SILVARA M
FIRE FIGHTING FOAM CLASS A, B

1. DESCRIPTION

Silvara M is fluorine free low viscosity newtonian foam concentrate to extinguish hydrocarbon fuels fires and solids.

Silvara M is formulated with solvents, hydrocarbon surfactants and additives. Silvara M doesn´t contain any type of organ halogen compound, it is easily biodegradable and responsible with the environment.

Silvara M forms resistant foam to insulate the fuel of the oxygen and extinguish the fire. Fire performance of Silvara M is similar to fluorine foam concentrates in hydrocarbon fuels fires. It is an alternative to the use of AFFF products.

2. APPLICATION

Silvara M should be used at 100%.

It is not suitable to use on polar fuels.

It is useful to combat class A fires (solids) because its excellent wetting properties.

It should be used with aspirating discharge devices (foam chambers, nozzles,…) with low or medium expansion.

Application of Silvara M by foam achieves excellent extinguishing and re-ignition times in hydrocarbon fuels fires. Obviously due to it is not a film forming foam, the application with fog/stream nozzles isn´t so effective as with AFFF foam concentrates.

3. DOSAGE

SILVARA M is designed to be used at 100% when refiling devices, not to be diluted with water.

4. PHYSICAL PROPERTIES OF FOAM CONCENTRATE

Appearance	clear liquid
Density, 20ºC, g/cm^3	1,000 ± 0,01
pH, 20ºC	7,5 ± 1,0
Kinematic viscosity, mm^{2}s^{-1}, 20°C	≤ 10
Freezing point	≤ 0° C

5. PROPERTIES OF FOAM SOLUTION

Surface tension, mN/m (100%)	≤ 30
Low expansion index (100%, fresh water)	≥ 7,0

6. FIRE PERFORMANCE

SILVARA M complies with standard EN 1568-1:2018 and EN 1568-3:2018.

7. 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.

The MIL-F24385C standard provides a formalized method of compatibility determination but the Freeze Protected AFFF fall outside the military specification.

vs FOCUM recommends the following test: Silvara products are considerate compatible in all proportions with the concentrates furnished by other manufacturers when the mixture of them, after having been aged 10 days at 65°C, maintain its properties of foamability and fire performance 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.

8. COMPATIBILITY WITH MATERIALS

Silvara M 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. Avoid using galvanized pipes and fittings, it can cause corrosion.

9. 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.

Its shelf life is about 1 year if the storage is in accordance with vs FOCUM´s recommendations. Annual testing of all firefighting foams is recommended by the National Fire Protection Association (NFPA).

10. STORAGE AND HANDLING

Silvara concentrate should be stored in the original shipping container or in an 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 2°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.

11. ENVIRONMENTAL AND TOXICOLOGICAL PROPERTIES

Aquatic Toxicity: The aquatic life is not adversely affected when Silvara products are used neither sensitive species nor tolerant ones.

Persistence and degradability: Silvara M does not contain persistent organic substances. Silvara M is fluorine-free foam. Silvara M has a very good biodegradability.

Sewage Treatment Plant Treatability: As Silvara products have a low biological oxygen demand (BOD), treatment plants don´t need additional oxygen.

Silvara products are 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 Silvara products contain no sources of nitrates or phosphates. Furthermore, it is extremely low in total organic carbon.

12. PACKAGING

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