



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 Fabrik chemischer Präparate von Dr. Richard Sthamer GmbH & Co. KG

Address Liebigstraße 5
22113 Hamburg
Germany

Type FOAM CONCENTRATE

Description Fire Extinguishing Foam Concentrate – Type: "FLUOR-FOAMOUSSE MARINE 3% F-15 #5315 or FLUOR-SCHAUMGEIST MARINE 3% F-15 #5315"
For Low Expansion Foam Applications

Specified Standard IMO MSC.1/Circ. 1312 : 2009 / Corr.1: 2011

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 16 November 2018

Expiry date 15 November 2023

Certificate No. SAS F180317

Signed



Sheet No 1 of 3

Name

T. Radtke
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.

DESIGN APPRAISAL DOCUMENT

Date 16 November 2018	Quote this reference on all future communications HTSO/STAT/TA/1865036/TRA
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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F180317

This Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

MPA Dresden GmbH, Freiberg, Germany, Test Report No. 20180112/Sth 256, dated 20 March 2018
Declaration of conformity of tested Foam Concentrate; No. KB 94/18 issued 20 March 2018
Data Sheet FLUOR-FOAMOUSSE® MARINE 3% F-15 #5315
Safety Datasheet FLUOR-FOAMOUSSE® MARINE 3% F-15 #5315
Sthamer ISO 9001:2015 Certificate

CONDITIONS OF CERTIFICATION

1. May be used as a low expansion foam at 3% minimum concentration, in suitable equipment, for hydrocarbon fire applications
2. The expansion ratio of the foam shall not exceed 12:1 for low expansion applications
3. The foam concentrate should be stored above its freezing temperature
4. Not to be used in temperatures of less than -15°C
5. The storage container should be compatible with its foam concentrate throughout the service life of the foam
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

NOTES

1. Periodical testing of foam concentrates samples to be performed at not more than 3 years after being supplied to ship, and after that, every year.
2. A Batch Certificate should be provided with each delivery, with a declaration of the main characteristics by the manufacturer and will be the basis for the periodical testing.

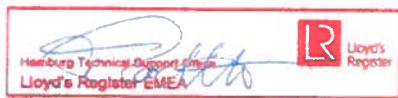
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PLACE OF PRODUCTION

Fabrik Chemischer Präparate von
Dr. Richard Sthamer GmbH & Co. KG
Liebigstraße 5
22113 Hamburg
Germany



Torsten Radtke
Senior Specialist Statutory Service
Lloyd's Register Marine
Hamburg Technical Support Office
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).