have reproductive or teratogenic effects.

Section 12. Ecological information

Ecotoxicity: Discharge of large volumes of product into waterways will have an adverse effect on local aquatic life.

Persistence/
Degradability: degrades rapidly in humid/wet environment

Bioaccumulation: extent unknown

Mobility in soil: Low evaporation rate and water solubility will allow this material to leach into groundwater from a surface release with moderate biodegradation

Section 13. Disposal considerations

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal

laws or regulations. Used product will be diluted and may be altered or contaminated, creating different disposal considerations.

Section 14. Transportation information

This product is not a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, and is not regulated by the DOT.

Section 15. Regulatory information

International Inventory Status

Hexylene glycol (<10% of product) is on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

European Risk and Safety phrases:

Component: Hexylene glycol

EU Classification: Xi Irritant
R Phrases: 36/38 Irritating to eyes, respiratory system, and skin.
S Phrases: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

U.S. federal regulatory information:

None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs).

State regulatory information:

Chemicals in this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: hexylene glycol
California – Permissible Exposure Limits for Chemical Contaminants: hexylene glycol
Florida – Substance List: hexylene glycol
Illinois – Toxic Substance List: hexylene glycol
Kansas – Section 302/303 List: None
Massachusetts – Substance List: hexylene glycol
Minnesota – List of Hazardous Substances: hexylene glycol
Missouri – Employer Information/Toxic Substance List: hexylene glycol
New Jersey – Right to Know Hazardous Substance List: hexylene glycol
North Dakota – List of Hazardous Chemicals, Reportable Quantities: None
Pennsylvania – Hazardous Substance List: None
Rhode Island – Hazardous Substance List: hexylene glycol
Texas – Hazardous Substance List: None
West Virginia – Hazardous Substance List: None
Wisconsin – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 lists.

Section 16. Other information

This MSDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

The information herein is given in good faith but no warranty, expressed or implied, is made.

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