



CERTIFICATE OF FIRE APPROVAL

This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	Dafo Fomtec AB
Address	Vindkraftsvägen 8 135 70 Stockholm Sweden
Type	FOAM CONCENTRATE
Description	Fire Extinguishing Low Expansion Foam Concentrate: 'Fomtec ARC AFFF 3% -45' Type 'B' Foam Concentrate
Specified Standard	IMO MSC.1/Circular 1312 IMO MSC.1/Circular 1312/Corrigendum 1

The attached Design Appraisal Document forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue 26 July 2016 Expiry date 25 July 2021

Certificate No. SAS F160217 Signed 

Sheet No 1 of 3 Name S. Abraham
Surveyor to Lloyd's Register EMEA
A Member of the Lloyd's Register Group

Note:

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid Certificate.

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



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DESIGN APPRAISAL DOCUMENT

Date 26 July 2016	Quote this reference on all future communications SOUTSO/SFS/TA/SA/WP26532058
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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F160217

This Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Lloyds Register Copenhagen Office Test Witness Certificate No: CPN 1620503/1, dated 14 June 2016, for testing conducted at the Falck Safety Service - Esbjerg, Denmark and DAFO Fomtec AB - Helsingborg, Sweden.

CONDITIONS OF CERTIFICATION

1. Type: B Aqueous Film Forming Foam (Newtonian) 'FOMTEC AFFF 3 % -45': When used in 3% concentration and an as-tested foam expansion ratio of 8.9:1, in suitable equipment for hydrocarbon fires in machinery spaces and tanker decks
2. The foam concentrate should be stored above their freezing temperature as per Table 1

Table 1:

Foam Type	Foam Concentrate	Freezing Temperature (°C)	Storage Temperature Range (°C)
FOMTEC AFFF 3 % - 45	Aqueous Film Forming Foam (Newtonian)	-45	-45 to 55

3. The storage container should be compatible with the foam concentrates throughout the service life of the foam
4. Each product is to be supplied with its manual for application, use, transport, storage and maintenance
5. Periodical testing of foam concentrates for hydrocarbon fires should be carried out not more than 3 years after being supplied to the ship and after that, every year, by independent laboratories or authorised service suppliers acceptable to the Administration
6. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype



Lloyd's
Register

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PLACE OF PRODUCTION

Dafo Fomtec AB
Garnisonsgatan 47A,
254 66 Helsingborg,
Sweden

Saji Abraham
Senior Specialist
Statutory Fire & Safety
Southampton Technical Support Office, Marine & Offshore
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).