

## Description

APIROL FX3 C 3% Fluoroprotein Foam Concentrate combines hydrolyzed protein with fluorochemical surfactants, foam stabilizers (metal salts), bactericide, corrosion inhibitors, freeze point depressants and solvents to provide superior fire and vapor suppression for Class B hydrocarbon fuel fires. This protein-based foam concentrate is intended for forceful or gentle firefighting applications at 3% solution in fresh, salt, or hard water.

APIROL FX3 C foam solution utilizes two suppression mechanisms:

- The foam blanket blocks oxygen supply to the fuel and suppresses fuel vapor. Protein based foam agents produce a foam blanket with very good heat stability and burn-back resistance.
- The water content of the foam solution produces a cooling effect for additional fire suppression.

### TYPICAL PHYSIOCHEMICAL PROPERTIES AT 20 °C

Appearance	Clear brown liquid
Density	1.12 ± 0.02 g/ml
pH	6.0 - 8.0
Refractive Index	1.3950 minimum
Viscosity*	6.0 ± 4.0 cSt
Sediment**	≤ 0.1%
Pour Point	≤ -12 °C
Freeze Point	≤ -15 °C

\*Cannon-Fenske viscometer

\*\*EN1568:2008 protocol

The environmentally-mindful APIROL FX3 C 3% Fluoroprotein Concentrate formulation contains short-chain, C-6 fluorochemicals manufactured using a telomer-based process. The telomer process produces no PFOS, and these C-6 materials do not breakdown to yield PFOA. The fluorochemicals used in the concentrate meet the goals of the U.S. Environmental Protection Agency 2010/15 PFOA Stewardship Program.



010041

## Approvals, Listings, and Standards

APIROL FX3 C 3% Fluoroprotein Concentrate is approved, listed, qualified under, or meets the requirements of the following specifications and standards:

- UL Standard 162, Foam Liquid Concentrates
- EN 1568:2008
  - Parts 1, 3
- IMO MSC.1/Circ.1312
- MED Modules B and D



## Application

APIROL FX3 C 3% Fluoroprotein Concentrate is intended for use on Class B hydrocarbon fuel fires with low water solubility such as crude oils, gasolines, diesel fuels, and aviation fuels. It is not suitable for use on polar fuels with appreciable water solubility, such as methyl and ethyl alcohol, acetone, and methyl ethyl ketone.

The concentrate may also be used in conjunction with dry chemical agents to provide even greater fire suppression performance. This concentrate can be used only with air aspirating type discharge devices.

APIROL FX3 C 3% Fluoroprotein Concentrate can be ideal for fixed, semi-fixed, and emergency response firefighting applications such as:

- Hydrocarbon fuel storage tanks
- Hydrocarbon fuel industrial/processing facilities
- Flammable liquid containment areas
- Docks and on-board marine systems
- Low temperature operations

## Foaming Properties

APIROL FX3 C 3% Fluoroprotein Concentrate may be effectively applied using most conventional air aspirating foam discharge equipment at a 3% dilution with fresh, salt, or hard water.

The expansion ratio will vary depending on the performance characteristics of the equipment. Air aspirating discharge devices produce expansion ratios from 6:1 to 12:1, depending on the type of device and flow rate. Typical expansion ratios for foam chambers are in range of 5:1 to 7:1.

### TYPICAL FOAM CHARACTERISTICS (Fresh and Salt Water)

Proportioning Rate	3%
Expansion Ratio	≥7.0
25% Drain Time (min:sec)	≥5:00
50% Drain Time (min:sec)	≥9:00

\*\*per EN 1568-3, 2008 protocol

## Proportioning

The recommended operational temperature range for APIROL FX3 C 3% Fluoroprotein Concentrate is -10 °C to 60 °C. This foam concentrate can be correctly proportioned using most conventional, properly calibrated, in-line proportioning equipment such as:

- Balanced and in-line balanced pressure pump proportioners
- Balanced pressure bladder tanks and ratio flow controllers
- Around-the-pump type proportioners
- Fixed or portable in-line venturi type proportioners
- Handline nozzles with a fixed eductor/pick-up tubes

## Storage and Handling

APIROL FX3 C 3% Fluoroprotein Concentrate should be stored in the original supplied package (HDPE totes, drums, or pails) or in the recommended foam system equipment as outlined in SABO Española Products Technical Bulletin "Storage of Foam Concentrates". The product should be maintained within the recommended temperature range. If the concentrate freezes during transport or storage, full product serviceability can be restored upon thaw with gentle re-mixing.

Factors affecting the foam concentrate's long-term effectiveness include temperature exposure and cycling, storage container characteristics, air exposure, evaporation, dilution, and contamination. The effective life of APIROL FX3 C Concentrate can be maximized through optimal storage conditions and proper handling. SABO FOAM concentrates have demonstrated effective firefighting performance with contents stored in the original package under proper conditions for more than 10 years.

Mixing APIROL FX3 C Concentrate with other fluoroprotein foam concentrates for long-term storage is not recommended. Different types of foam concentrates (i.e. AFFFs and fluoroproteins) should not be mixed together under any circumstances. Use in conjunction with comparable 3% fluoroprotein firefighting foam products for immediate incident response is appropriate.

## Materials of Construction Compatibility

To help avoid corrosion, galvanized pipe and fittings should never be used in contact with undiluted APIROL FX3 C 3% Fluoroprotein Concentrate. Certain materials such as black iron piping are also not recommended for use due to the corrosiveness and solids content of protein-based agents. Please refer to SABO Española Products Technical Bulletin "Acceptable Materials of Construction" for recommendations and guidance regarding compatibility of foam concentrate with common materials of construction in the firefighting foam industry.

## Inspection

APIROL FX3 C 3% Fluoroprotein Concentrate should be inspected periodically in accordance with NFPA 11, EN 13565-2, or other relevant standard. A representative concentrate sample should be sent to SABO Española Foam Analytical Services or other qualified laboratory for quality analysis per the applicable standard. An annual inspection and sample analysis is typically sufficient, unless the product has been exposed to unusual conditions.

## Quality Assurance

APIROL FX3 C 3% Fluoroprotein Concentrate is subject to stringent quality controls throughout production, from incoming raw materials inspection to finished product testing, and is manufactured in an ISO 9001:2008 certified facility.

## Ordering Information

APIROL FX3 C 3% Concentrate is available in pails, drums, totes, or bulk shipment.

<u>Part No.</u>	<u>Description</u>	<u>Shipping Weight</u>	<u>Container Volume</u>
F503378C1	25 L Pail	27.45 kg	0.0329 m <sup>3</sup>
F503378D1	200 L Drum	218.5 kg	0.2477 m <sup>3</sup>
F503378T1	1000 L Tote	1100 kg	1.398 m <sup>3</sup>