

Foam Testing Service and Foam Test Kits

Features

- Capable of testing most brands of foam products
- Two levels of annual testing available: Standard Quality Testing and Marine Testing
- Global support with test labs in the United States and Italy
- Test kits are available at no additional charge
- Lab-scale fire and chemical stability tests available
- As part of the testing program, if any foam product is discharged into the environment, efforts should be made to control, contain, and collect the discharge for proper disposal, while following all applicable laws, regulations, and codes

NOTICE

Tyco Fire Protection Products Testing Service does not accept or test foam products manufactured with PFOS. Any samples of product known to be manufactured with PFOS or unknown samples will be returned without analysis.

Testing Services

Tyco Fire Protection Products Foam Testing Service offers two types of foam testing protocols: Standard Quality Testing and Marine Testing. Other testing may be available at an additional cost. Contact Tyco Fire Protection Products Foam Testing Services, Technical Services or an Account Representative for more information.

Foam test kit

Sample kits are available at no additional charge for testing at a Tyco Fire Protection Products laboratory. The kits are designed to make sampling easier and to ensure that proper samples are sent to the laboratory for analysis.

- Tyco Fire Protection Products Foam Test Kits are the preferred containers for sending in material for testing. Samples sent in other containers may cause a testing delay if damaged during shipment.
- Guidance and procedures for taking representative samples are available with the kit, or by contacting Tyco Fire Protection Products.
- Each kit includes sampling containers, labels, and sampling instructions.

Note: Laboratory services are charged per sample not per kit.



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Standard quality testing

Standard quality testing evaluates the quality of the foam using the procedures described in appropriate Annexes of NFPA 11, 2021 Edition, or EN1568: 2018 Edition.

- Includes analysis of physical properties as required: pH, refractive index, density, viscosity (for non-Newtonian products), and film-formation (for film-forming products).
- Includes foam quality testing with expansion ratio and drain time.
- Lab-scale fire test available through select labs at an additional cost.

Marine testing

Marine testing evaluates the quality of the foam using the procedures described by IMO MSC. 1/Circ. 1312 for low-expansion or MSC/Circ. 670 for high-expansion.

- Includes analysis of physical properties as required: pH, refractive index, density, viscosity (for non-Newtonian products), and film-formation (for film-forming products), foam quality testing with expansion ratio and 25% drain time, or 50% drain time for high-expansion, and sedimentation.
- Lab-scale fire and chemical stability testing available through select labs at an additional cost.

Testing Services (Continued)

Proportioning testing

Tyco Fire Protection Products Foam Testing Service also offers proportioning testing. This testing evaluates the performance of the proportioning equipment in a system. Results do not evaluate the quality of the foam concentrate or foam solution.

Note: For best results, it is recommended that proportioning testing be completed on site at the time of service.

- Guidance and procedures to complete this testing are available in the Field Inspection Manual (Part No. 031274, latest revision) or by contacting Tyco Fire Protection Products Technical Services.
- Equipment to complete the testing is also available. Contact Tyco Fire Protection Products Technical Services for ordering information.

A separate test request is needed for each system to be tested. A single system uses the same water and foam concentrate supply for one or more proportioners. The system water and foam concentrate received by the lab are mixed to prepare a series of standards. Samples taken downstream of the proportioners are then compared to the standards to determine the mixing ratio. The series of standards created from one system cannot be used to analyze proportioned samples from another system.

- Includes the preparation of standards and analysis of one proportioned sample. Analysis of an additional proportioned sample from the same system is an additional cost.
- Each request requires the following representative samples:
 - 500 mL system water (system water should be sampled at the same time)
 - 500 mL of foam concentrate
 - 500 mL of foam-water solution for each proportioner in the system

Testing Protocol

Foam concentrates are exposed to a variety of conditions that could compromise the quality and firefighting ability of the foam. These conditions include temperature exposure and cycling, storage container characteristics, air exposure, evaporation, dilution, and contamination.

Foam concentrates should be tested periodically in accordance with NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam*, and NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, and EN 13568-2 fixed firefighting systems, foam systems, design construction and maintenance, or other relevant standard. A representative sample should be sent to Tyco Fire Protection Products Foam Testing Service or other qualified laboratory for quality analysis per the applicable standard. An annual test and sample analysis is sufficient unless the product has been exposed to unusual conditions.

The lab-scale fire test was developed by Tyco Fire Protection Products to interpret the suppressing and burnback performance characteristics of low-expansion Class B foam concentrates. This test is run on every batch of foam produced at the Tyco Fire Protection Products manufacturing facility and select laboratories are able to perform this test and compare field samples to that baseline data.

Ordering Information

Tyco Fire Protection Products Foam Testing Service provides global support for foam testing through two laboratories:

Marinette, Wisconsin, United States

Foam test kits can be ordered through Customer Services under part number: 710808.

Cologno Al Serio, Italy

Contact an inside-sales account representative to order test kits or test services.

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