



## STHAMEX® 3% F-15 #9352



### SYNTHETIC FOAM CONCENTRATE

STHAMEX® 3% F-15 is the successor product to STHAMEX 3% F-15 #9348 with a significantly more favorable hazardous material classification and environmental profile (top rating of zero harmful points in the Bavarian Environmental Classification<sup>1</sup>) with unchanged high extinguishing performance and robust<sup>2</sup> application.

STHAMEX® 3% F-15 is easily and completely biodegradable and free of organic fluorine compounds<sup>3</sup>, preservatives and silicone compounds.

STHAMEX® 3% F-15 is particularly suitable and tested for use in marine environments.

#### Performance

STHAMEX® 3% F-15 is suitable as a multi purpose firefighting foam agent for the generation of low-, medium- and high expansion foam for use on Class A- and Class B-fires (non-polar).

STHAMEX® 3% F-15 consists of novel agents active on surface and interfaces, foam stabilizers and antifreeze additives in the selection and sourcing of which great emphasis is put on sustainability. We do not use fluorine- or silicone compounds or substances that are either only partially degradable or not degradable at all, and (as far as possible) we also do not use substances deriving from mineral- or palm oil. Due to the increased frost protection, STHAMEX® 3% F-15 can be stored and used outdoors at temperatures well below 0°C.

STHAMEX® 3% F-15 is specifically designed for use with mobile foam generating equipment for Class A fires and Class B (non-polar) puddle fires, as well as for non-foam application as a wetting agent and for use as a CAFS<sup>4</sup> foam. STHAMEX® 3% F-15 exhibits excellent foaming capabilities and is excellent for generating Low, Medium, and High Expansion Foam. Low expansion foam made from STHAMEX® 3% F-15 provides a particularly fine-bubbled, compact and stable foam blanket that sticks well to solid surfaces cooling them and insulating them very effectively against radiant heat against radiant heat. The foam blanket slowly and evenly releases foam solution to the substrate and is thus able to very efficiently wet and penetrate deeply into solid (e.g. motor vehicles, Li-ion batteries, recycling materials, etc.) and ember-forming (e.g. wood, paper, tires, ...) materials.

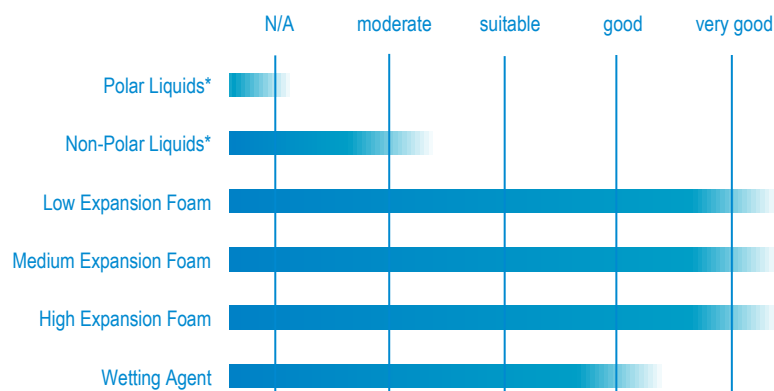
Medium expansion foam produced from solutions of STHAMEX® 3% F-15 has a homogeneous bubble structure, flows well and is stable. With suitable high-expansion foam generators, STHAMEX® 3% F-15 produces a very even high-expansion foam with expansion rates of up to 1000:1. With low expansion foam allows 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.

#### Technical Specification

Appearance	colorless to yellow
Fire Class/-es	A + B
Lowest Use Temperature	-15 [°C]
Max. Storage Temperature	max. +50 [°C]
Specific Gravity (20°C)	1,130 ± 0,02 [g/ml]
pH value (20°C)	6,5 - 8,5
Viscosity (20°C)	< 20 [mm²/sec]
Sedimentation	Sediment Free

#### Foam Properties acc. to EN1568 at 20°C

Induction Rate	3%
Expansion Rate	7 - 11, 40 - 80, 700 - 1000
25% Drainage Time	1 - 5, 2 - 6, 2 - 4 [min]
50% Drainage Time	3 - 7, 5 - 9, 4 - 6 [min]
Expansion Types	Low, Medium, High Exp. Foam



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

#### Performance Tests

**DIN EN 1568** EN 1568:2018 - Approval-No.: KB-211/20  
Part 3 (Heptane): IIC/IIC  
Part 1: Medium Expansion Foam --- Part 2: High Expansion Foam



IMO MSC/Circ. 670 High Expansion Foam

<sup>1</sup> The Bavarian environmental classification is a simplified model for evaluating the toxicological and ecotoxicological profile of firefighting foam agents, which was developed on behalf of the Bavarian Ministry of the Interior and is increasingly being used in Germany. For more information on this topic, please read our TI 020-Environmental Classification Foam.

<sup>2</sup> By "robust application" we mean foam agents that show a higher level of tolerance to changing real operating conditions than others of the same type on average.

<sup>3</sup> 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).

<sup>4</sup> CAFS: Compressed Air Foam System.

## Application

STHAMEX® 3% F-15 can be foamed to Low, Medium, and High Expansion Foam with all commercially available foam systems and equipment and used as extinguishing foam against fires of class A fires + B (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 3%.

The firefighting foam agent significantly reduces the surface tension of water and for this reason is very well suited as a wetting agent for use on Class A fires. 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. For use as wetting agent standard branchpipes can be used.

STHAMEX® 3% F-15 is not suitable for use on polar<sup>5</sup> 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® 3% F-15 can be mixed in any ratio with similar firefighting foam agents. Storage of the mixture is not recommended. 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 labeled according to hazardous materials regulations.

The foam produced from STHAMEX® 3% F-15 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 and also only in 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. On short-term contact and subsequent thorough cleaning with water, STHAMEX® 3% F-15 or a premix solution made from it will not corrode metals such as copper, aluminum, 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® 3% F-15 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® 3% F-15 was fully toxicologically tested. STHAMEX® 3% F-15 is easily and completely biodegradable and free of organic fluorine compounds<sup>3</sup>, preservatives and silicone compounds.

After use, all parts which were in contact to STHAMEX® 3% F-15 must be thoroughly rinsed with water and cleaned to prevent any product buildup. Dried-in adhesions may require longer time soaking for removal.

Direct discharge of even the foam solution into the sewage system is not permitted (except where unavoidable in the case of engagement). Disposal must be carried out in consultation with local authorities and specialised waste treatment companies. Unused product (concentrate) must not be released into the environment.

<sup>5</sup> flammable liquids that are miscible with water.

## Transport

STHAMEX® 3% F-15 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/9352>



**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.

<b>Main Office Hamburg</b> Liebigstr. 5 22113 Hamburg GERMANY Tel.: +49 (0)40 73 61 68-0 Fax: +49 (0)40 73 61 68-60	<b>Sales Office Hannover</b> Hartenbrakenstr. 54 30659 Hannover GERMANY Tel.: +49 (0)511 768 358-45 Fax: +49 (0)511 768 358-46	<b>Sales Office Jena</b> Carl-Pulfrich-Str. 1 07745 Jena GERMANY Tel.: +49 (0)3641 63538-57 Fax: +49 (0)3641 63538-59	<b>Office Frankenthal</b> Siemensstr. 4 67227 Frankenthal GERMANY Tel.: +49 (0)6233 3796-605 Fax: +49 (0)6233 3796-622	<a href="mailto:info@sthamer.com">info@sthamer.com</a> <a href="http://www.sthamer.com">www.sthamer.com</a>	
--	---	--	---	--	--