Film Forming Fluoro-Protein Foam Extinguishing Agent
(Model: FFFP3%, FFFP3%, FFFP6%)

These extinguishing agents are easily adapted for use in various low-expansion foam generators. Our film-forming fluoro-protein foam extinguishing agent (FFFP) contains a special surfactant that promotes excellent extinguishing properties. It is compatible with the BC type and ABC type powder extinguishing agents.

The Film Forming Fluoro-protein Foam extinguishing agent (FFFP) is effective in extinguishing large oil tank fires.

It is widely used in fire protection and fire extinguishments in airports, oil fields, large chemical plants, oil depots and ships.

We produce two types of above foam extinguishing agents. One may be used with sea water as well as with fresh water. The other may be used with fresh water only. Please specify which type (fresh water type or sea water-compatible type) is desired when you place your order.
We also produce low-viscosity and super low-viscosity above foam extinguishing agents. If you have a special situation, let us know. We can produce an extinguishing agent to meet your needs.

**Mixture Ratio:**

**FFFP2%:** Mix 2 parts extinguishing agent to ninety-eight parts water

**FFFP3%:** Mix 3 parts extinguishing agent to ninety-seven parts water

**FFFP6%:** Mix 6 parts extinguishing agent to 94 parts water

**Flow Temperature:**

Normal type: \( \leq -10 \) degrees C

Cold-resistant type: \( \leq -14 \) degrees C

Super Cold-resistant type: \( \leq -18 \) degrees C ~ \( -25 \) degrees C
Fluoro-Protein Foam Concentrate

(Model: FP2%, FP3%, FP6%)

These extinguishing agents possess low-expansion properties which are adaptable to various low expansion foam generators.

The fluoro-protein foam extinguishing agent (FP2%, FP3%, FP6%) are primarily used in fire protection of non-water-soluble flammable liquids. Fluoro-protein foam extinguishing agent may be used in combination with powder extinguishing agent.

Our fluoro-protein foam extinguishing agent may be used for fire protection of large oil tanks in a base-injection method.

Our fluoro-protein foam compound (foam extinguishing agent) maintains the excellent stability, but it also contains its special surfactant and maintains excellent fluidity, foam endurance, steady performance, and excellent extinguishing capabilities.

It is widely used in fire protection and fire extinguishment in oil fields, oil refining factory, oil depots and ships.

Our fluoro-protein foam compound (foam extinguishing agent) may be used with fresh water or with sea water.

**Mixture ratio:**

Mixture ratio of FP2%:

Mix two parts of FP2% to ninety-eight parts water.

Mixture ratio of FP3%:
Mix three parts of FP3% to ninety-seven parts water.

Mixture ratio of FP6%:

Mix six parts FP6% to ninety-four parts water.

Flow temperature:

ordinary type: $\leq -10.0$ degrees C

Cold-resistant type: $\leq -12.5 \sim -25$ degrees C

Packaging, Transportation and Storage Requirements

1. Package and transport in 25 liters, 125 liters, and 200 liters iron or plastic barrels (drums)

2. Avoid mixing with other kind of chemical or foam extinguishing agents during shipment and storage.

3. Keep the agents cool during shipment and storage: $-5$ degrees C to 50 degrees C

4. Avoid exposure to strong, direct sunlight for long time.
Low Viscosity Alcohol Resistant Fluoro-Protein Foam Concentrate

（Model: FP/AR3-3%, FP/AR6-6%）

This foam Concentrate possess low-expansion properties and is adaptable to various low expansion foam generators. Our Low Viscosity Alcohol Resistant Fluoro-protein Foam Concentrate may be used in chemical plants, wineries, chemical storerooms, oilfields, oil depots, and ships, chemical tankers where water-soluble flammable liquids or non water-soluble flammable liquids such as alcohol, ester, ether, aldehyde, ketone, organic acids and oil, petrol are produced or stored.

Our Alcohol-resistant Fluoro-protein foam extinguishing agent's effectiveness is demonstrably superior to that of both the Protein , Fluoro-protein’s ability to extinguish large area oil fires and solid mass fires.

Because of low Viscosity, so our Low Viscosity Alcohol Resistant Fluoro-protein Foam Concentrate （Model: FP/AR3-3%, FP/AR6-6%） can flow quickly in the very narrow diameter pipes. So it can fast, effectively extinguishing fire.

Our FP/AR complies with applicable standards, such as : IMO MSC/Circ.1312 standard and our Low Viscosity Alcohol Resistant Fluoro-protein Foam Concentrate （FP/AR3-3%） has been approved by MED certificate.

Till today, in China, we are the only manufacturer which can produce Low Viscosity Alcohol Resistant Fluoro-protein Foam Concentrate.
Mixture Ratio:
Mix three parts of FP/AR3-3% to ninety-seven parts water.
Mix six parts FP/AR6-6% to ninety-four parts water.

Flowing point:
Normal type: \( \leq -12.5 \) degrees \( ^{\circ}C \)
Cold-resistant type: \( \leq -17.5^{\circ}C \)

Packaging, Transportation and Storage Requirements:
1. Package and transport in 25 kg, 50 kg, and 200 kg plastic barrels

2. Avoid mixing with other kind of chemical or foam extinguishing agents during shipment and storage.

3. This product can be stored for long periods of time in the sealed original containers. High temperature up to \( +50^{\circ}C \) do not affect the quality. Neither does temporary freezing at temperatures below the specified frost resistance limit.
These extinguishing agents possess low-expansion properties which are adaptable to various low expansion foam generators.

The protein foam extinguishing agent (P2%、P3%, P6%) are primarily used in fire protection of non-water-soluble flammable liquids.

It is widely used in fire protection and fire extinguishments in oil fields, oil refining factory, oil depots and ships.

Our protein extinguishing agent may be used with fresh water or with sea water.

**Mixture ratio:**

Mixture ratio of P2%:
Mix two parts of P2% to ninety-eight parts water.

Mixture ratio of P3%:
Mix three parts of P3% to ninety-seven parts water.

Mixture ratio of P6%:
Mix six parts P6% to ninety-four parts water.

**Flow temperature:**

ordinary type: ≤ −10.0 degrees C
Cold-resistant type: $\leq -12.5 \sim -25$ degrees C

**Packaging, Transportation and Storage Requirements:**

1. Package and transport in 25 liters, 125 liters, and 200 liters iron or plastic barrels (drums)

2. Avoid mixing with other kind of chemical or foam extinguishing agents during shipment and storage.

3. Keep the agents cool during shipment and storage: $-5$ degrees C to 50 degrees C

4. Avoid exposure to strong, direct sunlight for long time.
These extinguishing agents exhibit low expansion foam fire extinguishing properties which are adaptable for use in various low-expansion foam generators. The Aqueous Film Forming Foam Extinguishing Agent (AFFF) can be used in combination with dry powder extinguishing agents and can be used to extinguish large oil tank fires. It is widely used in fire protection and fire extinguishing in airports, oilfields, large chemical plants, oil depots, and on ships where non-water-soluble flammable liquids are produced or stored.

In addition to the above-mentioned applications, the Alcohol Resistant Aqueous Film Forming Foam Extinguishing Agent (AFFF/AR) may also be used in chemical plants, wineries, and chemical storerooms where water-soluble flammable liquids are produced or stored (e.g., alcohol, ester, ether, aldehyde, ketone, organic acids and so on).

We produce two types of above-mentioned foam extinguishing agents. One may be used with both seawater as well as fresh water. The other may be used with fresh water only. Please specify which type (fresh water type or seawater-compatible type) is desired when you place your order.

We also produce low-viscosity and super low-viscosity Alcohol Resistant Aqueous Film Forming Foam Extinguishing Agent (AFFF/AR). If you have a special situation, let us know. We can produce an extinguishing agent to meet your needs.
**Mixture ratio:**
AFF/AR1-1%: Mix one part AFF/AR1-1% to ninety-nine parts water.
AFF/AR3-3%: Mix three parts of AFF/AR3-3% to ninety-seven parts water.
AFF/AR6-6%: Mix six parts AFF/AR6-6% to ninety-four parts water.

**Flow Temperature:**
Normal grade: \(\leq -7.5 \, ^\circ C\)
Cold-resistant Grade: \(-12.5\sim -25 \, ^\circ C\)

**Packaging, Transportation and Storage Requirements**
Package and transport in 25 L, 50 L, and 200L plastic drums
Avoid mixing with other chemical or foam extinguishing agents during shipment and storage.
Keep the agents cool during shipment and storage: \(-15 \, ^\circ C \text{ to } 50 \, ^\circ C\)
Avoid storing in direct sunlight.
**2% Seawater Compatible High Expansion Foam concentrate**

(Model: G2%, G3%, G6%)

Our 2% High Expansion Foam concentrate (2% HEF) exhibits high and medium expansion properties and is adaptable to use in various high- or medium-expansion foam generators.

Our 2% High Expansion Foam concentrate (2% HEF) is a superior quality high expansion fire fighting foam concentrate for extinguishing and securing flammable hydrocarbon liquid fires.

Our 2% Seawater Compatible High Expansion Foam concentrate (2%HEF) is especially suitable for fire protection and fire extinguishing in marine fire, in ships. This product is also useful for fire protection and fire extinguishing in limited spaces such as in underground tunnels, hangars, underground oil depots, garages and coal mines. This foam concentrate (2% HEF) exhibit greatest effectiveness when they are used to cover large areas of drifting non-water-soluble flammable liquids.

Our 2% Seawater Compatible High Expansion Foam concentrate (2%HEF) complies with applicable standards, such as : IMO MSC/Circ.670 standard and Our 2% Seawater Compatible High Expansion Foam concentrate has been approved by MED certificate.

When this product is used in suitable high expansion foam system, In controlled tests, this foam concentrate has been observed to be more effective than many other types of fire extinguishing agents.

Till today, in China, we are the only manufacturer which can produce 2% high expansion foam concentrater
Mixture ratio:

2%HEF: Water = 2: 98

Freezing point: \( \leq -5^\circ C \)

Packaging, Transportation and Storage Requirements:
1. Package and transport in 25 kg, 50 kg, and 200 kg plastic barrels
2. Avoid mixing with other kind of chemical or foam extinguishing agents during shipment and storage.
3. This product can be stored for long periods of time in the sealed original containers. High temperature up to +50 \(^\circ C\) do not affect the quality. Neither does temporary freezing at temperatures below the specified frost resistance limit.
Alcohol Resistant Film Forming Fluoro-Protein Foam Concentrate
(Model: FFFP/AR3-3%、FFFP/AR6-6%)

These extinguishing agents are easily adapted for use in various low-expansion foam generators. Our film-forming fluoro-protein foam extinguishing agent (FFFP) contains a special surfactant that promotes excellent extinguishing properties. It is compatible with the BC type and ABC type powder extinguishing agents.

The Film Forming Fluoro-protein Foam extinguishing agent (FFFP) is effective in extinguishing large oil tank fires.

Alcohol-resistant film forming fluoro-protein foam extinguishing agent (FFFP/AR) exhibit the same superior qualities as the FFFP3% and the FFFP6%.

In addition, the FFFP/AR perform well anywhere water-soluble flammable liquids are produced or stored (e.g., alcohol, ester, ether, aldehyde, ketone and organic acid).

It is widely used in fire protection and fire extinguishments in airports, oil fields, large chemical plants, chemical storerooms, oil depots and ships.

We produce two types of above foam extinguishing agents. One may be used with sea water as well as with fresh water. The other may be used with fresh water only. Please specify which type (fresh water type or sea water-compatible type) is desired when you place your order.

We also produce low-viscosity and super low-viscosity above foam extinguishing agents. If you have a special situation, let us know. We can produce an extinguishing agent to meet your needs.

Mixture Ratio:
FFFP3%: Mix 3 parts extinguishing agent to ninety-seven parts water
FFFP6%: Mix 6 parts extinguishing agent to 94 parts water
FFFP/AR3-3%: Mix 3 parts extinguishing agent to ninety-seven parts water
FFF/AR6-6%: Mix 6 parts extinguishing agent to 94 parts water

Flow Temperature:
Normal type: \( \leq -10 \) degrees C
Cold-resistant type: \( \leq -14 \) degrees C
Super Cold-resistant type: \( \leq -18 \) degrees C ~ \( -25 \) degrees C

Viscosity:
Model FFF/AR6-6%:
Normal Grade: \( \leq 800 \) MPa.s
Low Viscosity Grade: \( \leq 400 \) MPa.s
Super Low Viscosity Grade: \( \leq 200 \) MPa.s

Model FFF/AR3-3%:
Normal Grade: \( \leq 1600 \) MPa.s
Low Viscosity Grade: \( \leq 800 \) MPa.s
Super Low Viscosity Grade: \( \leq 300 \) MPa.s

Packaging, Transportation and Storage Requirements

Package and transport in 25kg, 50 kg, and 200 kg plastic barrels

Avoid mixing with other chemical or foam extinguishing agents during shipment and storage.

Keep the agents cool during shipment and storage: \(-5\) degrees C to 50 degrees C; avoid storing in direct sunlight.