

RFC-105

CLASS A/SYNTHETIC MULTI-EXPANSION FOAM CONCENTRATE (0.1%-1%)



FAST FACTS

- Synthetic fluorine-free multi-expansion foam concentrate for Industrial and Emergency Fire Services
- Combats Class A Fires - effective on forest, urban and structural fires at 0.1% to 1%
- Effective on Class B hydrocarbon fuel fires at 0.5%
- Compatible with low, medium, and high expansion systems and discharge devices
- Suitable for CAFS (Compressed Air Foam Systems) - further reducing water consumption
- Excellent wetting and penetration properties on deep seated Class A fires
- Low viscosity that easily mixes (for premix use)
- Highly biodegradable - No Persistent, Bioaccumulative or Toxic Profile



DESCRIPTION

RFC-105 is a synthetic fluorine-free multi-expansion foam concentrate with excellent wetting properties; specially engineered to deliver effective fire suppression across Class A fires (forest, urban, and structural) that can also be used effectively to control and extinguish Class B hydrocarbon fuel fires.

When used for Class A fires, the foam adheres effectively to surfaces rapidly cooling and extinguishing while the drained solution provides excellent wetting and penetration performance. Allowing the foam solution to infiltrate deep seated Class A burning materials - significantly reducing the risk of re-ignition.

For Class B hydrocarbon fuel fire applications - RFC-105 is suitable for use with standard low, medium and high expansion systems and nozzles - with gentle application recommended in low expansion scenarios.

RFC-105 is an excellent choice for providing firefighters of municipal fire departments with the concentrate they need to fight both Class A and Class B hydrocarbon fuel fires through multi-expansion devices.

APPLICATIONS

RFC-105 is specially designed to fight both class A and class B hydrocarbon fuel fires. It can be used with low, medium and high expansion foam equipment, with non aspirating equipment (water spray nozzles and sprinklers), and CAFS (Compressed Air Foam Systems). It is fully compatible with standard firefighting equipment, including in-line inductors, self-inducting nozzles, fire truck pumps and more.

The low viscosity RFC-105 concentrate is designed for rapid mixing and dissolves quickly in both fresh and seawater, requiring minimal agitation - ideal for premixed foam systems.

RFC-105 nominal proportioning rate is 0.5% in fresh or sea water. This rate can be varied between 0.1% and 1.0%, depending on the type of foam desired. Higher 1% concentrations are recommended for high expansion foams and when slow drainage times are desired.

RFC-105 is highly biodegradable.

CERTIFICATIONS

RFC-105 has been the subject of multiple large-scale fire testing programs. Results include:

- Passed and certified to European Standard: EN-1568:2018 part 1 and part 2 - for use with medium-expansion and high-expansion foam discharge devices at 1%
- Certified in European Standard EN-1568:2018 part 3 on hydrocarbon fuel with fresh water at 0.5%
 - EN1568:2018 - Part 3: IIIC (heptane)
 - EN1568:2018 - Part 3: IIIC (E10 - 90% heptane/10% Ethanol)
- CEREN - Surface Tension



EN 1568
2018: Part 1 & 2

EN 1568
2018: Part 3

USAGE RATE

The proportioning rate is 0.5% in fresh or sea water. This rate can be varied between 0.1% and 1.0%, depending on desired foam type.

TYPICAL PROPERTIES	
Specific gravity @ 20°C	1.010-1.060
pH @ 20°C	7.5-8
*Viscosity, cone and plate, mPa.s @ 20°C	23
Freezing point, °C	< -11°C
Lowest temperature for use, °C	-10°C

* Brookfield cone/plate

TYPICAL FOAM PROPERTIES		
Dilution rate	0.5%	1%
Wetting test (ASTM D2281-68), min:s	0:25	0:06
Surface tens. at 20°C, mN/m (Demineralised water)	24.0	24.0
Low Expansion Foam /Medium Expansion		
Foam Expansion Index	8.0/80	8.5/110
25% Drainage Time, min:s	5:00/8:00	7:00/12:00

INSPECTION

RFC-105 or a premix solution should be tested annually per National Fire protection Association (NFPA 11) and EN-13565-2 standards. A sample of the foam sent to the manufacturer or qualified third party lab to confirm physical properties and foam quality meet the specifications of the foam as originally supplied as per the requirements of NFPA 11 and EN-13565-2.

PACKAGING

The product is supplied in 20 or 25 L PE prismatic containers, 200 L PE cylindrical drums and, 1,000 L IBC containers.

STORAGE/MATERIAL COMPATIBILITY

RFC-105 should ideally be stored between -10°C and +50°C, preferably in the original containers. The foam concentrate has been successfully tested and verified under multiple temperature conditioning stability cycles at -30 °C to +60 °C, with no adverse effects. RFC-105 is not affected by freeze-thaw conditions and will return to the original, effective state upon thawing without any degradation in performance. RFC-105 is compatible with multiple materials of construction found in firefighting equipment. Do not mix with other foam concentrates without a previous verification of compatibility. For questions about material of construction compatibility consult Perimeter Solutions technical services.

The foam concentrate shelf life is maximized by proper storage conditions and maintenance. Factors affecting shelf life are wide temperature fluctuation, evaporation, dilution, and contamination by foreign materials. When stored in original containers or in manufacturer-recommended equipment within the specified temperature range the shelf life of the product is rated to exceed 20 years.

ENVIRONMENTAL

RFC-105 is siloxane-free and contains no intentionally added PFAS, fluorosurfactants, fluoropolymers, organohalogens, PFCAs, PFOA and no PFOS in accordance with EU Directive. Presents no concern for persistence, bioaccumulation or toxic breakdown (No PBT profile).

CAUTIONS

Foams should not be used in contact with electrical equipment or with chemical products that can react with water. It is recommended to avoid contact of the foam concentrate with skin. In case of eye splashes, wash with plenty of water. In case of ingestion do not induce vomiting, drink water and seek medical advice.

Contains no intentionally added PFAS.

FOR MORE INFORMATION

Contact any of our worldwide Perimeter Solutions Fire Safety offices or visit:
www.Perimeter-Solutions.com

UNITED STATES

1520 Brookfield Avenue
Green Bay, WI 54313
Tel: +1 (920) 593-9445
salesfoamusa@perimeter-solutions.com

EMEA

Polígono Industrial de Baiña, Parcela 23
33682 Baiña-Mieres (Asturias) – Spain
Tel: +34 985 24 29 45
salesfoamea@perimeter-solutions.com

ASIA PACIFIC

3 Charles Street
St Marys NSW 2760 – Australia
Tel: +61 2 9673 5300
salesfoamapac@perimeter-solutions.com



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