

FOMTEC® Enviro 3x3 Super

Fluorine free alcohol resistant foam concentrate

fomtec
Fire Fighting Foams & Equipment



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Fomtec® Enviro 3x3 Super is a multi-purpose alcohol resistant firefighting foam concentrate that has no intentionally added fluorinated surfactants and polymers (PFAS). The unique formulation of Fomtec® Enviro 3x3 Super enables the foam to rapidly cover burning surfaces and control of the fire. As a result, it is effective against hydrocarbon fires and with the presence of special polymers it is also very effective against polar solvents.

- Fluorine free alcohol resistant foam concentrate
- Excellent fire performance on Heptane, Acetone, Ethanol, Methanol and IPA with both potable and sea water



DESCRIPTION

The fire suppression mechanism of Fomtec Enviro 3x3 Super is utilising the foam blankets ability to block oxygen supply to the fuel and the high water content cools the fuel surface reducing the evaporation of flammable vapours. Additionally, the foam blanket prevents reignition of an extinguished fuel surface. When applied on polar solvents a polymeric membrane is formed and makes it possible for the foam blanket to extinguish effectively. It also works on severe foam destroying liquids such as MTBE.

Fomtec® Enviro 3x3 Super should be used at a 3% proportioning ratio (3 parts concentrate and 97 parts water) for hydrocarbon fuels as well as polar solvents.

For use on Class A type fires, induction ratio of 0,3% to 1% is recommended depending on application and discharge device. When used with sea water the fire performance is slightly reduced on hydrocarbon fuels. This may be compensated by increased application rate.

APPLICATION

Fomtec® Enviro 3x3 Super is intended for use on class B hydrocarbon fuels as well as polar solvents like isopropyl alcohol, methanol, ethanol, acetone, etc.

Fomtec® Enviro 3x3 Super can be used as low and medium expansion foam. Especially suited for use in mobile firefighting by use of aspirating foam discharge devices such as foam branch-pipes and monitors, where application rates and technique can be adjusted to the specifics of each incident. Or in systems designed for use with the product based on recommended minimum applications rates, application duration and discharge devices.

Fomtec® Enviro 3x3 Super is also effective against class A fires such as wood, paper, textiles etc. at 0,3% to 1% proportioning.

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 7:1, average 25% drainage time 15:00 minutes using UNI 86 test nozzle according to EN 1568-3.

EQUIPMENT

Fomtec® Enviro 3x3 Super can be proportioned at the correct ratio using proportioning equipment designed for the foam type.

Fomtec® Enviro 3x3 Super is suitable for use with Type II (gentle application) and Type III (direct application) discharge devices. It can be used in low and medium expansion applications with all conventional aspirating discharge devices giving an expansion ratio of more than 7:1 for best performance. Fomtec Enviro 3x3 Super is also suitable for use in CAF-systems.

TYPICAL DATA

Appearance	Clear yellowish liquid
Specific gravity at 20°C	1,065 ± 0.01 g/ml
Viscosity	Pseudoplastic*
pH	6,5 – 8,5
Freezing point	-11°C
Recommended storage temperature	-10°C - 55°C
Suspended sediment (v/v)	Less than 0,1%
Surface tension	≤ 30,0 mN/m

* See detailed viscosity data below

COMPATIBILITY

Fomtec® Enviro 3x3 Super 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.

ENVIRONMENTAL

Fomtec® Enviro 3x3 Super is non-hazardous, biodegradable substance formulated using raw materials specially selected for their fire performance and their environmental profile. All raw materials are registered in European REACH-database. The product is formulated with no intentionally added fluorinated surfactants and polymers (PFAS) and other organohalogens. The disposal of spills of 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.1/Circ. 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.

INTERNATIONAL APPROVALS

- EN 1568 Part 1, Pass
- EN 1568 part 2, Pass
- EN 1568, part 3
Class IA fresh water / IB sea water
- EN 1568, part 4
Acetone: IA Fresh water / IB sea water
IPA: IB fresh water / IIC sea water
Additional test according to EN 1568, part 4 test protocol:
Ethanol: IA fresh water / IA sea water
Methanol: IA fresh water / IA sea water

Volume per piece	Packaging	Part no	Approx. shipping weight*	Dimensions (mm) L x W x H
25 ltr	Can	I2-3356-01	27,8 kg	295 x 260 x 441
200 ltr	Drum	I2-3356-02	221,5 kg	581 x 581 x 935
1000 ltr	Container	I2-3356-04	1125 kg	1200 x 1000 x 1150
5 US gal.	Can	I2-3356-XX	22,4 kg	295 x 260 x 376
55 US gal.	Drum	I2-3356-XX	230 kg	581 x 581 x 935
265 US gal.	Container	I2-3356-XX	1128 kg	1200 x 1000 x 1150
Bulk	Special request	I2-3356-XX		

* including packaging.

ENVIRO BY FOMTEC

The Fomtec Enviro range comprises an extensive range of non-PFAS based foams suitable for use Emergency Response missions and System applications. Enviro foam concentrates are available for class A, class B fire hazards and products are available for low, medium, and high expansion discharge devices.



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.

Viscosity (Brookfield Cone-Plate rheometer) as measured by KIWA MPA Dresden				
Shear Rate (1/s)	20°C	10°C	0°C	-10°C
	mPa·s / cP			
75	665	748	810	905
150	393	440	491	573
225	294	334	377	447
300	241	276	315	377
375	207	238	274	333
450	183	212	246	300
525	167	192	224	276
600	153	177	208	257