

FOMTEC® ARC 3x3

Alcohol Resistant AFFF Foam Concentrate



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Fomtec ARC 3x3 is an alcohol resistant aqueous film forming foam concentrate (AFFF-ARC) consisting of a blend of fluorocarbon-, hydrocarbon surfactants and polymers, various solvents and stabilisers. All Fomtec AFFF-ARC foam concentrates are formulated with 100% C6 Pure fluoro-surfactants and fluoro-polymers. On hydrocarbon fuels, Fomtec ARC 3x3 utilises the unique film forming effect to cut off oxygen supply to the fire and the oleophobic properties of the foam enables a stable foam blanket to prevent reignition of the fire. With polar fuels, a polymeric membrane is formed that suppresses vapours and allows the foam blanket to survive on the water miscible fuel surface.

- Short chain C6 Pure fluorochemistry
- Environmentally documented according to HOCNF
- Multi-approvals: EN 1568, IMO 1312, MED, GOST
- Freeze protected
- Suitable for Class A and B fires
- Low and medium expansion foam



DESCRIPTION

Fomtec ARC 3x3 should be used at a 3% proportioning ratio (3 parts concentrate and 97 parts of water) for both hydrocarbon and polar solvent fuels. May be used with all water types.

For use on Class A type fires, a proportioning ratio of 0,3% to 1% is recommended depending on application and discharge device.

APPLICATION

Fomtec ARC 3x3 is tested and approved according to EN 1568 for use on class B hydrocarbon fuel fires such as oil and diesel as well as polar solvent fires such as IPA and acetone. Can also be used on class A fires such as wood, paper, textiles etc. Fomtec ARC 3x3 is also certified for marine applications according to IMO Circ. 1312 and Marine Equipment Directive (MED).

Typical applications include high risk installations such as:

- Storage tanks, process areas and loading racks
- Waste and recycling industry
- Marine vessels and offshore platforms

FIRE PERFORMANCE & FOAMING

The fire performance of this product has been tested and documented according to the "International Approvals" stated in this document. The use of the product should follow design guidelines appropriate to the type of system and application. The foaming properties are depending on equipment used and other variables such as water and ambient temperatures. Average expansion 6:1, average 25% drainage time 10:00 minutes using UNI 86 test nozzle according to EN 1568-3.

EQUIPMENT

Fomtec ARC 3x3 can easily be proportioned at the correct ratio using conventional proportioning equipment. The equipment should be designed to the foam type. Fomtec ARC 3x3 is suitable for use with Type II (gentle application) and Type III (direct application) discharge devices as well as sprinklers according to EN 13565-2. It can be used in low and medium expansion applications with all conventional aspirating and non-aspirating discharge devices. Fomtec ARC 3x3 is also suitable for use in CAF-systems.

Fomtec ARC 3x3 can be used together with foam compatible powders and other expanded foams.

It is suitable for all water types.

For mixing with other foam concentrates, contact Fomtec for advise and guidance. For material compatibility please refer to our Fomtec Technical Advices FTA 20 addressing the topic.

TYPICAL DATA

Appearance	Pale yellow liquid
Specific gravity at 20°C	1,040 ± 0,010 g/ml
Viscosity	Pseudoplastic*
pH	6,5 – 8,5
Freezing point	-15°C
Recommended storage temperature	-14°C - 55°C
Suspended sediment (v/v)	< 0,1%

*) See detailed viscosity data below

ENVIRONMENTAL

Fomtec ARC 3x3 is formulated using raw materials specially selected for their fire performance and their environmental profile. All raw materials are registered in the European REACH-database. Fomtec ARC 3x3 is non-toxic, biodegradable and each individual component is fully tested and documented. Fomtec only uses C6 Pure fluoro-surfactants and polymers in our AFFF-ARC formulations. Our filmforming (ARC 3x3NV) products comply with current EU regulation 2019/ 1021 and PoP's Stockholm convention and US EPA Stewardship as of the revision date of this document. In case of an analysis with current available analytical methods, the result of PFOA and PFOS will be below the detection level. ARC 3x3 complies to IMO Resolution MSC.532(107) in regards to PFOS and PFOA restriction.

More details can be found in the Material Safety Datasheet (MSDS). The products is fully documented to the Norwegian HOCNF regulation, and is registered in the NEMS database. The disposal of spills of foam concentrate or premix foam solution should be made in accordance with local regulations. For more detailed information please consult our Fomtec Technical Advices FTA 40.

STORAGE / SHELF LIFE

Stored in original unbroken packaging the product will have a long shelf life. Shelf life in excess of 10 years will be found in temperate climates. As with all foam concentrates, shelf life will be dependent on storage temperatures and conditions. For storage recommendations and material compatibility please refer to our Fomtec Technical Advices FTA 10 addressing the topic.

INSPECTION/TESTING/ MAINTENANCE

All foam concentrates should be tested annually. Testing should be carried out by an approved laboratory certified to assess firefighting foam quality according to relevant standards, such as NFPA 11, EN 13565-2, EN 1568 and IMO MSC.1Circ. 1312. Storage containers should be inspected and reevaluated for the suitability of the storage location regarding temperature fluctuations (temperature should be as stable as possible). Exposure to direct sunlight should be avoided.

PACKAGING

We supply this product in 25 litre or 5 US gallon cans, 200 litre or 55 US gallon drums, and 1000 litre or 265 US gallon IBC containers. Larger bulk supply is available against special request.

Volume per piece	Packaging	Part no	Approx. shipping weight*	Dimensions (mm) L x W x H
25 ltr	Can	I2-3304-01	27,2 kg	295 x 260 x 441
200 ltr	Drum	I2-3304-02	216,5 kg	581 x 581 x 935
1000 ltr	Container	I2-3304-04	1100 kg	1200 x 1000 x 1150
5 US gal.	Can	I2-3304-XX	20,7 kg	295 x 260 x 441
55 US gal.	Drum	I2-3304-XX	225,2 kg	581 x 581 x 935
265 US gal.	Container	I2-3304-XX	1105 kg	1200 x 1000 x 1150
Bulk	Special request	I2-3304-XX		

* including packaging.

INTERNATIONAL APPROVALS

- EN 1568 part 3
Class IB Fresh water/Class IB Sea water
- EN 1568 part 4
Acetone: Class IB Fresh water and sea water
IPA: Class IA Fresh water and sea water
- IMO MSC.1 Circ. 1312
- MED Wheelmark
- GOST

VISCOSITY DATA - FLOW CURVES

The viscosity flow curves are determined by Brookfield RST rheometer from low to high shear rates. The viscosity curves below are determined by calculating the average value of at least 8 different measurements and add a safety margin of three standard deviations to the average. The viscosity curves are determined for 20°C and 5°C. In the table below the kinematic viscosity (mm²/s) is calculated as dynamic viscosity (mPa·s) divided by the specific gravity of the concentrate.

Shear Rate (s ⁻¹)	Dynamic Viscosity (mPa·s) 20°C	Dynamic Viscosity (mPa·s) 5°C	Kinematic Viscosity (mm ² /s) 20°C	Kinematic Viscosity (mm ² /s) 5°C
10.7	2204	2096	2120	2015
21.5	1185	1138	1140	1094
53.7	559	551	538	530
107.4	325	330	312	317
214.8	196	212	188	204
375.0	132	152	127	146
537.0	102	123	98	118
1074.0	82	98	79	94
1611.0	52	72	50	69
2148.0	44	65	43	63
2792.2	62	81	60	78

