

## TECHNICAL DATA SHEET

# PROFREE-F3 AR (Alcohol Resistant Fluorine Free Foam)

**All-Purpose Fluorine-Free Foam concentrate**  
**Use on Hydrocarbon and Polar Solvents fires Low, Medium, High Expansion**

### Composition



**PROFREE-F3 AR** foam concentrate is based on a new FLUORINE-FREE formulation of synergetic surfactants and foam stabilisers, resulting in a highly plastic and remarkably fluid foam, extremely resistant to the destructive effects of oxygenated substances (alcohols, ketones, ethers, etc.).

**PROFREE-F3 AR** is totally free from fluorinated surfactants.

### Principle of Operation



**PROFREE-F3 AR** is designed for use at low, medium and high expansion ratios.

Due to its versatility, **PROFREE-F3 AR** can be used for the extinguishing of both hydrocarbon and polar solvents fires

At low expansion, **PROFREE-F3 AR** is suitable for fighting all types of fires regularly encountered by civil firefighting units.

When used in high-expansion generators, **PROFREE-F3 AR** allows total flooding of large areas and is most suitable for the protection of hangars and chemical products storage warehouses.

### Induction Ratio



**PROFREE-F3 AR** is available in following standard versions:

- 3-3 3 % dilution on hydrocarbon and polar solvent fires
- 1-3 1% dilution on hydrocarbon fires and 3% dilution on polar solvent fires

- 3 % dilution: 3 L foam concentrate + 97 L water = 100 L foam solution
- 1 % dilution: 1 L foam concentrate + 99 L water = 100 L foam solution

### Method of Application



**PROFREE-F3 AR** can be used with variety of generators:

- Low expansion (1 to 20:1)
- Medium expansion (20:1 to 200:1)
- High expansion (200:1 to 1000:1)

### Fields of Application

The versatile alcohol-resistant **PROFREE-F3 AR** is primarily designed for:



Large capacity warehousing



Chemical product plants



Distilleries

## General Characteristics

**PROFREE-F3 AR** conforms to all national and international standards and particularly to European standards EN 1568-1, 2, 3 and 4.

**PROFREE-F3 AR** can be used with fresh and sea water.

**PROFREE-F3 AR** properties are not impaired in case of freezing. It recovers its initial properties as soon as it is defrosted.

## Storage and Shelf-life



**PROFREE-F3 AR** 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.

**PROFREE-F3 AR**, 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 %         |
|--------------------|-------|-------------|
| density @ 20°C     | kg/l  | 1.04 ± 0.02 |
| pH @ 20°C          |       | 6,5 - 9     |
| viscosity @ 20°C   | cPs   | ≤ 3000      |
| Surface tension    | mN/m  | 25 ± 2      |
| pour point *       | °C    | ≤ - 5       |
| undissolved solids | % V/V | ≤ 0.2       |

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

## Typical Foam Properties

The foam properties of **PROFREE-F3 AR** vary depending on the performance characteristics of foaming equipment used and the operating conditions.

**PROFREE-F3 AR**, tested in accordance with the EN 1568:3 and 4 gives the following typical properties:

| Foam solution     | Low Expansion | Medium Expansion | High Expansion |
|-------------------|---------------|------------------|----------------|
| Expansion ratio   | ≥ 8           | ≥ 60 *           | ≥ 700 *        |
| 25% Drainage time | ≥ 10'         | ≥ 7'             | ≥ 7'           |

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