

6% ABERDEEN FOAM AFFF-C6



Aqueous Film Forming Fire Fighting Foam



An internationally accredited, high quality C6 Aqueous Film Forming Foam (AFFF) concentrate which is compliant with the EPA 2010/15 PFOA Stewardship Programme.

Designed to quickly extinguish and secure Class B hydrocarbon fires of liquids such as crude oil, gasoline, aviation kerosene and fuel oil.

Formulated for use with either fresh or seawater.

Not suitable for use on fuels which are polar solvents and water miscible such as alcohols, ketones, aldehydes and ethers.

FIRE PERFORMANCE APPROVALS

Aberdeen Foam 6% AFFF-C6 concentrate has been independently tested and is accredited to the following international standard:

- IMO MSC.1/Circ.1312

HOW IT WORKS

Aberdeen Foam 6% AFFF-C6 effectively extinguishes and secures liquid hydrocarbon fires by the following actions:

Film forming – the foam forms an aqueous film across the surface of the fire to quickly cut off the oxygen supply and effectively knock down the flames.

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.

Resealing – if the blanket is broken by personnel or equipment, the foam quickly reseals to minimise the risk of re-ignition.



C6 & THE EPA 2010/15 PFOA STEWARDSHIP PROGRAMME

All traditional Fire Fighting Foams contain fluorosurfactants. Fluorosurfactants aid fire extinguishment and support excellent burnback properties.

However, a USA EPA working group has found that fluorosurfactants containing R_f carbon chain length greater than C6 could potentially degrade in the environment and form PFOA, a chemical which is bioaccumulative, toxic and persistent.

Due to this discovery, in 2005 the EPA convened what came to be known as the **2010/15 PFOA Stewardship Programme**. Under this programme, all fluorosurfactant manufacturers worldwide committed

to withdraw from sale any fluorosurfactant with a carbon chain length greater than C6 by 2015.

In the Fire Fighting Foam manufacturing industry, this means that all manufacturers were required to reformulate and retest their foam concentrates by 2015.

Aberdeen Foam 6% AFFF-C6 was developed and specially formulated to meet the requirements of the 2010/15 PFOA Stewardship Programme.

For further information, please contact Oil Technics Ltd.

6% AFFF-C6

PHYSICAL PROPERTIES

Appearance	Clear pale straw liquid
Specific gravity	1.02
pH at 20°C	7 - 8
Viscosity @ 20°C mPas	~2
Surface tension @ 20°C N/m	0.019
Freezing point (°C)	-3
Lowest use temp. (°C)	2
Expansion*	≥ 6.0
25% drainage (minutes)	≥ 3.0
Max. storage temp. (°C)	49
Min. storage temp. (°C)	1.7
BOD/COD 28 days	>55%
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.

PROPORTIONING INFORMATION

- 6 parts foam concentrate to 94 parts water

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

- Contain no fluorosurfactants of chain length greater than C6
- Biodegradable
- Butyl carbitol free
- Low fluorine content (typical value: 0.3% fluorine)
- Low toxicity to aquatic organisms

APPLICATIONS

Aberdeen Foam 6% AFFF-C6 concentrate provides quality protection wherever hydrocarbons 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 AFFF 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 6% AFFF-C6 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)	40 x 29.5 x 24.5	47 x 29.5 x 24.5	92 x 58 x 58	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 6% AFFF-C6 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

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

If kept in the original manufacturer's supplied container and stored between 1.7°C and 49°C, a shelf life of at least 10 years can be expected. To prolong the shelf life of any AFFF, do not expose to temperature extremes and prevent contamination from foreign materials.

COMPATIBILITY

Our laboratory tests have shown Aberdeen Foam 6% AFFF-C6 concentrate is compatible in all proportions with other high quality aqueous film forming foams and ABC and BC fire fighting powders.

However, in order to maintain EPA 2010/15 compliancy, it is recommended that **C6 foams are not mixed with any other foams.**

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 6% AFFF-C6 can be safely disposed of in biological waste water treatment systems.

INSPECTION AND TESTING

As recommended by NFPA11, BS:EN 13565-2:2009 and BS 5306, Aberdeen 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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