

TECHNICAL DATA SHEET

PROFILM AR Hi-Ex High Expansion All-Purpose AR-AFFF

All-purpose Aqueous Film Forming Foam (AFFF) 3%
Use on Hydrocarbon and Polar Solvents fires with High Expansion generators

Composition



- ✓ NO PFOS
- ✓ NO PFOA

This Formulation contains only telomer-based fluorosurfactants with a short chain (C6 or below) that cannot degrade in the environment into PFOA or other PFCA's.

IMPORTANT:

C6 telomer-based fluorosurfactants are NOT bio-accumulative or toxic to the environment.

PROFILM AR Hi-Ex is a composition of fluorocarbon surfactants, active hydrocarbon surfactants, corrosion inhibitors, and special soluble natural polymers that produce a highly plastic and remarkably fluid foam capable of covering large areas quickly, even in presence of the obstacles. The foam is extremely resistant to the destructive effects of oxygenated substances (alcohols, ketones, ethers, etc.).

Principle of Operation



PROFILM AR Hi-Ex is specifically designed for use with high expansion generators, where it can totally flood large areas and is therefore most suitable for the protection of aircraft hangars and hazardous products warehousing.

Due to its versatile qualities, **PROFILM AR Hi-Ex** can be used for extinguishing of hydrocarbon fires, where its optimum film-forming capacity can achieve rapid fire knock-down, or for difficult oxygenated chemical substances, or to prevent the emission of toxic and corrosive.

Induction Ratio



PROFILM AR Hi-Ex is used at 3% concentration ratio on hydrocarbon and polar solvent fires:

- 3 % dilution: 3 L foam concentrate + 97 L water = 100 L foam solution

Method of Application

PROFILM AR Hi-Ex is designed for use is with high expansion generators, for producing exceptional quality Hi-Ex foam. Its expansion ratio can vary from 200:1 to 1000:1 depending on the foam generator used and the operating conditions.

Field of Application

The versatile alcohol-resistant **PROFILM AR Hi-Ex** is primarily designed for:



Large capacity warehouses



Chemical product plants



Distilleries

General Characteristics

PROFILM AR Hi-Ex conforms to all national and international standards and particularly to APSAD R12 French standard designed for certification of high expansion generators with adapted foam concentrate. It also conforms to European standards EN 1568-1, 2, 3 and 4.

PROFILM AR Hi-Ex can be used with fresh and sea water.

PROFILM AR Hi-Ex properties do not change in case of freezing. It recovers its initial properties as soon as it is defrosted.

Storage and Shelf-life



PROFILM AR Hi-Ex has a long shelf life if stored properly in the original intact and unsealed packaging. Its shelf life may exceed 10 years if maintained correctly. As with all foam liquids, storage temperatures and conditions are important factors for optimal shelf life.

If the product becomes frozen during storage or transport, gentle thawing will render the product completely usable and without any impairment of its properties.

PROFILM AR Hi-Ex, like other synthetic foam concentrates, is recommended to be stored in stainless steel or plastic containers. Furthermore, since electro-chemical corrosion can occur at joints and unions between different metal types when they are in contact with the foam liquid, it is recommended that any foam concentrate storage systems employ the same materials throughout for tanks, pipelines and fittings.

We recommend following our guidelines to ensure optimal storage conditions

Physico-Chemical Characteristics

Foam concentrate	u.m.	3 et 6 %
Density @ 20°C	kg/l	1.03±0.02
pH @ 20°C		6 - 9
Viscosity @ 20°C	cPs	≥ 2000
Pour point*	°C	≤ - 5
Undissolved solids	% V/V	≤ 0.2
Surface tension	mN/m	≤ 18
Interfacial tension solution / cyclohexane	mN/m	≤ 5

* The product is also available in low temperature version with pour point - 15 °C.

Typical Foam Properties

The foam properties of **PROFILM AR Hi-Ex** vary depending on the performance characteristics of foaming equipment used and the operating conditions.

PROFILM AR Hi-Ex tested in accordance with the EN 1568:1 to 4 gives the following typical properties:

	Foam solution 3%	
	Expansion ratio	25% Drainage Time
Low expansion	≥ 7	≥ 7'
Medium expansion	≥ 100	≥ 5'
High expansion	≥ 550	≥ 5'

* The value of the Expansion Ratio depends on the foam generator used.