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DGS CIRCULAR NO. XX OF 2026

Nautical Wing - Safety in Carriage of Cargoes and Containers Branch	
File No. 25-63011/20/2026-NT – DGS (Comp. No.:39255)	**Date: XXX.06.2026**
Authorised By: Nautical Advisor to the Government of India.	**Subject:** Implementation of IMDG Code 2024 (Amendment 42-24) and Additional Safety Measures for Prevention of Fire and Explosion Incidents for Safe Carriage of Lithium and Sodium-Ion Batteries by Sea – reg.

1. The safety of ships, cargo, and the protection of the marine environment remain paramount to the Directorate General of Shipping (DGS). The Directorate remains firmly committed to ensuring the highest standards of maritime safety through the effective implementation of conventions and their amendments adopted under the auspices of the International Maritime Organization (IMO).

2. The International Convention for the Safety of Life at Sea, 1974 (SOLAS), as amended, deals with various aspects of maritime safety and Chapter VII of SOLAS contains the mandatory provisions governing the carriage of dangerous goods in packaged form or in solid form in bulk.

3. The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL), deals with various aspects of prevention of marine pollution, and Annex III of MARPOL prescribes the mandatory provisions for the prevention of pollution by harmful substances carried by sea in packaged form. Regulation 1(2) prohibits the carriage of harmful substances in ships except in accordance with the provisions of Annex III, which are also amplified by the IMDG Code.

4. A meeting was conducted with container lines and industry stakeholders regarding the fire and explosion incidents involving the carriage of lithium-ion batteries reported in and around the Indian coast during the past year.

5. During the meeting, it was noted that the primary reasons for such incidents were non-declaration or misdeclaration of lithium-ion batteries as non-dangerous goods (Non-DG cargo), and carriage of batteries without adequate safeguards and proper packaging as prescribed under the IMDG Code.

6. The Maritime Safety Committee (MSC) at its 108th session adopted the IMDG Code 2024 (Amendment 42-24) vide Resolution MSC.556(108), which puts forth various new mandatory requirements for the carriage, stowage, marking, packaging, and labelling of lithium and sodium-ion batteries on ships.

7. In view of the foregoing, and to safeguard maritime infrastructure, ships, coastal ecology, and human lives on board ships from the hazards caused by shipboard fires, the Competent Authority hereby directs the following measures for the carriage of batteries and battery-related products by sea.

8. The classification of batteries and related equipment shall strictly adhere to the updated framework:

a) Shipments shall be classified under UN 3480 (Lithium ion batteries), UN 3481 (Lithium ion batteries contained in/packed with equipment), UN 3090 (Lithium metal batteries), UN 3091 (Lithium metal batteries contained in/packed with equipment), UN 3551 (Sodium ion batteries), and UN 3552 (Sodium ion batteries contained in/packed with equipment).

b) Vehicles powered by specific battery types shall be documented under UN 3556 (Vehicle, lithium ion battery powered), UN 3557 (Vehicle, lithium metal battery powered), or UN 3558 (Vehicle, sodium ion battery powered). The use of UN 3171 is restricted exclusively to vehicles powered by wet, metallic sodium, or sodium alloy batteries.

c) Lithium batteries installed in a Cargo Transport Unit (CTU), including Battery Energy Storage Systems (BESS), shall be classified under UN 3536.

9. To mitigate thermal accumulation and ignition risks, the following stowage parameters shall be enforced:

a) Packages and CTUs must be stowed a minimum distance of 2.4 meters away from any heated ship structure (including steam pipes, heating coils, or machinery space bulkheads) where the surface temperature is liable to exceed 55°C.

b) Cargo shall be stowed "Clear of living quarters," requiring a minimum distance of 3 meters from accommodation areas, air intakes, machinery spaces, and other enclosed work areas.

c) Packages stowed on deck outside of closed CTUs must be shaded from direct sunlight. Voyage planning must account for the rapid internal heating of CTUs exposed to direct sun.

d) UN 3536 (BESS/CTUs) must be assigned Stowage Category D (On deck only) and is strictly prohibited on passenger ships carrying more than 25 passengers, or more than 1 passenger per 3 meters of overall length.

e) Compliance with new stowage code SW31 requires strict segregation from potential ignition sources. The State of Charge (SoC) for standalone lithium-ion shipments should not exceed 30% of the rated capacity.

f) Shipping lines and vessel operators should limit block stowage of lithium battery cargo to minimize thermal propagation risks.

g) Enhanced segregation shall be maintained between lithium-ion battery cargo and other IMDG cargoes.

h) Lithium-ion battery cargo should, as far as practicable, maintain at least one-bay separation from accommodation spaces and engine room casing.

10. Packaging Instructions for Standard Shipments

a) Cells and batteries must be placed in inner packagings or separated by suitable means, such as trays or dividers, to prevent movement and damage during normal transport conditions. Absolute protection against short circuits must be ensured.

b) Vehicles powered by lithium or sodium-ion batteries may be transported unpackaged only if they remain upright and stable without support. Vehicles prone to toppling must be secured using appropriate crates, pallets, bracing, frames, or racking.

c) Pre-production prototypes or production runs of fewer than 100 cells/batteries transported for testing must meet the rigorous packaging standards stipulated in Special Provision 310.

11. Handling of Damaged, Defective, or End-of-Life Batteries

a) Where a lithium battery installed in an article is found to be damaged or defective, it must be removed and packed separately prior to transport.

b) Packaging for damaged or defective batteries liable to dangerously react or experience thermal runaway must be fully surrounded by non-combustible, electrically non-conductive thermal insulation.

c) The packaging design must ensure that during a thermal event, the outside surface temperature of the completed package does not exceed 100°C (with momentary spikes up to 200°C permitted). If coolants such as dry ice or liquid nitrogen are utilized, the packaging must maintain structural integrity at sub-zero temperatures.

d) Batteries destined for recycling or disposal must be explicitly packaged to prevent short circuits and dangerous heat evolution, and marked accordingly.

12. Marking, Labelling, and Documentation

a) Cargo must bear the designated “Lithium or Sodium Ion Battery Class 9 Label” and the “Lithium or Sodium Ion Battery Mark.” Individual batteries do not require independent marking if the pallet assembly bears the correct UN mark and Class 9 label.

b) Enclosed CTUs containing battery-powered vehicles (UN 3556, 3557, 3558) must be externally placarded if the internal cargo cannot be readily identified.

c) The UN Manual of Tests and Criteria (Part III, subsection 38.3) test summary must be made readily available by manufacturers and distributors for immediate verification by any supply chain participant.

d) Any active tracking devices or data loggers placed inside a cargo transport unit must be securely installed and independently certified as safe for use within hazardous environments.

13. In order to prevent non-declaration or misdeclaration of lithium-ion battery cargo as Non-DG cargo, the following best practices are recommended for implementation by shipping lines, Multimodal Transport Operators (MTOs), logistics providers, and terminal operators:

a) Bills of Lading and packing lists should be scrutinized for cargo descriptions indicative of lithium-ion battery related cargo and simple software-based checks may be utilized to identify whether such cargo has been properly declared under IMDG requirements.

b) Dedicated cargo screening teams for identifying potential lithium-ion battery shipments may be established by carriers and logistics operators.

c) Keyword-based screening for cargo descriptions such as charger, inverter, solar charger, adapter, and other battery-related terms should be undertaken. HS Code analysis and verification of shipper details may also be carried out to identify suspicious consignments.

d) In doubtful cases, additional supporting documents may be sought from shippers and physical inspection of cargo may be conducted wherever considered necessary.

14. Shipping companies and vessel operators are encouraged to enhance onboard preparedness and firefighting capability for lithium battery related incidents by:

a) Deployment of hydro-pens onboard container ships for efficient fire fighting; and

b) Provision of fire hose support stands for sustained cooling and boundary cooling operations during cargo fire incidents.

15. In the event of any non-compliance identified during transport or upon receipt, or in the case of an emergency exposure situation, the carrier, consignor, or consignee must take immediate mitigation steps. Furthermore, a detailed investigation report regarding the causes, circumstances, and corrective actions taken must be communicated immediately to this Directorate and the relevant port authorities.

16. Consignors, logistics agents, and carriers shall retain a copy of the dangerous goods transport document, the UN 38.3 test summaries, and all supplementary information regarding battery shipments for a minimum period of three (3) months. These documents must be readily reproducible in printed form upon request by Flag State or Port State Control officers.

17. Shipping companies, Carrier Lines, Multimodal Transport Operators (MTOs), and terminal operators must ensure that all shore-based personnel and seafarers involved in the transport, handling, and stowage of batteries receive updated familiarization training. Training curriculums must integrate the specific risks of lithium and sodium-ion thermal runaway and ensure full compliance with the training requirements stipulated in the IMDG Code.

18. Compliance with the provisions of this Circular shall be verified during Port State Control inspections and Flag State inspections. Port authorities, shippers, shipping lines, logistics agents, and Multimodal Transport Operators (MTOs) shall ensure strict adherence to the above requirements.

19. All concerned stakeholders are advised to bring the contents of this Circular to the notice of their personnel and ensure effective implementation.

The provisions of this Circular shall come into force with effect from xx June 2026.

Capt. Ravi Singh Sikarwar
Nautical Surveyor-cum- DDG (Tech.)

Copy to:

1. DGS Secretariat.
2. All Major/Non-Major Port Authorities of India.
3. Multimodal Transport Operators, MANSA, Logistic Agents, Shipping Companies.
4. INSA, MASSA, FOSMA, ICCSA.
5. Computer Cell.