TECHNICAL DATA SHEET

PROFILM-AR 1x3 All-Purpose Aqueous Film Forming Foam (AR-AFFF 1x3)

Alcohol-Resistant Aqueous Film Forming Foam (AR-AFFF) Synthetic based
For Use on Hydrocarbon and Polar Solvents fires
Low, Medium, High Expansion

Composition

✓ NO PFOS
✓ NO PFOAS

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 also are not bioaccumulative or toxic to the environment.

PROFILM AR 1x3 is composed of fluorocarbon surfactants, hydrocarbon effective surfactants, corrosion inhibitors, and special natural soluble polymers, which confer to the foam the particular ability of forming an aqueous film on the surface of hydrocarbons, and a thick layer that interposes between polar solvents (alcohols, ethers, cetones) and the foam blanket interrupting the emission of vapours, destructive for traditional foams.

Principle of Operation

Thanks to its polyvalence, PROFILM AR 1x3 can be used for extinguishing either hydrocarbon fires, benefiting from its film forming capacity to achieve rapid fire knock down, or difficult oxygenated chemical substances, as well as for preventing emission of toxic and aggressive vapours.

Induction Ratio

PROFILM AR 1X3 is used at 1% on hydrocarbon fires and 3 % on polar solvent fires:

- 1 % (1 L foam concentrate + 99 L water = 100 L foam solution)
- 3 % (3 L foam concentrate + 97 L water = 100 L foam solution)

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Method of Application

PROFILM AR 1x3 can be used in direct application (nozzle or monitor) on hydrocarbon fires, and in gentle (indirect) application on polar solvent fires.

Field of Application

The all-purpose foam concentrate PROFILM AR 1x3 is mainly designed for use in:

Petrochemical industry

Petroleum plants

Chemical products storage areas

Fire Brigades

Vessels for transportation of chemical products

Ports

General Characteristics

PROFILM AR 1x3 is in conformity with all national and international standards and particularly with European standards EN 1568-1, 2, 3 and 4.

PROFILM AR 1x3 can be used with fresh and sea water.

PROFILM AR 1x3 properties do not change in case of frost. It recovers its initial properties as soon as it is defrosted.

Storage and Shelf-life

PROFILM AR 1x3 has a long shelf life if stored properly in the original unbroken packaging. Its shelf life may exceed 10 years if maintained correctly. As with all foam liquids, storage temperature and conditions are important factors for an optimal shelf life.

If the product is frozen during storage or transport, thawing will render the product completely usable.

PROFILM AR 1x3, like other synthetic foam concentrates, is recommended to be stored in stainless steel or plastic containers. Furthermore, since electrochemical corrosion can occur at joints between different metals when they are in contact with the foam liquid, the best is to use the same type of material for tanks, pipelines and fittings used for the storage of the foam concentrate.

We recommend following our guidelines to ensure optimal storage conditions.

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Physico-Chemical Characteristics

Foam concentrate	**u.m.**	**1 et 3 %**
Density @ 20°C	kg/l	1.05±0.02
pH @ 20°C		8 ± 1
Viscosity @ 20°C	cPs	≈ 1300
Pour point*	°C	≤ - 5
Undissolved solids	% V/V	≤ 1
Surface tension	mN/m	≤ 18
Interfacial tension solution / cyclohexane	mN/m	≤ 3

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

Typical Foam Properties

The foam properties of PROFILM AR 1x3 vary depending on the performance characteristics of foam equipment used and the operating conditions.

PROFILM AR 1x3 tested in accordance with the EN 1568:1 to 4 gives the following typical properties:

foam solution %	**1%**	**3%**
Expansion Ratio	≥ 6	≥ 9
25% drainage time	≥ 2'30"	≥ 9'00''

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