GOVERNMENT OF PAKISTAN
MINISTRY OF MARITIME AFFAIRS
(PORTS & SHIPPING WING)
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No. 3(3)/2021-CNS Karachi, 19th November, 2026.

MERCHANT SHIPPING NOTICE

Circular No. 006/2026

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Notice to All Pakistani Flag Shipowners, Ship Managers and Operators, Recognized Organizations authorized by the Government of Pakistan, Pakistan National Shipping Corporation and other concerned shipping companies, all workshops approved by DG (P&S) undertaking annual servicing, inspection, testing and maintenance of Life-Saving Appliances (LSA) and Fire-Fighting Appliances (FFA), Karachi Port Trust, Port Qasim Authority, Gwadar Port Authority and other relevant port / terminal operators, Offshore operators , Ship Recycling facilities , Karachi Ship yard Engineering Works and other relevant marine-industry stakeholders, Maritime Training Institutes in Public and Private sector.

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Subject: PROHIBITION AND DISPOSAL OF FIRE-FIGHTING FOAMS CONTAINING PERFLUOROOCTANE SULFONIC ACID (PFOS)

EFFECTIVE DATE: With effect from 1 January 2026, in accordance with the application and transition provisions set out in this Circular.

1. PURPOSE

1.1. The purpose of this Marine Circular is to inform the maritime industry of the IMO amendments prohibiting the use or storage on board ships of fire-extinguishing media containing perfluorooctane sulfonic acid (PFOS) including fire-fighting foam concentrates. The requirements are intended to protect persons on board from exposure to hazardous substances and to reduce the environmental impact of fire-extinguishing media.

1.2. This Circular also prescribes compliance, verification, servicing, record-keeping and safe-disposal measures for Pakistan-flagged ships and provides directions to MMD/DG(P&S)-approved workshops engaged in annual servicing, inspection, testing and maintenance of LSA/FFA equipment.

2. INTERNATIONAL REGULATORY REQUIREMENTS AND APPLICATION

2.1. IMO Resolution MSC.532(107) introduced SOLAS Chapter II-2 regulation 10.11, entitled “Fire-extinguishing media restrictions”. Under regulation 10.11.2.2, the use or

storage of extinguishing media containing PFOS is prohibited. Regulation 10.11.2.1 requires prohibited substances, when removed from a ship, to be delivered to appropriate shore-based reception facilities.

2.2. For ships constructed on or after 1 January 2026, SOLAS regulation II-2/10.11 applies from construction/delivery in accordance with the Convention. Ships constructed before 1 January 2026 are required, under SOLAS regulation II-2/1.2.10, to comply with regulation II-2/10.11.2 no later than the date of the first survey on or after 1 January 2026. The meaning of "first survey" is to be determined in accordance with the applicable IMO unified interpretation, including MSC.1/Circ.1290.

2.3. For the purpose of verification under the IMO unified interpretation MSC.1/Circ.1694, fire-extinguishing media containing PFOS means media in which PFOS is present in a concentration above 10 mg/kg (0.001% by weight). The Administration/RO is to verify compliance by reviewing the foam manufacturer's declaration or laboratory test report. Where neither is available for media installed before 1 January 2026, sampling and testing should be undertaken using a recognized standard.

2.4. The corresponding amendments to the 1994 and 2000 International Codes of Safety for High-Speed Craft are contained in IMO Resolutions MSC.536(107) and MSC.537(107), respectively. Owners and operators of HSC shall comply with the applicable Code provisions.

2.5. The statutory application of the SOLAS amendments is governed by the relevant Convention and Code provisions. This Circular shall not be construed as extending SOLAS requirements to every foreign vessel merely by reason of its presence in Pakistan's territorial waters. Foreign ships remain subject to applicable international obligations, port State control powers and any valid directions issued under Pakistani law.

3. PROHIBITION

3.1. No Pakistan-flagged ship within the scope of SOLAS, and no High-Speed Craft to which the relevant HSC Code amendments apply, shall use or store fire-extinguishing media containing PFOS above the threshold specified in MSC.1/Circ.1694 after the applicable compliance date.

3.2. The prohibition covers fire-extinguishing media used in fixed and portable arrangements where within the scope of the applicable Convention or Code requirements. PFOS-containing foam shall not be used for drills, testing, demonstrations or actual fire-fighting once the applicable compliance date has been reached.

3.3. Shipowners and operators shall not procure, replenish, recharge or install PFOS-containing extinguishing media for use on a vessel subject to the prohibition. Any replacement medium shall be suitable for the hazard and system concerned, and shall meet applicable IMO performance, approval and equipment requirements.

4. ACTION REQUIRED BY SHIPOWNERS, OPERATORS AND MASTERS

4.1. An inventory review shall be carried out of all fixed foam fire-extinguishing systems, portable foam extinguishers and other relevant fire-extinguishing media on board. The

inventory shall identify the product name, foam type, manufacturer, batch/lot number, production period, quantity, location, system served and available PFOS declaration or test evidence.

4.2. The ship shall retain the manufacturer's declaration and/or laboratory test report demonstrating that the relevant extinguishing medium does not contain PFOS above 10 mg/kg (0.001% by weight). The declaration should identify, as applicable, the foam type, production period, batch number and reference to relevant type approval/certification. Where documentary evidence is unavailable for pre-2026 media, the company shall arrange sampling and testing by a competent laboratory using a recognized standard, such as NPR-CEN/TS 15968 (NPR stands for Nederlandse Praktijkrichtlijn (Dutch Practice Guideline,"CEN/TS 15968:2010 or an equivalent validated analytical method") or an equivalent recognized method.

4.3. Where PFOS-containing media is identified, the company shall arrange its safe removal and replacement by the applicable compliance date. Removal, transfer and replacement shall be planned so that the ship's fire protection is not left ineffective. Any impairment of a required fire-extinguishing system shall be managed under the ship's safety management procedures and reported to the Administration/RO as required.

4.4. Removed PFOS-containing media shall be securely contained, labelled and delivered to an appropriate shore-based reception facility or other facility authorized by the competent national authority for handling such waste. Disposal at sea, discharge overboard, discharge through bilge systems or uncontrolled disposal ashore is prohibited. Documentary evidence/receipts of transfer and disposal shall be retained by the company and made available to the Administration/RO.

4.5. The company shall ensure that the Safety Management System (SMS), planned maintenance system and relevant shipboard procedures are updated to cover identification, handling, replacement, testing, storage restrictions, waste transfer and record retention for PFOS-containing media.

5. REQUIREMENTS FOR MMD/DGP&S-APPROVED LSA/FFA SERVICING WORKSHOPS

5.1. All workshops approved by MMD/DGP&S for annual servicing, inspection, testing, maintenance, recharging or repair of LSA/FFA equipment shall incorporate PFOS verification into their relevant FFA servicing procedures with immediate effect.

5.2. Before servicing, recharging or replenishing any foam-based fire-extinguishing equipment, the workshop shall check the manufacturer's declaration, product label, batch details and/or laboratory test report to establish whether the extinguishing medium contains PFOS above the applicable threshold. A product shall not be represented as PFOS-free without reliable documentary or test evidence.

5.3. Workshops shall not supply, refill, recharge, install or return to service PFOS-containing extinguishing media for a ship after the applicable compliance date. Workshops shall advise the shipowner/Master and the attending RO or MMD surveyor where PFOS-containing media is found or where its composition cannot be established.

5.4. Workshops undertaking removal or replacement shall use suitable containment arrangements and shall ensure that removed concentrate and any contaminated residues or cleaning liquids are collected and transferred to an authorized shore-based waste handler/reception facility. Such material shall not be discharged into drains, harbour waters, the sea or shipboard bilge systems.

5.5. Where a system is converted to a replacement foam, the workshop shall verify compatibility with the system design, proportioning equipment, pumps, eductors, seals, pipework and intended fire hazard. The workshop shall follow the foam and equipment manufacturers' instructions and obtain RO/Administration approval where required. A change of foam type shall not compromise the required fire-extinguishing performance.

5.6. Each workshop shall maintain a service record stating the vessel name and IMO number (where applicable), equipment/system serviced, old and replacement foam details, manufacturer and batch numbers, PFOS declaration/test report reference, quantity removed and supplied, cleaning/flush work performed, waste-reception/disposal receipt reference, tests carried out and name/signature of the responsible technician. Records shall be made available to MMD/DG(P&S) and the RO upon request.

5.7. MMD/DG(P&S)-approved workshops shall review their internal procedures, staff instructions and procurement controls to ensure that PFOS-containing products are not inadvertently supplied or used. Any failure to comply with these directions may be considered in the review, suspension or withdrawal of workshop approval, in accordance with applicable approval conditions and law.

6. REPLACEMENT FOAMS AND SYSTEM CONVERSION

6.1. Fluorine-free foam (F3) may be considered as a replacement, provided that the selected product is suitable for the particular fire risk and system, meets the applicable IMO performance and approval requirements, and is accepted by the Administration/RO where required. The SOLAS PFOS amendment does not, by itself, impose a universal requirement that every ship must use F3 foam; the mandatory requirement is that prohibited PFOS-containing media shall not be used or stored after the applicable compliance date.

6.2. The shipowner, operator and servicing workshop shall verify that the replacement concentrate is compatible with the existing fixed or portable system. Differences in viscosity, proportioning characteristics, expansion, drainage, application method and equipment materials shall be assessed using manufacturer data and, where appropriate, RO review.

6.3. Removal of the former concentrate and cleaning or flushing of the system shall be undertaken in accordance with the foam/system manufacturers' instructions and the approved conversion method. All removed concentrate, residues and cleaning liquids shall be collected and managed as waste through an appropriate shore-based facility. No universal triple-rinse procedure is prescribed by SOLAS regulation II-2/10.11; the method and extent of cleaning shall be determined by the applicable manufacturer's instructions, system design and competent technical assessment.

6.4. Following conversion, the system shall be inspected and functionally tested as appropriate, without discharging PFOS-containing residues into the environment. Required testing shall be coordinated with the RO/Administration and documented. The vessel shall retain the new foam's product documentation, approval/certification, compatibility assessment, service report and evidence of lawful disposal of the removed media.

7. RECOGNIZED ORGANIZATIONS AND SURVEY

7.1. Recognized Organizations acting on behalf of the Administration shall verify compliance during the relevant statutory survey, in accordance with SOLAS and the applicable authorization arrangements. Verification should include review of the manufacturer's declaration or laboratory test report, examination of relevant equipment and records, and confirmation that removed prohibited media has been delivered to appropriate shore-based reception facilities.

7.2. Where the foam concentrate or its PFOS content cannot be verified, the RO shall advise the company to obtain appropriate sampling and testing evidence and shall report any unresolved non-compliance to DG(P&S). Replacement or modification of a fixed fire-extinguishing system shall be subject to applicable statutory/class approval and survey requirements.

7.3. Upon satisfactory verification, the vessel shall retain the relevant compliance evidence with its fire safety/statutory documentation and make it available during flag State and port State control inspections.

8. RECORDS AND DOCUMENTATION

8.1. Shipowners, operators, Masters and approved workshops shall maintain, as applicable, inventory records, manufacturer declarations, laboratory reports, foam approval documents, risk/compatibility assessments, servicing and testing reports, conversion records, waste transfer notes and reception/disposal certificates.

8.2. Records shall be kept on board or at the company/workshop office, as appropriate, and produced to DG(P&S)/MMD, the RO or other duly authorized inspecting authority upon request.

9. IMPLEMENTATION AND COMPLIANCE

9.1. Companies shall ensure that each vessel's compliance date is determined by reference to its construction date and the first survey provisions in SOLAS Chapter II-2. For existing ships constructed before 1 January 2026, the applicable deadline is no later than the first survey on or after 1 January 2026.

9.2. All MMD/DG(P&S)-approved LSA/FFA servicing workshops shall implement the controls in paragraphs 5 and 6 of this Circular and shall ensure that their personnel are briefed before undertaking further foam servicing or replenishment.

9.3. Any difficulty in implementation, uncertainty regarding PFOS test evidence, or proposed alternative method of compliance shall be referred to the Chief Nautical Surveyor, DG(P&S), through the relevant Mercantile Marine Department, with supporting technical documentation.

10. ENQUIRIES

10.1. For clarification or further information, correspondence may be addressed to the Chief Nautical Surveyor, Directorate General Ports & Shipping, Ministry of Maritime Affairs, Government of Pakistan, Karachi.

This Circular is issued with the Approval of the Competent Authority.



Capt. Rafaqat Hussain
Chief Nautical Surveyor
Directorate General Ports & Shipping Wing Karachi
Ministry of Maritime Affairs

Distribution:

1. The Director General, Ports & Shipping Wing, Karachi.
2. The Principal Officer, Mercantile Marine Department, Karachi.
3. The Chief Engineering & Ship Surveyor, (CESS)
4. Recognized Organizations authorized by the Administration.
5. The Chairman, Karachi Port Trust
6. Chairman Port Qasim Authority
7. Chairman Gwadar Port Authority.
8. The Chairman, Pakistan National Shipping Corporation (PNSC), Karachi.
9. Karachi Shipyard & Engineering Works
10. All Public and Private Maritime Training Institutes.
11. All MMD/DG(P&S)-approved LSA/FFA servicing, testing and maintenance workshops.
12. All relevant shipyards, terminals, offshore operators and ship-recycling facilities.