



شركة المصنع السعودي لأجهزة الإطفاء  
SAUDI FACTORY FOR FIRE EQUIPMENT Co.

Empowering  
a Safer Future for  
the Kingdom

# Foam Concentrates



**LISTED**  
FOAM LIQUID  
CONCENTRATE  
UL FILE NO. EX6069

- ❖ AFFF
- ❖ AR-AFFF
- ❖ FFFP
- ❖ AR-FFFP

Quality Approvals for Various Products and Services

VER: 00-03/26



## The Global Standard in Fire Safety

Since 1983, SFFECO has been the trusted name and a recognized global leader in manufacturing top-tier fire-fighting equipment. We don't just offer products; we provide total fire safety solutions like fire doors, fire cabinets, fire pumps, fire extinguishing systems, etc. Our commitment to excellence is certified by multiple international standards, including ISO 9001 (Quality), ISO 14001 (Environmental), and ISO 45001 (Health

& Safety). With state-of-the-art facilities in Riyadh and Dubai, we ensure every product meets rigorous international quality standards.

## One-Stop-Shop for Fire Protection

SFFECO is your single source for everything in fire protection and fire-fighting. Represented in over 100 countries through a vast network of dealers, our innovative approach and comprehensive, end-to-end product range deliver the full spectrum of solutions



## Quality Services

SFFECO is deeply committed to ensuring superior performance and accuracy in every product it delivers. This dedication is maintained through continuous, close collaboration with a wide array of stakeholders, including key certification bodies, government regulatory agencies, industry partners, and leading technology associations. This concerted effort focuses on the development and delivery of truly innovative and high-quality fire-fighting solutions. The commitment to excellence is rigorously upheld through extensive product testing and evaluation, alongside a strict, ongoing process

SFFECO is dedicated to providing fire safety products of the highest quality and performance. We achieve this by working closely with certification bodies, government regulatory agencies, industry partners, and technology associations. This collaboration ensures our innovative products are backed by extensive product testing and evaluation, and

maintained through continuous quality compliance.

As global leaders since 1983, SFFECO believes in manufacturing quality products and offering exceptional service standards worldwide. Our primary goal is to reward our customers by keeping their investments safe and secure. Our manufacturing plant has steadily grown and is now equipped with modern hi-tech equipment and staffed by highly skilled professionals. With optimal ISO-certified operations,



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# Foam Concentrates

## General Description



Model	Description
SF-KSA AR-AFFF 1x3 C6	Alcohol Resistant Aqueous Film Forming Foam Concentrate
SF-KSA AR-AFFF	
SF-KSA AR-AFFF 3x6 C6	
SF-KSA AR-AFFF 1x1 C6	Alcohol Resistant Film Forming Fluoro Protein
SF-KSA AR-FFFP 3x3	
SF-KSA AR-FFFP 3x6 C6	Aqueous Film Forming Foam Concentrate
SF-KSA AFFF 1% C6	
SF-KSA AFFF 3% C6	
SF-KSA AFFF 6%	
SF-KSA AFFF 3% C6	Fluoro Protein
SF-KSA FFFP 3%	Film Forming Fluoro Protein Foam Concentrate
SF-KSA FFFP 6%	
SF-KSA FLUORINE FREE AR-FFF 3x3	Fluorine Free Ar Synthetic

SFFECO is a manufacturer for Foam concentrates. Our UL Listed Foam Concentrates represents a major advancement in foam technology for effective extinguishment of class A and class B fires, as low and Medium expansion foam.

It can be used with standard and conventional low / medium expansion foam making equipments with fresh / sea / brackish water, either as a solution or through foam induction systems. This unique quality makes it suitable for use in special applications like crash Tenders / Monitors / Foam chambers Air-aspirating and nonaspirating sprinkler heads or spray nozzles / Air-aspirating foam nozzles/portable foam Extinguishers etc.

It applied into fixed water spray or sprinkler installations for protection of stores, warehouses, tanker loading areas and other local risks involving a spilled fuel fire, has been found extremely effective. Various crude oils, gasoline, diesels fuels, aviation fuels, etc. its excellent wetting characteristics make it suitable in combating class A fires as well. It can be used with dry chemical extinguishing agents without

### Advantages of Foam Concentrates:



Produces a cohesive



Flows freely



Has slow drainage rate



Has cooling effect



Resists the spill



Resists heat

# AFFF

1% - 3% - 6%

## Aqueous Film Forming Foam Concentrate



### Description

Our AFFF (Aqueous Film-Forming Foam Concentrates) are superior in quality and can be used at the specified concentration to extinguish fires of non-polar hydrocarbon fuels. This extinguishing agent is suitable for use with most types of proportioning and discharge equipment. AFFF foam concentrates are designed for rapid fire knockdown by producing a thin aqueous film which helps to prevent the release of fuel vapors. The foam blanket from which the film forming liquid drains separates oxygen from the fuel surface, extinguishes the fire and prevents re-ignition.

AFFF provides excellent penetrating and wetting qualities when used on Class A fires also. The water content of the foam provides a cooling effect. The aqueous film is produced by the fluorocarbon surfactant reducing the surface tension of the foam solution to a point where the solution can be supported by the surface tension of the fuel. This is important when extinguishing deep-seated fires in wood, paper, rubber and other ordinary combustibles.

### Features

- ❖ Formulated for use with wide range of discharge devices and proportioning system.
- ❖ Suitable for use with both aspirating foam and standard water fog nozzles.
- ❖ If inadvertently frozen, thawing will render product completely serviceable again.
- ❖ Suitable for use with fibre glass, polyethylene or stainless steel.
- ❖ Suitable for use with either fresh or salt water.
- ❖ Suitable for use with deluge or closed head foam water sprinkler systems
- ❖ Suitable for use with siliconised dry chemical extinguishing agents
- ❖ UL recommended application rate on hydrocarbon type fuels is 0.10gpm / ft<sup>2</sup>
- ❖ Suitable for use at temperatures up to -29°C.

AFFF may be stored in its shipping container without change in its original physical or chemical characteristics. Shelf life is expected to be 20 years or more when stored at recommended temperatures and in original containers. It does not show significant sedimentation or precipitation in storage or after temperature cycling. Freezing and thawing have no effect on performance and the concentrate proportions satisfactorily in ordinary equipment at temperatures above 1.7°C. Synthetic foam concentrates should only be stored in stainless steel (Type 304L or 316), reinforced fiberglass polyester with a vinyl ester resin internal layer coating or plastic containers.

## Applications

- ❖ Refinery
- ❖ Hydrocarbon Storage Tanks
- ❖ Airports
- ❖ Ports
- ❖ Process Areas
- ❖ Solvent Extraction
- ❖ Polymer Manufacturing
- ❖ Domestic Fire
- ❖ Industrial Fire
- ❖ Mobile Equipment

## Environmental Impact

AFFF is biodegradable, low in toxicity and can be treated in effluent treatment plants.

## Available Capacity

20L, 30L, 200L

## Approval

- ❖ UL Listed Foam Liquid Concentrate
- ❖ UL File No. EX6069

## Specifications

Product	AFFF 1%	AFFF 3%	AFFF 6%	AFFF Freeze Protect
Use Concentration	1%	3%	6%	1% / 3% / 6%
Specific Gravity	1.03 ± 0.02	1.01 ± 0.02	1.01 ± 0.02	1.06 ± 0.03
pH @ 20°C	7.5 ± 0.5	7.5 ± 0.5	7.5 ± 0.5	7.5 ± 0.5
Viscosity @ 20°C	< 10 CST	< 10 CST	< 10 CST	< 10 CST
Suspended Sediment (V/V)	< 0.1%	< 0.1%	< 0.1%	< 0.1%
Freezing Point	-2°C	-2°C	-2°C	-31°C
Pour Point	-1°C	-1°C	-1°C	-30°C
Storage Temperature	+1.7°C Min. +50°C Max.	+1.7°C Min. +50°C Max.	+1.7°C Min. +50°C Max.	+29°C Min. +50°C Max.
Foam Expansion	Low > 7	Low > 7	Low > 7	Low > 7
25% Drainage Time	3 Minutes	3 Minutes	3 Minutes	4 Minutes

# AR-AFFF

1% x 1% / 1% x 3% / 3% x 3% / 3% x 6%



## Alcohol Resistant Aqueous Film Forming Foam Concentrate



### Description

Our AR-AFFF (Alcohol Resistant Film Forming Foam) is an ultra-high efficient multi-purpose foam concentrate.

The film forming characteristics of AR-AFFF means that it spreads rapidly across a fire. As a result, it is highly effective against hydrocarbon fires and with the addition of special polymers it is also high effective against polar solvents. It is intended for use on hydrocarbon fuels such as gasoline, kerosene, diesel, etc. and on polar solvent or water miscible fuels such as alcohols, ketones, esters, etc.

### Features

- ❖ Suitable for use on hydrocarbon or polar solvent type fuels.
- ❖ Excellent wetting characteristics when used in combating Class A fuels fires.
- ❖ Suitable for use with carbon steel, fiberglass, polyethylene or stainless steel.
- ❖ Suitable for use with all siliconized dry chemical extinguishing agents
- ❖ Recommended minimum application rate on hydrocarbon fuels is 0.10gpm/ft<sup>2</sup>.
- ❖ Recommended minimum application rate on polar solvent fuels is 0.17 gpm / ft<sup>2</sup>. (Some Polar type fuel fires have been successfully extinguished with a lower application rate).
- ❖ Compatible with other AR - AFFF concentrates of equivalent characteristics.

AR-AFFF may be stored in its shipping container without change in its original physical or chemical characteristics. Shelf life is expected to be 20 years or more when stored at recommended temperatures and in original containers.

If the AR-AFFF is to be stored in an atmospheric type foam concentrate storage tank whether on mobile apparatus or stationary, limit the air space above the surface of the concentrate where possible and place a thin layer of quality mineral oil the surface of the foam concentrate to minimize any effect from evaporation.

## Applications

- ❖ Crash Fire Rescue
- ❖ Defense Facilities
- ❖ Storage Tanks
- ❖ Truck/Rail Loading or Unloading Facilities
- ❖ Processing / Storage Facilities
- ❖ Docks / Marine Tankers
- ❖ Flammable Liquid Containment Areas
- ❖ Solvent Extraction

## Environmental Impact

AR-AFFF is biodegradable, low in toxicity and can be treated in sewage treatment plants.

## Available Capacity

20L, 30L, 200L

## Approval

- ❖ UL Listed Foam Liquid Concentrate
- ❖ UL File No. EX6069

## Specifications

Product	AR-AFFF 1x1	AR-AFFF 1x3	AR-AFFF 3x3	AR-AFFF 3x6
Use Concentration	1%	1% - 3%	3%	3% - 6%
Specific Gravity	1.05 ± 0.03	1.05 ± 0.03	1.02 ± 0.02	1.02 ± 0.02
pH @ 20 °C	7.5 ± 0.5	7.5 ± 0.5	7.5 ± 0.5	7.5 ± 0.5
Viscosity @ 20 °C	2200 ± 500 CST	1750 ± 500 CST	1750 ± 500 CST	1500 ± 500 CST
Freezing Point	-2 °C	-2 °C	-2 °C	-2 °C
Pour Point	-1 °C	-1 °C	-1 °C	-1 °C
Storage Temperature	+1.7 °C Min. +50 °C Max.	+1.7 °C Min. +50 °C Max.	+1.7 °C Min. +50 °C Max.	+1.7 °C Min. +50 °C Max.
Foam Expansion	Low > 7	Low > 7	Low > 7	Low > 7
25% Drainage Time	8 Minutes	8 Minutes 12 Minutes	8 Minutes	8 Minutes 12 Minutes

# FFFP / AR-FFFP

3% / 6% 3% x 3% / 3% x 6%



Film Forming Fluoro Protein Foam Concentrate Or  
Alcohol Resistant Film Forming Fluoro Protein Foam Concentrate



## Description

Our FFFP is a unique combination of a rapid fire knockdown quality of conventional film forming AFFF with a tough cohesive foam blanket based on protein base material, providing high level of post fire security and burn back resistance as a top quality fluoro protein. FFFP's formulation is based on advanced protein foam technology containing hydrolyzed protein, fluorochemical surface active agent and preservatives to achieve the maximum synergetic effect.

Our AR-FFFP is multi-purpose natural protein based foam for use on a wide range of both hydrocarbon and polar solvent fuel fires. Our product contains special hydrophilic polymers producing a thick layer if applied on chemicals. It generates a fast flowing foam resistant against burn back with high insulating protection to heat and chemical destruction, if applied on any kind of fuel. It is suitable with all types of known equipment and is also compatible dry chemical powders.

## Features

- ❖ Film Forming for last flame knock down and extinguishment.
- ❖ Stable and long lasting foam blanket for excellent burn back resistance and post-fire security
- ❖ Detergent free for high resistance of fuel pick up
- ❖ Foam blanket tree-seals when ruptured by personnel or equipment
- ❖ Readily bio degradable and virtually non-toxic. It is based on natural protein foaming agent and contains no harmful synthetic detergent.

FFFP / AR-FFFP may be stored in its shipping container without change in its original physical or chemical characteristics. Shelf life is expected to be 10 - 15 years or more when stored at recommended temperatures and in original containers.

If the FFFP / AR-FFFP is to be stored in an atmospheric type foam concentrate storage tank whether on mobile apparatus or stationary, limit the air space above the surface of the concentrate where possible and place a thin

## Applications

FFFP/AR-FFFP is used in high risk situations where hydrocarbons (such as aviation kerosene, crude oil, gasoline, and diesel fuel) are stored, processed or transported. It is used extensively on rapid intervention vehicles at major international airports and military bases where fast extinguishment and post-fire security with limited quantities of foam concentrate essential.

FFFP foam concentrate provides quality protection for a wider range of hazardous areas such as:

- ❖ Airport crash fire rescue
- ❖ Aircraft hangar fire protection system
- ❖ Military equipment bases
- ❖ Docks / Marine tankers
- ❖ Trucks / Rail loading and unloading facilities
- ❖ Flammable liquid contaminated areas
- ❖ Mobile equipment

## Specifications

Product	FFFP3	FFFP6	AR-FFFP 3 x 3	AR-FFFP 3 x 6
Use Concentration	3%	6%	3%	3% - 6%
Specific Gravity	1.08 ± 0.03	1.06 ± 0.03	1.08 ± 0.02	1.08 ± 0.02
pH @ 20°C	7.5 ± 0.5	7.5 ± 0.5	7.5 ± 0.5	7.5 ± 0.5
Viscosity @ 20°C	<20 CST	<20 CST	1750 ± 500 CST	1500 ± 500 CST
Freezing Point	-8°C	-8°C	-15°C	-15°C
Pour Point	-7°C	-7°C	-14°C	-14°C
Storage Temperature	+1.7°C Min.	+1.7°C Min.	+1.7°C Min.	+1.7°C Min.
Foam Expansion	Low > 7	Low > 7	Low > 7	Low > 7
25% Drainage Time	3 Minutes	3 Minutes	8 Minutes	8 Minutes

## Environmental Impact

FFFP / AR-FFFP is biodegradable, low in toxicity and can be treated in sewage treatment plants.

## Available Capacity

20L, 30L, 200L

## Approval

- ❖ UL Listed Foam Liquid Concentrate
- ❖ UL File No. EX6069

# AR Synthetic

3% x 3%

Fluorine Free Foam Concentrate



## Description

Our Fluorine Free AR Synthetic 3%/3% is a certified fluorine free Class A/B firefighting synthetic foam, Alcohol-resistant foam concentrate used to effectively extinguish Class B hydrocarbon & polar solvent fuel fires at 3% solution. It provide rapid extinguishment and excellent burn back characteristics can be used with fresh, salt and brackish water.

SFFECO Fluorine Free AR Synthetic 3%/3% create foam blanket above the fuel on fire and add a cooling effect to rapidly extinguish the fire. It is environmentally friendly foams can be applied in low, medium and high expansion. They offer excellent extinguishment performances and burn back resistance.

## Features

- ❖ Environmentally responsible foam concentrate.
- ❖ Can be used with fresh, brackish and sea water.
- ❖ Contains NO alcohols for higher flash point and compatibility with Class A/B Systems.
- ❖ Exhibits good foamability, even in cold water.
- ❖ UL Listed as a Fluorine Free AR Synthetic 3%/3%, at substantially lower usage rates than most AR Synthetic.
- ❖ Premix is stable for more than 30 days (using potable water), which is significantly longer than traditional Class A foam solutions.

# Storage and Handling



The recommended storage temperature range for SFFECO Fluorine Free AR Synthetic 3%/3 is 35°F (1.7°C) to 120°F (49°C). Fluorine Free AR Synthetic 3%/3% is not affected by freeze/thaw cycles, and it has unique premix stability properties. Samples of Fluorine Free AR Synthetic 3%/3%, premixed with potable municipal water supplies, have been shown to be stable and not suffer any significant loss of expansion or drainage properties after 30 days. Actual results may vary based on the water supply. Fluorine Free AR Synthetic 3%/3% should be stored in its original shipping container or in tanks or other containers that have been designed for such foam storage. Recommended construction materials are stainless steel (Type 304L or 316), high-density cross-linked polyethylene, or reinforced fiberglass polyester (isophthalic polyester resin) with a vinyl ester resin internal layer coating (50 -100 mils).

## Applications

- ❖ Forestry
- ❖ Solvent extraction
- ❖ Mining
- ❖ Polymer manufacturing
- ❖ Industrial fire
- ❖ Domestic fire
- ❖ Tires Industry
- ❖ Mobile equipment
- ❖ Hydrocarbon Spill Control

## Environmental Impact

Fluorine Free AR Synthetic 3%/ 3% Foam is biodegradable, low in toxicity and can be treated in effluent treatment plant

## Available Capacity

20L, 30L, 200L

## Approval

- ❖ UL Listed Foam Liquid Concentrate
- ❖ UL File No. EX6069

Product	Fluorine Free AR Synthetic
Use Concentration	3% x 3%
Specific Gravity @68°F (20°C)	1.02 ± 0.02
pH	7.5 ± 0.5
Viscosity @ 20°C (LV-1 Spindle @ 60 RPM)*	1500 ± 500 CST Max.
Refractie Index	1.3700 - 1.3900
Min. Temperature for use	35°F (1.7°C)
Max. Temperature for use	120°F (49°C)
Freezing Point	23°F (-5°C)
Appearance	Amber Color



Since 1983, SFFECO has been a trusted name in fire protection, known for innovation and quality worldwide.

With state-of-the-art facilities in Riyadh and Dubai, we deliver a complete range of firefighting solutions that meet international standards.

Our innovative approach and comprehensive product portfolio make SFFECO the one-stop destination for reliable fire protection products and services.

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