

1x3% ABERDEEN FOAM AR-F3



Alcohol-Resistant Fluorine Free Fire Fighting Foam Concentrate



One of our first operational Alcohol-Resistant Fluorine Free (F3) Fire Fighting Foam concentrates!

Designed to quickly extinguish and secure fires involving both:

- Class B hydrocarbon fuels such as crude oil, gasoline, aviation kerosene and fuel oil
- Polar solvents and water miscible liquids such as alcohols, ketones, aldehydes and ethers.

Formulated for use with either fresh or seawater, Aberdeen Foam 1x3% AR-F3's versatile fire fighting capability reduces the need to stock different foam types.

HOW IT WORKS

Aberdeen Foam 1x3% AR-F3 effectively extinguishes and secures liquid hydrocarbon and polar solvent fires by the following actions:

Low surface tension – as the liquid drains from the foam, the surface tension reduces to ensure the foam floats on top of the surface of the liquid fuel.

Foam expansion – the foam cools the fuel's surface and creates a stable blanket to suppress the release of flammable vapours.

Membrane forming – in fires involving polar solvents, an insoluble polymer membrane is formed to protect the foam blanket from the solvent.

**FLUORINE
FREE**

**EPA 2015
COMPLIANT**

WHY FLUORINE FREE?

For many years fluorine compounds have been used as ingredients in high performance foams such as AFFFs. Their unique properties have made them essential for providing rapid extinguishment of life threatening fires such as those encountered at aircraft crashes.

Aberdeen Foam 1x3% AR-F3 is a new, versatile, high quality Fluorine Free Foam designed for minimal environmental impact - fluorine free technology has become a reality!

1x3% AR-F3

PHYSICAL PROPERTIES

Appearance	Yellow liquid
Specific gravity	1.08
pH @ 20°C	6.5 - 8.5
Viscosity @ 20°C mPas	<120
Surface tension @ 20°C N/m	<25
Freezing point (°C)	<-7
Lowest use temp. (°C)	-7
BOD/COD ₅	>65%
Expansion @ 1%*	≥ 6.5
25% drainage @ 1% (minutes)	≥ 10.0
Max. storage temp. (°C)	-5
Min. storage temp. (°C)	50
Freeze/thaw effect	None

* Foam quality will depend on the foam equipment used and the operating conditions. The above are tested in accordance with UK Defence Standard 42-40.

FOAMING PROPERTIES

Foam expansion properties will vary depending on several factors including:

- Using salt or fresh water
- Water hardness
- Equipment characteristics
- Equipment flow rate

For example, aspirating devices will produce typical expansion ratios of between 6:1 and 10:1 and non-aspirating devices between 2:1 and 4:1.

Always check your equipment's operation manual for guidance.

ENVIRONMENTAL IMPACT

- Fluorine free
- Butyl carbitol free
- Readily biodegradable: BOD/COD₅ >65%
- Low toxicity to aquatic organisms

APPLICATIONS

Aberdeen Foam 1x3% AR-F3 concentrate provides quality protection wherever hydrocarbons and / or polar solvents present a fire risk:

- Offshore platforms and helidecks
- Petrochemical refining, processing and storage facilities
- Marine terminals, power stations and road / rail loading racks
- Rapid Intervention Vehicles and aircraft hangar systems

Produced AR-F3 foams can also be used as wetting agents for combating Class A fires (i.e. tyres, paper, wood) and for providing a vapour suppression blanket on hydrocarbon spills.

PROPORTIONING EQUIPMENT

Aberdeen Foam 1x3% AR-F3 concentrate is readily proportioned with the following equipment:

- In-line inductors (fixed or portable)
- Balanced pressure variable flow proportioners
- Around the pump proportioners
- Bladder tank Balanced Pressure proportioning skid
- Handline, aspirating nozzles with fixed inductor pickup tube

PACK SPECIFICATIONS

Aberdeen Foam concentrates are available in the following sizes:

Capacity	20L	25L	200L	1000L	Bulk tank
Dimensions (cm)	399 x 294 x 245	470 x 294 x 245	920 x 581 x 581	102 x 100 x 116	TBC
Empty weight (kg)	0.8	0.9	8	60	TBC
Filled weight (kg)	22.2	27.6	222	1130	TBC

These measurements are for reference purposes only and are intended as guidelines only. Oil Technics Ltd reserve the right to modify any specification at any time and without prior notice.

DISCHARGE EQUIPMENT

Aberdeen Foam 1x3% AR-F3 concentrate is suitable for use with:

- Foam chambers
- Aspirating and non-aspirating sprinklers or spray nozzles
- Water fog nozzles for handlines and monitors
- Foam makers for use with either Floating Roof or Bund Protection systems

PROPORTIONING INFORMATION

Hydrocarbon fires:

- 1 part foam concentrate to 99 parts water

Polar solvent fires:

- 3 parts foam concentrate to 97 parts water

STORAGE AND SHELF LIFE

Best stored as supplied in original, unopened containers.

Suitable for storage in containers and tanks manufactured from:

- Stainless steel (Type 304L or 316L)
- High density cross-linked polyethylene
- RFP – vinyl ester epoxy resin only
- Concentrate must not be stored or come in contact with galvanised tanks, pipes or fittings

If kept in the original manufacturer's supplied container and stored between -7°C and 50°C a shelf life of at least 15 years can be expected.

To prolong the shelf life of any foam concentrate, do not expose to temperature extremes and prevent contamination from foreign materials.

COMPATIBILITY

As recommended by NFPA 11, we would advise that if mixing foam concentrates from different manufacturers a compatibility study is carried out beforehand.

Different types of foam concentrates - for example AFFF and Protein Foams - should never be mixed.

For further information or advice on compatibility testing, please contact Oil Technics Limited.

DISPOSAL

Produced Aberdeen Foam 1x3% AR-F3 can be safely disposed of in biological waste water treatment systems.

INSPECTION AND TESTING

As recommended by NFPA 11: 2016 and BS:EN 13565-2: 2009, Aberdeen Foam foam concentrates should be inspected and tested at least annually as part of your fire fighting foam maintenance programme.

Oil Technics Limited offers a worldwide foam testing service and inhouse foam testing training. For further details, please contact us or visit our website: www.foamtesting.com

TECHNICAL SERVICES AND SALES SUPPORT

For our UK customers, Aberdeen Foam is available 24/7 via our 24 hour emergency call out service: +44 (0) 1561 361515

Aberdeen Foam is manufactured in Scotland under ISO 9001 and ISO 14001 accredited management systems and audited by UL every four months.



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