

**FireFilm® 3% AFFF
- 40°C (Cold-Foam)****Environmentally Responsible Formulation****● Description**

Environmentally Responsible FireFilm 3% is a superior quality Aqueous Film Forming Foam (AFFF) concentrate which is used at 3% concentration to extinguish fires on hydrocarbon fuels. This new formulation demonstrates SKFF's commitment to superior, firefighting performance and environmental responsibility. FireFilm 3% is suitable for use with most types of proportioning and discharge device.

AFFF foam concentrates are designed for rapid fire knockdown producing a thin aqueous film that spreads across the surface of the fuel, separating the fuel from oxygen. FireFilm is a fast draining foam with improved vapor-sealing ability and burnback resistance.

The aqueous film is produced from fluorochemical surface active agents that reduce promoting rapid spread over the surface area. The film tends to be more effective on fuels with higher surface tension such as diesel and jet fuels. and slightly less effective on fuels with lower surface tension such as hexane and gasoline.

● Features

- Low energy input AFFF-requires minimal agitation.
- Excellent fluidity provides rapid " knockdown ".
- Does Not contain any PFOS.
- Compatible with standard proportioning and foam making devices.
- Suitable for use with foam compatible dry powder extinguishing agents.

● Applications

FireFilm 3% is used at 3% concentration with fire suppression systems and portable fire fighting to fight fires involving hydrocarbon fuels such as crude oil, gasoline, and fuel oils. It is not suitable for use on polar solvents or water miscible fuels such as alcohols , ketones, esters and ethers.

Typical applications include foam water sprinkler systems, aircraft hangars, loading racks, process areas, etc. FireFilm 3% is an excellent agent for use in aircraft rescue and fire fighting or other manual fire fighting

Applications where polar solvent fuels are not encountered. It is also useful as a wetting agent in combating class A fires.

In general, AFFF foam concentrates may be used with non aspirating nozzles and sprinklers, however, for best foam expansion and 25% drainage time, all foam concentrates should be used with aspirating nozzles and foam making discharge devices.

● Typical Physical Properties

Appearance_____	Straw Yellow Color
Specific Gravity at 21°C _____	1.09
pH_____	8.5
Viscosity at 25°C _____	9 csk
Freezing point_____	-40°C
Minimum Usable Temperature_____	-35°C
Maximum Usable Temperature_____	49°C
Expansion_____	7.6
25% Drainage time_____	3~6 min.
Extinguishment _____	< 3min.
20% Burnback _____	> 10min.

■ Approvals and listings**● Chinese GB 15308-2006**

FireFilm 3% has successfully passed Chinese GB Test standard for use at 3% concentration on hydrocarbons. using a variety of proportioning and foam making discharge devices both with fresh and sea water. Consult SKFF for a complete list of these devices.

● Storage and Handling

FireFilm 3% is ideally stored in original shipping containers or in tanks or other containers which 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)

Foam concentrates are subject to evaporation which accelerates when the product is exposed to air. Storage tanks should be sealed and fitted with a pressure vacuum vent to prevent the free exchange of air. The recommended storage environment is within temperature range of -40°C to 49°C

It is recommended that FireFilm 3% not be mixed with any other type of foam concentrate in long term storage. Such mixing could lead to chemical changes in the product and a possible reduction in or loss of firefighting performance. Most expanded foams are compatible for side-by-side application during an incident.

FireFilm 3% may be stored for a limited period as a 3% premixed solution using fresh water. A biocide agent should be added to prolong storage life of the premix solution. SKFF should be consulted for advice.

FireFilm 3% is suitable for use in combination with foam compatible dry chemical extinguishing agents.

● **Shelf Life, Inspection and Testing**

The shelf life of any foam concentrate is maximized by proper storage conditions and maintenance. Factors affecting shelf life are wide temperature changes, extreme high or low temperatures, evaporation, dilution, and contamination by foreign materials. Properly stored SKFF AFFF foam concentrates have been tested and shown no significant loss of fire fighting performance, even after 15 years.

Annual testing of all fire fighting foam is always recommended and SKFF provides a Technical Service Program to conduct such tests. Contact us for details.

● **Environmental and Toxicology Information**

FireFilm 3% contains no ingredients reportable under the ‘U.S. SARA’ and ‘CERCLA’ regulations.

FireFilm 3% does not contain any PFOS.

FireFilm 3% is biodegradable. However, as with any substance, care should be taken to prevent discharge from entering ground water, surface water or storm drains. Heavily diluted or finished foams can be treated by local biological sewage treatment systems. Since facilities vary widely by location, disposal should be made in accordance with state and local regulations.

Results of tests for acute oral toxicity and primary skin irritation have proved negative. Repeated skin contact will remove oils from the skin and cause dryness. FireFilm 3% is a primary eye irritant, and contact with the eyes should be avoided. Users are advised to wear protective equipment. If FireFilm 3% enters the eyes, flush well with water and seek immediate medical attention. For further details, see the FireFilm 3% Material Safety Data Sheet.

● **Ordering Information**

FireFilm 3% is packed in 25 litre or 200 litre high density polyethylene containers sealed with tamper evident caps.

25 litre pails----- gross weight 29 kg

200 litre drums ----- gross weight 228 kg

Palletizing of pails and wooden case packing can be provided upon request.

● **Shipping Cube**

25 litre Pail _____ (0.032cu.m)

200 litre Drum _____ (0.326cu.m)