



STHAMEX®-IAF MARINE 1% F-10 #9146



SYNTHETIC FOAM CONCENTRATE

STHAMEX®-IAF MARINE 1% F-10 is a synthetic firefighting foam agent especially developed to give a particularly temperature and fume resistant high expansion foam with excellent stability against combustion gases. The low proportioning rate of only 1% offers enormous logistical advantages.

STHAMEX®-IAF MARINE 1% F-10 is particularly suitable and tested for use in marine environments. STHAMEX®-IAF MARINE 1% F-10 has been successfully tested with seawater according to the civil aviation standard ICAO Level B and is therefore particularly suitable for helidecks in marine environments (ships, oil rigs, ...).

STHAMEX®-IAF MARINE 1% F-10 is easily and completely biodegradable and free of organic fluorine compounds*¹, preservatives and silicone compounds.

Performance

STHAMEX®-IAF MARINE 1% F-10 is suitable to generate high expansion foam by the "Inside Air Foam"-technique using hot fumes present in the room (operating independently from fresh air), as well as with all commercially available foam systems and equipment to generate low - and high expansion foam for extinguishment of class A- and -B fires. The low proportioning rate of only 1% offers enormous logistical advantages.

With low expansion foam allows to flood large rooms completely within a short time, and displace flammable gas-air mixtures preventively from containers, rooms, pipe trenches and e.g. engine rooms on ships. High expansion foam produced from STHAMEX®-IAF MARINE 1% F-10 is particularly insensitive to and stable against hot (temperatures up to 1000°C) and acidic fire gases as well as strong thermal radiation.

With suitable high-expansion foam generators, STHAMEX®-IAF MARINE 1% F-10 produces a very even high-expansion foam with expansion rates of up to 1000:1. The use of the hot combustion gases (fumes) to make high expansion foam indoors eliminates the need for costly pressure relief systems that would be required for foam generation with outside air.

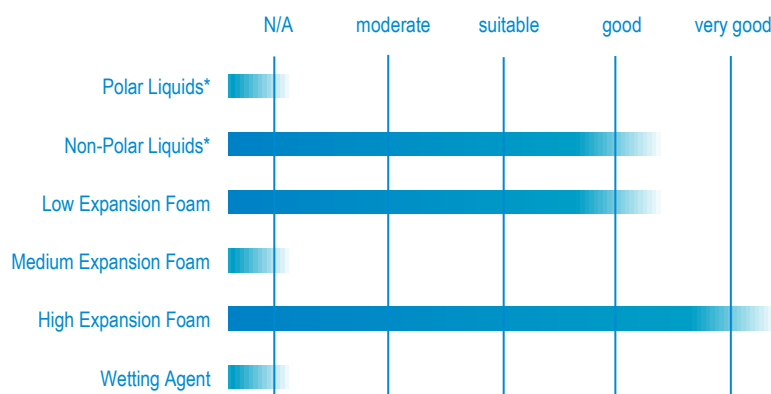
The robust formulation of STHAMEX®-IAF MARINE 1% F-10 grants a high level of redundancy in performance and stability against influences typical for situations of engagement.

Technical Specification

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|--------------------------|---------------------|
| Appearance | colourless/yellow |
| Fire Class/es | A + B |
| Lowest Use Temperature | -10 [°C] |
| Max. Storage Temperature | max. +50 [°C] |
| Specific Gravity (20°C) | 1,050 ± 0,02 [g/ml] |
| pH value (20°C) | 6,5 - 8,5 |
| Viscosity (20°C) | < 50 [mm²/sec] |
| Sedimentation | Sediment Free |

Foam Properties acc. to EN1568 at 20°C

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|-------------------|----------------------------|
| Induction Rate | 1% |
| Expansion Rate | 7 - 11, 700 - 1000 |
| 25% Drainage Time | 1 - 4, 2 - 6 [min] |
| 50% Drainage Time | 2 - 6, 5 - 9 [min] |
| Expansion Types | Low -, High Expansion Foam |



*as mentioned in the respective test standard or in the text

Performance Tests



IMO MSC/Circ. 670 High Expansion Foam



Notified Body: BG Verkehr - No. 0736
Approval-No.: 201046-00



Special Fire Test
Level B on Kerosene following ICAO Airport Services Manual using Sea Water

¹ We define fluorine-free as products that are manufactured without the intentional addition of fluoroorganic compounds for the purpose of improving performance in such a way that, according to currently commercially available analysis of PFAS in firefighting foam concentrates, they do not contain any quantity of fluoroorganic substances in excess of the ubiquitous regional background contamination (e.g. in the drinking water used for production).

Application

STHAMEX®-IAF MARINE 1% F-10 can be expanded to give low - and high expansion foam with all commercially available foam generating systems and -equipment and used as extinguishing foam against fires of class A- and -B fires (e.g. fires of plastics and mineral oil products). In addition to tap water, sea water, brackish water and treated industrial water (without foam-destroying additives) can also be used to generate foam. The proportioning rate to the fire water is 1%.

When used as a non-foaming wetting agent to extinguish hard-to-wet materials, the proportioning rate can be reduced to about one-tenth of the normal proportioning rate to fire water.

STHAMEX®-IAF MARINE 1% F-10 is not suitable for use on polar² liquids. For extinguishing operations in the presence of or on electrical equipment, relevant standards for protection against damage by electricity (e.g. in Germany DIN/VDE-0132) must be followed.

Compatibility

For immediate use (e.g. in case of emergency) STHAMEX®-IAF MARINE 1% F-10 can be mixed at any ratio with similar firefighting foam agents. When mixing different firefighting foam agents, it must be considered that the resulting mixture is a new chemical product which is not tested as firefighting foam agent and also must be re-evaluated and labelled according to hazardous materials regulations. Mixtures of STHAMEX®-IAF MARINE 1% F-10 with other firefighting foam concentrates are not suitable for storage - not even short term. The foam produced from STHAMEX®-IAF MARINE 1% F-10 is fully compatible with all other ready expanded firefighting foams.

Storage & Shelf Life

When synthetic firefighting foam agents and concentrates are stored, only certain materials in only certain combinations are suitable for permanent media contact. Our detailed Technical Information Nos. 014 (Storage of synthetic firefighting foam concentrates) and 009 (Material suitability polymers) provide information on this and other important aspects for the optimum storage of our products. Please do not hesitate to contact us for further information. On short-term contact and subsequent thorough cleaning with water, # or a premix solution made from it will not corrode metals such as copper, aluminium, brass, admiralty brass or bronze.

Elevated temperatures up to a maximum of +50°C or temporary freezing at temperatures below the specified frost resistance limit do not affect this high-quality product adversely (see our further Technical Information on the storage of firefighting foam agents). Temperature should not exceed +50°C.

Before filling storage tanks, these tanks and all supply lines, pumps, valves or other parts carrying media must be thoroughly cleaned, free of grease and free of residues from a previous filling. Before filling up stocks of our STHAMEX®-IAF MARINE 1% F-10 we recommend to have a quality test of the stock to be filled up carried out in our laboratory. If stored according to our storage recommendations, a shelf life of well over ten years is possible.

Environment

STHAMEX®-IAF MARINE 1% F-10 is easily and completely biodegradable and free of organic fluorine compounds^{*1}, preservatives and silicone compounds.

² flammable liquids that are miscible with water.

After use, all parts which were in contact to STHAMEX®-IAF MARINE 1% F-10 must be thoroughly rinsed with water and cleaned to prevent any product buildup. Dried-in adhesions may require longer time soaking for removal.

Unused product (concentrate) must not be released into the environment. Disposal must be carried out in consultation with local authorities and specialised waste treatment companies.

Please also note further information in our safety data sheet!

Transport

STHAMEX®-IAF MARINE 1% F-10 is available in the following packaging units: PE-canister (20 ltr, 25 ltr and 60 ltr), PE-canister according to DIN 14452 (20 ltr); PE-drum (200 ltr), PE-IBC (600 ltr und 1.000 ltr) or bulk.

Please contact us for special packing sizes.



For further Documentation please scan the Qr code or see <http://sthamer.de/qr/9146>



Safety Advice: Please bear in mind that foam solutions are electroconductive liquids. The use in proximity to electrical/electronic equipment can require specific safety measures.



Safety Advice: Please see our Technical Information regarding "Mixing of Foam Concentrates" for further information

Disclaimer:

Any information in this product data sheet bases upon our best knowledge and expertise at the time of this issue. We reserve the right to change the content of this document or adopt to newer information . Please ask for the most recent revision of this data sheet.

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