

NIPPON KAIJI KYOKAI

Certificate

OF

TYPE APPROVAL

Name of Product : High Expansion Foam Concentrate

Product name : STHAMEX-IAF MARINE 1% F-10 #9146

Descriptions 1% mixing ratio type high expansion air foam

concentrate for fixed high expansion foam fire

extinguishing systems

Expansion Ratio : 500 to 1000 times

Physical Properties : See Annex. Chemical Components : See Annex.

Manufacturer : Fabrik chemischer Präparate

von Dr. Richard Sthamer GmbH & Co. KG Liebigstrasse 5, 22113 Hamburg, Germany

Testing standard : IMO MSC/Circ.670

Documentation : See Annex.

Limitation : Foam system is to be complied with the

requirements developed by IMO

THIS IS TO CERTIFY that the above-mentioned foam concentrate has been approved by Nippon Kaiji Kyokai with type approval No. N-1330, and that the products of the above type will be accepted for use onboard ships classed with the Society except Japanese flagged ships for compliance with the relevant requirements of the Society's Rules for the Survey and Construction of Steel Ships and those of the International Convention for the Safety of Life at Sea, 1974, as amended, subject to conditional upon that product verification be carried out by the Society.

This certificate is valid until 9 January 2025.

Issued at Tokyo on 10 January 2020.

NIPPON KAIJI KYOKAI

H. Kobayashi General Manager

Material and Equipment Department

Initial approval date: 10 January 2020

Annex to the certificate No. TA2038E(N)



1. Test Report

Test laboratory : MPA Dresden GmbH
Report number : 20190861/Sth 277
Issued date : 24 September 2019

2. Physical Properties

Density (20°C) : $1.040 \sim 1.080 \text{ g/ml}$

Solidification point : $\leq -10.0^{\circ}\text{C}$ pH value (20°C) : $6.5 \sim 8.5$ Sediment content (20°C) : None

Viscosity $< 50 \text{ mm}^2/\text{s} (20^{\circ}\text{C})$

 $< 100 \text{ mm}^2/\text{s} (0^{\circ}\text{C})$ $< 200 \text{ mm}^2/\text{s} (-10^{\circ}\text{C})$

3. Chemical Components

~End of Certificate~