

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB0000726

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Expansion foam for fixed fire extinguishing systems for chemical tankers

with type designation(s)

FOAMER Brand ECOSOLV C6 AFFF 3, FOAMER Brand AF3 GREEN 3

Issued to

Foamtech Antifire Company

57, Sharda Niketan, Pitampura, New Delhi-110034, India

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2022/1157,

item No. MED/3.59. SOLAS 74 as amended IMO Res. MSC.4(48)-(IBC Code) 11, Reg. II-2/1, IMO MSC/Circ.553 and IMO MSC.1/Circ.1312 incl. Corr.1

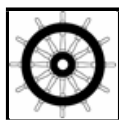
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2027-11-16**.

Issued at **Hamburg** on **2022-11-17**

DNV local unit:
Mumbai NB & CMC

Approval Engineer:
Frank Poetsch



Notified Body
No.: **0098**

for DNV SE

Christine Mydlak-Roeder
Head of Notified Body

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

"FOAMER Brand ECOSOLV C6 AFFF 3 & FOAMER Brand AF3 GREEN 3"

is an aqueous film-forming foam concentrate (AFFF) consisting of fluorocarbon and hydrocarbon surfactants blended with various solvents, preservatives and stabilizers.

Application/Limitation

Approved for use as a low expansion, multi-purpose concentrate (Type A) for fixed and mobile fire-fighting systems.

Description	FOAMER Brand ECOSOLV C6 AFFF 3 // FOAMER Brand AF 3 GREEN 3 - CONCENTRATE
Nominal mixing ratio with seawater:	3% (both hydrocarbon and alcohol fires)
Kinematic viscosity (0 °C):	30,6mm ² /s
Kinematic viscosity (+20 °C):	11,8mm ² /s
pH value (20 °C):	6,5 - 8,5
Expansion ratio:	6,0 - 10,0
Drainage time (25%, 20±2 °C):	01:30 (min:s)
Volumetric mass/density (20±2 °C):	1.00 - 1,04 g/ml
Temperature, storage and usage:	0°C to +50 °C
Freezing point:	-5°C
Onboard tank/ storage material:	Carbon steel, stainless steel, brass, polyethylene or PVC (refer to manufacturer's information sheet).
Foam use, filling, maintenance, storage, transport, etc. are to be in accordance with the manufacturer's instructions.	

The validity of the certificate is dependent on the compliance of each manufactured product with the prototype which underwent the type approval tests and such compliance shall be stated by the manufacturer.

The storage facilities and piping arrangement onboard the vessel is to be designed and constructed with regards to seawater exposure (where applicable), and the minimum allowed temperature for the foam liquid.

This approval does not address the foam generating equipment, only the foam concentrate.

The foam concentrate does not contain PFOS & PFOA.

Each product is to be supplied with its manual for installation, use and maintenance. This shall include requirements for transport and storage, material of foam tank, coating (if applicable) and cleaning procedures.

Periodical controls of foam concentrates stored on board (to be done in accordance with IMO MSC.1/Circ. 1312):

- The foam liquid is to be delivered with a declaration of conformity and a declaration of the main characteristics (sedimentation, pH-value, expansion ratio, drainage time and volumetric mass). The declaration will be the basis for the annual condition test (each year after 3 years).
- The annually condition test shall include a small-scale fire.
- Chemical stability test shall be performed prior to delivery to the ship and annually thereafter.

Type Examination documentation

Tests carried out

Tested according to IMO MSC/Circ.1312/Corr.1.

Marking of product

The packing is to be marked with MED Mark of Conformity (see page 1) and according to IMO MSC.1/Circ.1312 3.13.