

ARM

ANTI-ALCOHOL MULTIEXPANSION FOAM

DESCRIPTION

ARM is a new Anti-alcohol Multiexpansion foam, designed to be used at low, medium and high expansion for Class A (solids) and Class B (hydrocarbon fires and polar fuels). It's formulated from hydrocarbon and fluorochemical surfactants along with solvents.

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

BoldFoam ARM is specially appropriated for indoor fires where 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.

The concentration of use is between 1% to 3% with fresh, sea or brackish water.

APPLICATION

BoldFoam ARM can be used in various concentration from 1% to 3% for Class A fires (solids) and Class B fires (hydrocarbon fires and solvent polar fires) using high and medium expansion devices.

Suitable for places as aviation hangars, ship engine room, solids warehouse (coal, wood, cardboard, paper, rubber, plastic...) for to protect with flooding.

According to its use and the quantity of water you want to add the required solutions are the following ones:

-Low Expansion, 1%: It can be used with low expansion foam equipment (foam chambers, nozzles...) and non-aspirating discharge devices (handline water fog/stream nozzles or standard sprinkler heads).

-Medium Expansion, 2%: With medium expansion nozzles you can reach expansion index of up to 200 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, 3%: It can reach an expansion index over 600, filling up completely the indoor facilities.

In case the level of foam is higher than the height of a person you can stay in the foam pressing a cloth on the mouth to avoid inhaling the foam solution.

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

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

DOSAGE

BoldFoam ARM 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	Yellow Liquid
Density, g/cm ³	1,04±0,1
pH	7,5±1,0
Viscosity (20°C), mPa.s	<30
Freezing Point	<-8°C

PROPERTIES OF FOAM SOLUTIONS

Surface Tension, mN/m	<25
Low Expansion Rate (1%)	>7
Drainage time (25%)	>5'
Medium Expansion Rate (2%)	>150
Drainage time (25%)	>10'
High Expansion Rate (3%)	>500
Drainage time (25%)	>8'
Drainage time (50%)	>15'

FIRE PERFORMANCE

BoldFoam ARM is qualified under the requirements of the EN 1568-1 and EN 1568-2 Standards.

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 ARM may simultaneously be applied to fires with other foam solutions and dry chemical fire fighting agents.

MATERIALS OF CONSTRUCTION COMPATIBILITY

BoldFoam ARM 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 Aluminum.

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).

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 –8°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

1.-Aquatic Toxicity.

The aquatic life, neither sensitive species nor tolerant ones, is not adversely affected by the use of BoldFoam ARM.

2.-Biodegradability.

The theoretical biodegradability is measured with two different tests: BOD over a five day period and COD. The biodegradability is the ratio of BOD to COD: BOD/COD.

A concentrate is considered easily biodegradable when the ratio: BOD/COD is above 0,65. BoldFoam products are well above this level and so they are easily biodegradable.

3.-Sewage Treatment Plant Treatability.

As BoldFoam products have a low biological oxygen demand (BOD), treatment plants don't need additional oxygen.

BoldFoam ARM 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.

4.-Nutrient Loading.

An algal bloom is not expected as BoldFoam ARM contains no sources of nitrates or phosphates. Furthermore, it is extremely low in total organic carbon.

ORDERING INFORMATION

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

