BoldFoam®

TECHNICAL INFORMATION

M2 MULTIEXPANSION CONCENTRATE 2%

DESCRIPTION

The composition of BoldFoam M2 is based on a mixture of hydrocarbon surfactants, glycols, inhibitors corrosion and other additives.

The aqueous solutions of this concentrate form a homogeneous foam with a high expansion index, a high drainage time and high heat resistance.

BoldFoam M2 is specially designed to be used with sea water. This foam concentrate is specially appropriated for marine purposes because it can be applied in deck with low expansion nozzles and in engine room with high expansion generator. When BoldFoam M2 is applied in hot engine the application of foam results in a reduction of oxygen by sweeping away the air and so suffocate the fire. Furthermore, the water in the foam produces a cooling effect.

BoldFoam M2 represents effective protection for special cases and more severe cryogenic risks such as LNG (Liquefied Natural Gas) and LPG (Liquid Petroleum Gas) using high expansion generators.

It is suitable in concentrations of 2% with fresh, sea or brackish water.

APPLICATION

BoldFoam M2 can be used for Class A fires (solids) and Class B fires (liquids) using high, medium and low expansion devices.

- *Low Expansion*: Indirect application is recommended due to the low oleophobicity of the foam caused by the absence of fluorinated surfactants in the concentrate. Use low expansion foam only in long distance firefighting.

- *Medium Expansion*: With medium expansion nozzles you can reach high expansion index and its use is only for medium distance firefighting filling the security pools of the fuel tanks with foam in case of a possible spillage.

- *High Expansion*: At 2% BoldFoam M2 reaches expansion index between 400 and 1000 depending on the type of generator used.

Do not apply on liquid polar fires.

Its excellent wetting characteristics make it ideal for fighting Class A fires.

BoldFoam M2 should be applied at its adequate concentration with aspirating systems to make use as much as possible of its wetting properties.

DOSAGE

BoldFoam M2 can be easily proportioned using most conventional proportioning equipment such as:

*Balanced pressure pump and bladder tank proportioners, around the pump type and venturis proportioners, and handline nozzles with fixed induction/pickup tubes.

TYPICAL PHYSICAL PROPERTIES OF CONCENTRATE

Appearance	Amber Liquid
Density, 20°C, g/cm^3	1,040±0,005
pH, 20°C	8,0±1,0
Kinematic Viscosity, mm^2/s, 20°C	≤ 30
Freezing Point, °C	≤-15

PROPERTIES OF FOAM SOLUTIONS

Surface Tension, (2%, deioniz. water) mN/m	≤30
Low Expansion Index (2%)	≥9
Drainage Time, 25%	≥8´
Medium Expansion Rate (2%)	≥150
Drainage Time, 25%	≥10´
High Expansion Rate* (2%)	≥400
Drainage Time, 25%	≥5´
Drainage Time, 50%	≥10´

*The values obtained depend on the type of generator used.

Values valid both in fresh water, sea or brackish water.

FIRE PERFORMANCE

BoldFoam M2 is certified by MPA DRESDEN according to the following Standards:

- EN 1568-1:2018 and EN 1568-2:2018 (Medium and high expansion)

BoldFoam M2 has EC Type Examination (Module B) Certificate **No. 2018-009-MED-R3** – Council Directive 2014/90 / EU on Marine Equipment as amended.

BoldFoam M2 has been tested to verify compliance with the following Regulations and testing Standards:

- EC Directive (EU) 2023/1667 dated August 8th, 2023
- SOLAS 74, Reg. II-2/10, IMO Res. MSC. 98(73)-(FSS Code)6
- IMO MSC Circ. 670:1995 (By MPA DRESDEN)

COMPATIBILITY WITH OTHER CONCENTRATES

VS FOCUM recommends the following test: BoldFoam products are considered compatible in all proportions with the concentrates supplied by other manufacturers, when their mixture maintains its properties of foamability, film formation, sealability and fire performance to the same extent as the worst concentrate involved in the mixture, after an aging period of 10 days at 65°C at least.

Furthermore, the mixture should always be used with the higher induction and for the higher minimum temperature of use of the mixed concentrates.

BoldFoam M2 may simultaneously be applied to fires with other foam solutions.

MATERIALS OF CONSTRUCTION COMPATIBILITY

BoldFoam M2 is compatible with Standard Carbon Steel "black" pipe and pipe manufactured from various Stainless Steel (304 and 316) or Brass Compounds. Other recommended materials are Polyethylene and Aluminium.

Galvanized pipe and fittings must not be used in areas where undiluted concentrate can get in contact with them since corrosion will result.

SHELF LIFE

The factors affecting shelf life and stability for this foam concentrate are the following: big temperature changes, handling procedures, extremely high or low temperatures and contamination by unknown materials.

Its shelf life is about 20-25 years if the storage is done according to the recommendations of VS FOCUM.

The premixed solutions storage is not recommended.

Annual testing of all firefighting foams is recommended by the National Fire Protection Association (NFPA) in case the concentrate is removed from its original vessel.

STORAGE AND HANDLING

BoldFoam concentrate should be stored in the original shipping containers or in other special containers specially designed for this type of products (stainless steel or epoxy lined tanks).

Place the storage containers in an area at temperatures between -14°C to 50°C.

If the product is frozen during storage or transportation, thawing will render the product completely usable. Mixing after freeze thaw cycle is recommended.

ENVIRONMENTAL/TOXICOLOGICAL PROPERTIES

Aquatic Toxicity: The aquatic life, neither sensitive species nor tolerant ones, is not adversely affected by the use of BoldFoam M2 at dosage of use.

Persistence and degradability: BoldFoam M2 does not contain persistent organic substances. BoldFoam M2 is a fluorine-free foam. Boldfoam M2 is compliant with **IMO Resolution MSC.532(107),** with PFOS content below 10 mg/kg (0.001% by weight). BoldFoam M2 presents an aerobic biodegradability at 28 days of 100%, which makes it a product "Fully biodegradable in 28 days".

Sewage Treatment Plant Treatability: BoldFoam M2 is not particularly toxic to the microbial populations normally found in treatment plants. Compatible with the treatment plant's flora. Anti-foam agents may be used to reduce foaming in waste streams.

Nutrient Loading: An algal bloom is not expected as BoldFoam M2 contains no sources of nitrates or phosphates.

ORDERING INFORMATION

BoldFoam products are available in plastic Pail (20, 25 or 60 l.), Drum (200 l.), Container (1000 l.) and Bulk.