



EC TYPE EXAMINATION (MODULE B)
CERTIFICATE No. MED283523WS/002

This is to certify that RINA Services S.p.A. (Notified Body No. 0474) did undertake the relevant type approval procedures for the equipment identified below, which was found to be in compliance with the Fire Protection requirements of Marine Equipment Directive (MED) 2014/90/EU, including the requirements and testing standards of Regulation (EU) 2022/1157.

<i>MED Item N°</i>	MED/3.58; MED/3.59
<i>Description</i>	Fixed low expansion foam fire extinguishing systems components for machinery spaces and tanker deck protection Expansion foam for fixed fire extinguishing systems for chemical tankers
<i>Type</i>	SF-FP/AR3-3%
<i>Applicant</i>	JIANGSU SUOLONG FIRE SCIENCE AND TECHNOLOGY CO., LTD Kangmin Road, LinCheng, 225753 Xinghua (Jiangsu) CHINA
<i>Testing standards</i>	IMO MSC.1/Circ.1312, IMO MSC.1/Circ.1312/Corr.1.
<i>Reference standards</i>	SOLAS 74 Reg.II-2/10. IMO Res.MSC.98(73)-(FSS Code) 6, IMO Res.MSC.98(73)-(FSS Code) 14, IMO MSC/Circ.1239, IMO MSC.1/Circ.1276.; IMO Res.MSC.4(48)-(IBC Code) 11, IMO MSC/Circ.553.
<i>Issued in SHANGHAI on</i>	<i>This Certificate is valid until</i>
<i>July 22, 2023</i>	<i>July 21, 2028</i>

This Certificate consists of this sheet plus an attachment



Hai Wen Zhang
RINA Services S.p.A.



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Manufacturer

JIANGSU SUOLONG FIRE SCIENCE AND TECHNOLOGY CO., LTD

Place of Manufacturer

KANGMIN ROAD
LINCHENG TOWN
XINGHUA CITY
JIANGSU PROVINCE
CHINA

Name & place of Authorised Representative

ANTONIO TRANI (SSI SRL)
Via Ponte dei Francesi 43 - 80146 Napoli, Vat 10227171211, ITALY
ITALY

Technical Characteristics

FOAM CONCENTRATE SF-FP/AR3-3%		
Type of Foam Concentrate	Alcohol Resistant Fluoro-Protein Foam Concentrate(FP/AR) -Type A and Type B	
Mixing Ratio	3%	
Density at 20°C	1.00 ~ 1.20 g/cm ³ *	1.170 g/cm ³ **
Viscosity at 20°C	≤ 200 mm ² /s	91 mm ² /s **
PH at 20°C	6.0 ~ 8.5*	6.43 **
Minimum temperature for use	-10 °C	
Maximum temperature for use	+ 60 °C	
Expansion Ratio at 20°C	≥ 6.0 *	6.5 **

*) Data from Product Data Sheet No. SL-MED-01-KF3.

**) Data from Initial Test, when tested according to IMO MSC.1/Circ.1312 & MSC.1/Circ.1312/Corr.1.

Field of Application

Fixed foam fire extinguishing systems using low expansion foam concentrate for extinguishing fires of following products at ambient temperature and pressure:

- Chemical Products as per list of Chapter 17, International Bulk Chemical Code (Column L - Letters A, B and D);
- Chemicals to which the IBC Code nor the BCH Code apply as per list set out in IMO Circular MSC/Circ. 553.

Technical Documentation

Product Data Sheet (Ref No. SL-MED-01-KF3) filed by RINA with n° SHFP-10562.

Tests carried out

According to IMO MSC.1/Circ.1312 - "Revised guidelines for the performance and testing criteria, and surveys of foam concentrates for fixed fire-extinguishing systems" , Test report n° SL-2013-0419, issued by JIANGSU SUOLONG FIRE SCIENCE AND TECHNOLOGY CO.,LTD, witnessed and filed by RINA with n° SHFP-5130.

Note

- The foam concentrate should be delivered with a declaration (i.e., Batch Certificate) 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.
- Our review and approval is based on Original Prototype MED Module B issued by RINA, refer to Module B Certificate MED088818WS/002 & 003 issued on July 22, 2018. As verified, the initial condition is kept.

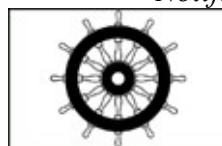
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The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production control phase module (D, E or F) of Annex II of the Directive is fully complied with a written inspection agreement with a Notified Body



XXXX/YYYY

"WHEELMARK FORMAT"

XXXX Notified Body number undertaking surveillance module

YYYY The year in which the mark is affixed

General conditions for the approval

- a) The initial conditions verified by RINA at the time of the approval are to be maintained
- b) Any changes to the initial conditions are to be promptly communicated to RINA, which reserves the right to repeat the relevant assessment
- c) This certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with RINA
- d) RINA personnel are to be allowed to witness during the performances of activities, upon their request
- e) The activities are to be carried out in compliance with the RINA Rules and/or other applicable Rules
- f) Should the specified regulations or standards be amended during the validity of this certificate, the product is to be reapproved prior to it being placed on board vessels to which the amended regulations or standards apply.



Hai Wen Zhang