BoldFoam®

TECHNICAL INFORMATION

F-40 EXTINGUISHING SOLUTION. CLASS F FIRES

DESCRIPTION

BoldFoam F-40 is last generation fire fighting foam, a mixture of organic salts, surfactants and additives, designed for fighting class F fires.

With difference to others extinguishing solutions for fighting class F fires, BoldFoam F-40 forms resistant foam, with high drainage time that improve the efficiency in the extinguishing.

The main characteristics are:

- Designed to use in kitchen fire extinguishers. The product achieves a quick extinction time in class F fires.
- Specialty formulated to increase the compatibility between the solution and the oil. It is achieved a quicker extinction time than when a solution based only in organic salts is used.
- Great cooling capacity. It is lower the re-ignition probability.
- Because of its composition of surfactants, the surface tension of the solution is decreased. The solution goes deeper in the combustible material which results in a more effective extinguishing.
- The solution forms stable foam which provides an additional protection.
- It can be easily removed with water.

APPLICATION

Principal fields of application are:

1. Automatic systems for extinction of electrical transformers.

1.a. Water systems:

• Water mist: Total replacement of water by BoldFoam F-40.

• Water spray system. According NFPA 15, the application rate to protect by water spray is 10 L/min.m^2 during 60 minutes. The use of BoldFoam F-40 instead water reduces drastically the extinction time. It decreaces the problem of smoke emission to atmosphere, the loss of human lives or the installation.

Total o partial application. Due to extinction by BoldFoam F-40 is so fast, it is only requerided a small amount of product to achieve total extinction, continuing with water to cool.

1.b. Foam sistems:

• Medium expansion. It is obtained a good quality foam with long drainage time and structural strength.

2. Automatic systems for extinction in kitchen fires.

Replacing the usual extinguishing agent for BoldFoam F-40, improving the extinction time and reignition resistance.

3. Fire extinguishers:

3.a. Small capacity fire extinguishers for oil fires.

3.b. Special fire extinguishers for polar solvents fires due to the resistance of the foam of BoldFoam F-40.

4. Household aerosols:

250 mL pressurized container with a hydrofluorocarbon propellant no harmful to the ozone layer.

BoldFoam F-40 can be used to extinguish class B fires.

Its excellent wetting characteristics make it useful in combating Class A fires as well.

PERFORMANCE

A conventional AFFF product works forming an aqueous film on hydrocarbon surfaces. However, BoldFoam F-40 reacts with the hot vegetable oil in a saponification reaction, forming a protective barrier over the surface of the oil. The protective barrier isolates the oil of the oxygen, inhibits the re-ignition and provides an additional cooling.

DOSAGE

BoldFoam F-40 is provided to recharge the fire extinguisher directly. It is used concentrated, not diluted.

PHYSICAL PROPERTIES OF THE SOLUTION

Appearance	Clear yellow liquid
Density, g/cm3	1,20±0,05
pH	9,0±0,5
Viscosity a 375 s-1(Brookfield), mPa.s	
20ºC	< 10
0ºC	< 20
Freezing point	< - 40°C
Surface Tension, mN/m	< 25
Low expansion index	> 7
Drainage time (25%)	> 11´
Medium expansion index	> 150
Drainage time (25%)	>10´
Wetting power, s	< 10”

FIRE PERFORMANCE

BoldFoam F-40 is certified according:

- EN 1568-1 Medium expansion

- EN 1568-4. Low expansion, acetone (Classification IA).

COMPATIBILITY WITH OTHER CONCENTRATES

The NFPA standards (NFPA 412, Paragraph 214 and NFPA 11B, 1-5.2) prohibits the mixing of AFFF concentrates unless it has been determined that they are compatible.

vs FOCUM recommends the following test: BoldFoam products are considerated compatible in all proportions with the concentrates furnished by other manufacturers when the mixture of them, after to have been aged 10 days at 65°C, maintain its properties of foamability, film formation, sealability and fire perfomance at least equal of the worst concentrate involved in the mixture and to use the higher induction rate and to the higher minimum usable temperature of the mixing concentrates.

MATERIALS OF CONSTRUCTION COMPATIBILITY

BoldFoam F-40 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 (Alloys 3003-H-14 and 661-T-6).

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

BoldFoam F-40 has low corrosivity in different materials:

Corrosivity Al2024T3 < 0,2 mpy

Corrosivity F157 < 0,2 mpy

Corrosivity Brass 77/33 < 0,2 mpy

SHELF LIFE

The factors affecting shelf life and stability for this foam concentrate are: wide temperature changes, handling procedures, extreme high or low temperatures and contamination by odd materials.

Following the recommended storage conditions, it is expected a shelf life of at least 10 years.

According NFPA 11 (12.6), samples of foam concentrates shall be sent to the manufacturer or qualified laboratory for quality condition testing at least annually.

STORAGE AND HANDLING

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

Place the storage container in an area at temperatures between –40ºC to 60ºC.

ENVIRONMENTAL PROPERTIES

A concentrate is considered easily biodegradable when the following ratio: DBO_{28}/DQO above 0,65. BoldFoam F-40 product is well above this level and then they are easily biodegradable.

ORDERING INFORMATION

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