International Maritime Solid Bulk Cargo (IMSBC) Code — study guide

Solid bulk cargoes — coal, ore, DRI, grain, fertilisers — carry hazards that are invisible until the hold is opened. The IMSBC Code exists to manage them. This guide covers the cargo groups, the main risks and the loading precautions.[1]

Cargo groups

The IMSBC Code sorts solid bulk cargoes into three groups. **Group A** covers cargoes that may **liquefy**; **Group B** covers cargoes that possess a **chemical hazard**; **Group C** covers cargoes that present neither of these hazards. Coal can belong to groups **A and B**.

Chemical and physical risks

Direct Reduced Iron (DRI), when it reacts with water and air, can produce **hydrogen and heat**, and oxygen may be depleted in enclosed spaces. Group B cargoes require precautions against **toxic gas**, **fire and explosion**, and **corrosion**. Solid bulk cargoes can involve serious risks that must be managed carefully to safeguard the crew and the ship.

Authorisation and exemptions

For **Group C** cargo, carriage can be authorised by the port of loading, and the competent authorities of the unloading port and the **flag state** will be informed of the authorisation. Where an exemption is issued by the loading port authority, it is the **flag state authority** and the **unloading port authority** that decide whether it is accepted or rejected.

Cargo information

The Master must obtain the cargo's **physical and chemical properties** from the shipper prior to loading. Two common links of bulk cargo: the product is generally sold by weight or volume, and the product is nearly uniform no matter who produced it. Individual cargo schedules are found in the ship's safety management procedure, and the required distribution of cargo through the hold is found in the ship's safety management system or by using loading calculators.

Before and during loading

Checks before loading include that the bilge lines, sounding pipes and other service lines are in good order, and that the bilge wells and strainer plates are prepared to facilitate drainage and prevent cargo entering the bilge system. Ventilation systems should **not** be switched off before loading starts.

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Key facts to remember

- Groups: A = may liquefy; B = chemical hazard; C = neither. Coal can be A and B.
- DRI + water/air → hydrogen and heat; oxygen can be depleted. Group B: toxic gas, fire/explosion, corrosion.
- Group C carriage authorised by loading port; flag state informed. Exemption decisions by flag state and unloading port.
- Obtain cargo physical and chemical properties from the shipper before loading.
- Pre-loading: check bilge/sounding/service lines; prepare bilge wells and strainers for drainage.
- Don't switch ventilation off before loading.

Sources

1. IMO International Maritime Solid Bulk Cargoes (IMSBC) Code — cargo classification, individual schedules and loading precautions (with SOLAS Chapter VI).