IN FORCE FIRE-FIGHTING

Foam concentrate testing, and what the PFOS prohibition actually requires in 2026

Foam is tested three years after it is supplied to the ship and every year after that. Since 1 January 2026 SOLAS also prohibits PFOS in extinguishing media. This bulletin separates what is enforceable at survey today from the EU market restriction with a later date.

ISSUED	APPLIES TO	REFERENCE
September 2026	Fixed and portable foam systems, all ship types	MSC.1/Circ.1312 · Res. MSC.532(107) · Reg. (EU) 2025/1988

AT A GLANCE

- Periodical control of low-expansion foam: not more than three years after supply to the ship, then every year (MSC.1/Circ.1312).
- SOLAS II-2/10.11 prohibits the use or storage of extinguishing media containing PFOS above 10 mg/kg, in force 1 January 2026.
- Existing ships comply by the first survey on or after 1 January 2026.
- The SOLAS ban covers PFOS, not all PFAS. The broad PFAS restriction is EU market law with a core date of 23 October 2030.

01 The testing interval, and the exact wording

MSC.1/Circ.1312, dated 10 June 2009, covers low-expansion foam concentrates. Section 5 of its annex: except for tests in accordance with paragraph 4.7, the first periodical control of foam concentrates should be performed not more than 3 years after being supplied to the ship, and after that, every year. The tests required by paragraph 4.7 should be performed prior to delivery to the ship and annually thereafter.

So: three years, then annually. The exception is the chemical stability test for protein-based alcohol-resistant concentrates, which runs before delivery and then annually. MSC.1/Circ.1432 calls for the sampling at the annual inspection, and the Marshall Islands restates the point in MN 2-011-14, adding that the tests are done by laboratories or service suppliers acceptable to the recognised organisation.

> There is a Corr.1 to MSC.1/Circ.1312, and no Rev.1. High-expansion foam goes to MSC/Circ.670 and medium-expansion to MSC/Circ.798, which are separate circulars with their own requirements.

02 What is in the periodical control

PARAGRAPH	TEST
4.1	Sedimentation
4.2	pH value
4.3	Expansion ratio
4.4	Drainage time
4.5	Volumic mass (density)
4.6	Small-scale fire test, for protein-based alcohol-resistant concentrates
4.7	Chemical stability test, for protein-based alcohol-resistant concentrates

The tests at 4.1, 4.3 and 4.4 are carried out on samples kept at 60 °C for 24 hours and then cooled to the test temperature. The circular names the causes of abnormal ageing: high storage temperature, contamination of the concentrate and incomplete filling of the tank.

03 What a fail means

MSC.1/Circ.1312 sets no numeric pass or fail criteria. Section 4 says only that deviations from the values obtained in the type approval tests should be within ranges acceptable to the Administration. There is no IMO-defined pass threshold, top-up allowance or retest rule.

In practice the laboratory reports the measured values against the type approval values, and the decision is taken with the flag or class. A neat pass and fail table with percentages is a maker's or a laboratory's internal criterion, not an IMO requirement. Our report states the measured value, the type approval value and the deviation, so the decision is yours to take with your surveyor.

The one place the circulars do say replace is MSC.1/Circ.1432 paragraph 7.11.4: protein-based concentrate in portable containers and tanks more than five years old is tested to MSC.1/Circ.1312 or renewed. The same paragraph accepts factory-sealed non-protein containers less than 10 years old without the periodical tests.

04 PFOS: what is in force now

Resolution MSC.532(107) added regulation II-2/10.11 to SOLAS; resolutions MSC.536(107) and MSC.537(107) made the matching amendment to the 1994 and 2000 HSC Codes. The prohibition entered into force on 1 January 2026.

POINT	REQUIREMENT
What is prohibited	The use or storage of fire-extinguishing media containing PFOS, in fixed systems and portable fire-fighting equipment
Threshold	PFOS present above 10 mg/kg, that is 0.001 per cent by weight
New ships	Ships constructed on or after 1 January 2026 comply at delivery
Existing ships	Not later than the first annual, periodical or renewal survey on or after 1 January 2026 for the relevant safety certificate
Evidence	Maker's declaration or laboratory test report, stating foam type, production period, batch number and the type approval or MED certificate reference
No declaration	For media installed before 1 January 2026 with no declaration or report, sampling and testing on board to a recognised standard
Disposal	PFOS removed from a ship goes to shore reception facilities; removal and delivery are recorded in the official log book

MSC.1/Circ.1694, approved at MSC 110 with effect from 1 January 2026, carries the unified interpretations. IACS UI SC309 and UI HSC11 cover the same ground.

05 What is not prohibited, and where the confusion comes from

The SOLAS prohibition covers PFOS, not all PFAS. IMO decided that a ban on fluorinated substances in foam concentrates was not necessary at this time, to be revisited if needed.

The broad PFAS restriction is European market law. Commission Regulation (EU) 2025/1988, in force 23 October 2025, creates REACH Annex XVII entry 82. Its core prohibition on placing on the market and use of fire-fighting foams containing PFAS at or above 1 mg/L, summed across all PFAS, applies from 23 October 2030, with earlier dates for some uses. PFOA and PFHxS are separately listed in the EU POPs Regulation.

> Planning a changeover on a European-trading fleet? Ask us for the current position on the marine derogations in entry 82 before you fix a budget year. We would rather check the operative text with you than repeat a date from a press summary.

06 What a compliant changeover includes

- Draining and removal of the existing concentrate, with IBC tanks supplied and collected.
- Certified disposal through a licensed facility, with the disposal certificate.
- Tank and line cleaning and flushing. The EU restriction sets a separate residual limit for fluorine-free foams from equipment cleaned to best available techniques.
- Supply and filling of the new concentrate at the same mixing ratio and a similar viscosity; a different viscosity can mean new pumps and a re-verified mixing unit.
- Equivalent approvals for the foam type, with a certificate stating the absence of PFOS.
- System function test and a documentation pack for class and port state control.

Inside-air foam systems under MSC.1/Circ.1271 are a special case: only the foam brand, type and mixing rate listed on the system's type approval or MED certificate may be used.

WHAT TO DO NOW

- List every foam concentrate on board with type, supply date and batch.
- Check that a PFOS declaration or laboratory report exists for each.
- Book the periodical control before its due date.
- For EU-trading ships, put the PFAS changeover into the budget plan.

HOW OZ MARITIME CAN HELP

- Foam sampling by our engineers, analysis at accredited laboratories
- IMO and EU positions reported separately
- Removal, certified disposal, tank cleaning and refill as one job
- Documentation pack for class and port state control

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SOURCES

- IMO MSC.1/Circ.1312, annex sections 4 and 5
- IMO MSC.1/Circ.1432, as amended by MSC.1/Circ.1516
- IMO Res. MSC.532(107); MSC.1/Circ.1694
- ABS Regulatory News 05/2025, PFOS
- DNV, PFOS prohibited from 1 January 2026
- Liberia Marine Advisory 16/2024
- Commission Regulation (EU) 2025/1988

This bulletin summarises the requirements as we read them on the date of issue. It is general technical information, not legal advice, and does not replace the text of the instruments, your flag Administration's notices, your classification society's rules or the equipment maker's instructions, which take precedence for your vessel. Check your flag, not a general claim.