

Statutory Certification for International Maritime Dangerous Goods Code (IMDG Code)

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TECHNICAL INSTRUCTIVE Statutory Certification for International Maritime Dangerous Goods Code

(IMDG Code)

1. Objectives.

- .1 The purpose of this Instructive is to provide detailed guidelines and survey requirements to carry out the statutory certification of the ship, in accordance with the provisions of:
 - .1 The International Maritime Dangerous Goods Code (IMDG Code), as amended.
 - .2 The International Convention for the Safety of Life at Sea, 1974 (SOLAS), as amended, Chapter II-2, regulation 19 or 54, as appropriate, including the issuance of the corresponding Document of Compliance-Special Requirements for Ships carrying Dangerous Goods (IMDG-Document of Compliance).

2. Application.

- .1 This Instructive only applies for ships in services (existing ships).
- .2 The IMDG Code is legally treated as a mandatory instrument under SOLAS Chapter VII.
- .3 The provisions contained in the IMDG Code apply to all ships to which the SOLAS regulations apply and which are carrying dangerous goods as defined in SOLAS Chapter VII, Part A, regulation 1.
- .4 Compliance with SOLAS Chapter II-2, **regulation 19** (2000 amendments, which entered into force from 01 July 2002) is a mandatory requirement for a ship carrying, or intending to carry, dangerous goods as defined in SOLAS Chapter VII, regulation 2, except class 6.2 and 7, and is:
 - .1 A passenger ship constructed on or after 01 July 2002; or
 - .2 A cargo ship of 500 gross tonnage or over constructed on or after 01 July 2002; or
 - .3 A cargo ship of less than 500 gross tonnage constructed on or after 01 July 2002.

All such ships shall be issued with an IMDG-Document of Compliance in accordance with regulation II-2/19.4.

- .5 Compliance with SOLAS Chapter II-2, **regulation 54** (before 01 July 2002) is a mandatory requirement for a ship carrying, or intending to carry, dangerous goods as defined in SOLAS Chapter VII, regulation 2, except class 6.2 and 7, and is:
 - .1 A passenger ship constructed on or after 01 September 1984 but before 01 July 2002; or
 - .2 A cargo ship of 500 gross tonnage or over constructed on or after 01 September 1984 but before 01 July 2002; or
 - .3 A cargo ship of less than 500 gross tonnage constructed on or after 01 February 1992 but before 01 July 2002.
 - All such ships shall be issued with an IMDG-Document of Compliance in accordance with regulation II-2/54.3.

For cargo ships of less than 500 gross tonnage constructed on or after 01 September 1984 and before 01 February 1992, it is recommended that Contracting Parties extend such application to these cargo ships as far as possible.

- .6 All ships, irrespective of type and size, carrying substances, materials or articles identified in IMDG Code Chapter 2.10 as marine pollutants, are subject to the provisions of this Code (see definition 5.3 below).
- .7 Ships falling outside the parameters specified in paragraph 2.4 above, and ships of countries which have not signed SOLAS will, in many cases, wish to comply with SOLAS Chapter II-2, regulation 54 as the Port State Control of some major trading nations require all ships entering their ports to fully comply if dangerous goods are being carried.



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- .8 It needs to be emphasized that, in the context of the language of this Instructive, the words "shall", "should" and "may", when used, mean that the relevant provisions are "mandatory", "recommendatory" and "optional", respectively.
- .9 This Instructive will enter into force on **01 October 2021.**

3. Scope.

- .1 This Instructive shall be used by the designated Surveyors and Marine Division to carry out the statutory certification of the ship, in accordance with the provisions of the IMDG Code and SOLAS Chapter II-2, regulation 19 (or 54), which includes:
 - .1 Conducting the required surveys onboard for the IMDG Code certification.
 - .2 Issuance of the corresponding IMDG-Document of Compliance (Interim and Full-Term).

4. Relevant documentation.

- .1 The following documentation is relevant for the control of this Instructive:
 - .1 International Convention for the Safety of Life at Sea, 1974 (SOLAS), as amended.
 - .2 International Maritime Dangerous Goods Code (IMDG Code), as amended.
 - .3 International Maritime Solid Bulk Cargoes Code (IMSBC Code) amended by Resolution MSC.462 (101), referred as IMSBC Code 5th amendment.
 - .4 ICS Class Technical Instructive PO02-TI10-Surveys and Certificates under the Harmonized System of Survey and Certification (HSSC).
 - .5 ICS Class Technical Instructive PO02-TI24-Statutory Certification for International Maritime Solid Bulk Cargoes Code (IMSBC Code).

5. Definitions.

- .1 **Dangerous goods:** mean the substances, materials and articles covered by the IMDG Code.
- .2 **Dangerous goods in solid form in bulk:** means any material, other than liquid or gas, consisting of a combination of particles, granules or any larger pieces of material, generally uniform in composition, which is covered by the IMDG Code and is loaded directly into the cargo spaces of a ship without any intermediate form of containment, and includes such materials loaded in a barge on a barge-carrying ship
- .3 **Marine pollutants:** means substances which are subject to the provisions of Annex III of MARPOL Convention, as amended.
- .4 **Packaged form:** means the form of containment specified in the IMDG Code.
- .5 **Cargo unit:** means a vehicle, container, flat, pallet, portable tank, packaged unit, or any other entity, etc., and loading equipment, or any part thereof, which belongs to the ship but is not fixed to the ship as defined in Resolution A.489(XII).
- .6 **Cargo transport unit:** means a road transport tank or freight vehicle, a railway transport tank or freight wagon, a multimodal freight container or portable tank, or a multiple-element gas container (MEGC).
- .7 **Intermediate bulk container (IBC):** means a rigid, semi-rigid or flexible, portable bulk container packaging of a capacity of not more than 3 m³ (3,000 litres), designed for mechanical handling and tested for its satisfactory resistance to handling and transport stresses.
- .8 **Portable tank:** means a tank which is not permanently secured on board a ship, and has a capacity of more than 450 litres and a shell fitted with external stabilizing members and items of service equipment and structural equipment necessary for the transport of gases, liquids or solids.



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- .9 **Cargo space:** means any space in a ship designated for carriage of cargoes.
- .10 **Constructed**: means the date of keel laid or the date of which the ship was at a similar stage of construction.
- .11 **"A-60" class divisions:** are smoke and fire-resistant divisions formed by insulated steel bulkheads and decks complying with the SOLAS standard fire test criteria for 60 minutes exposure. They shall be insulated with non-combustible materials such that the average temperature of the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature, at any one point, including any joint, rise more than 180°C above the original temperature, within 60 minutes.
- .12 **Special category spaces**: are those enclosed vehicle spaces above and below the bulkhead deck, into and from which vehicles can be driven and to which passengers have access. Special category spaces may be accommodated on more than one deck provided that the total overall clear height for vehicles does not exceed 10 m.
- .13 **Ro-ro cargo spaces:** are spaces not normally subdivided in any way and extending to either a substantial length or the entire length of the ship in which goods (packaged or in bulk, in or on rail or road cars, vehicles, trailers, containers, pallets, demountable tanks or in or on similar stowage units or other receptacles) can be loaded and unloaded normally in a horizontal direction.
- .14 **Open ro-ro spaces:** are ro-ro spaces either open at both ends or open at one end, and provided with adequate natural ventilation effective over their entire length through permanent openings distributed in the side plating or deckhead or from above, having a total area of at least 10% of the total area of the space sides.
- .15 **Closed ro-ro cargo spaces:** are ro-ro cargo spaces which are neither open ro-ro cargo spaces nor weather decks.
- .16 **Open-top containership:** means a containership especially designed so that one or more of the cargos holds need not be fitted with hatch covers.
- .17 Weather deck: is a deck which is completely exposed to the weather from above and from at least two sides. Note: An open deck extending into a ro-ro cargo space not having sufficient openings to be considered "open" does not fall under the definition weather deck in the context of dangerous goods.

6. Introduction.

- .1 From 01 January 2011, for carrying solid bulk cargoes, including dangerous goods in solid form in bulk, the ships shall have a valid **IMSBC-Certificate of Compliance** before loading, in accordance with ICS Class Technical Instructive PO02-TI24-Statutory Certification for International Maritime Solid Bulk Cargoes Code (IMSBC Code).
- .2 The carriage of dangerous goods by sea, in packaged form or in solid form in bulk, is regulated based on the safety considerations set out in SOLAS Chapter VII, Part A and Part A-1. More recently, as marine pollution has become a serious concern, further steps have taken to regulate the carriage of marine pollutants, as described in MARPOL Convention, Annex III. The IMDG Code amplifies the requirements of both Conventions and has become the standard guide to all aspects of handling dangerous goods and marine pollutants in sea transport.
- .3 In 2002, through Resolution MSC.122(75), amendments to SOLAS Chapter VII were adopted to make the IMDG Code mandatory, which entered into force on **01 January 2004**. The carriage of dangerous goods is prohibited except in accordance with the relevant provisions of the IMDG Code.



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- .4 The IMDG Code lays down basic principles: detailed recommendations for individual substances, materials and articles, and a number of recommendations for good operational practice, including advice on terminology, packing, labelling, stowage, segregation and handling, and emergency response action.
- .5 Although the information in the IMDG Code is directed primarily at the mariner, its provisions may affect a range of industries and services: manufacturers, packers, shippers, feeder services such as road and rail, and port authorities will find reliable advice on terminology, packing, labelling, classification, stowage, segregation, and emergency response action.
- .6 The IMDG Code is evolving and is updated every two years to take account the new dangerous goods which have to be included, new technology and methods of working with or handling dangerous goods, and safety concerns which arise as a result of experience. Each version of the Code is given an Amendment number to signify how many times it has been updated. This number appears at the bottom of each page together with the year of the Amendment. Although the Code is updated every two years, the basic structure remains constant.
- .7 The IMDG Code has undergone many changes over the years, in both format and content, in order to keep up with the rapid expansion of the shipping industry. IMDG Code, 2018 Edition (Amendment 39-18) includes revisions to various sections of the Code and to transport requirements for specific substances. Amendment 39-18 of the IMDG Code is mandatory as from 01 January 2020. Validity of this edition has been extended until 31 May 2022. The 2020 Edition (Amendment 40-20) comes into force on 01 June 2022 and may be applied voluntarily as from 01 January 2021.
- .8 The IMDG Code is presented in two Volume. The two-volume Code is divided into seven parts. Volume 1 contains Parts 1, 2, 4, 5, 6 and 7. Volume 2 contains Part 3. Also available is the IMDG Code Supplement, containing several related texts such as: Emergency response procedures, Medical first aid guide, Reporting procedures, Carriage of packaged irradiated nuclear fuel, etc.
- .9 Dangerous goods commonly transported are listed in the Dangerous Goods List in IMDG Code, Chapter 3.2 (refer to IMDG Code, Volume 2). Where an article or substance is specifically listed by name, it shall be identified in transport by the Proper Shipping Name in the Dangerous Good List.
- .10 Carriage of dangerous goods as defined in SOLAS Chapter VII, regulations 1 and 7, shall be in accordance with SOLAS Chapter VII, Part A and Part A-1, IMSBC Code, IMDG Code and supplemental requirements, which may be imposed by the flag Administration. In addition to complying with the aforementioned requirements, SOLAS Chapter II-2 regulation 19 or 54, as appropriate, provides additional safety measures in order to address the fire safety objectives of that Chapter II-2 for ships carrying dangerous goods.
- .11 Unless provided otherwise by the IMDG Code, the following are forbidden from transport: Any substance or article which, as presented for transport, is liable to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive or flammable gases or vapours under normal conditions of transport. The special provisions in the IMDG Code Chapter 3.3 list certain substances, which are forbidden for transport.
- .12 Dangerous goods shall be carried in packaged form or in solid form in bulk, in accordance with Sections 8 and 9 below.



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7. Classification of dangerous goods. UN Number and PSN.

- .1 For the purpose of the IMDG Code, the dangerous goods have been classified into nine (9) classes, to subdivide a number of these classes and to define and describe characteristics and properties of the substances, materials and articles which fall within each class or division. The way in which different classes of dangerous goods are handled in transport will depend upon these properties and hazards, for example:
 - .1 The type of packaging that can be used.
 - .2 What classes of dangerous goods can be transported together in freight containers.
 - .3 Where the goods can be stored within the port and on the ship.
- .2 Substances (including mixtures and solutions) and articles subject to the provisions of the IMDG Code are assigned to one of the classes 1-9 according to the hazard or the most predominant of the hazards they present. Some of these classes are subdivided into divisions. These classes or divisions are as listed below:

Class 1:	Explosives.			
Division 1.1:	Substances and articles which have a mass explosion hazard.			
Division 1.2:	Substances and articles which have a projection hazard but not a mass explosion			
	hazard.			
Division 1.3:	Substances and articles which have a fire hazard and either a minor blast hazard			
	or a minor projection hazard or both, but not a mass explosion hazard.			
Division 1.4:	Substances and articles which present no significant hazard.			
Division 1.5:	Very insensitive substances which have a mass explosion hazard.			
Division 1.6:	Extremely insensitive articles which do not have a mass explosion hazard.			
Class 2:	Gases.			
Class 2.1:	Flammable gases.			
Class 2.2:	Non-flammable, non-toxic gases.			
Class 2.3:	Toxic gases.			
Class 3:	Flammable liquids.			
Class 4:	Flammable solids; substances liable to spontaneous combustion;			
	substances which, in contact with water, emit flammable gases.			
Class 4.1:	Flammable solids, self-reactive substances and solid desensitized explosives.			
Class 4.2:	Substances liable to spontaneous combustion.			
Class 4.3:	Substances which, in contact with water, emit flammable gases.			
Class 5:	Oxidizing substances and organic peroxides.			
Class 5.1:	Oxidizing substances.			
Class 5.2:	Organic peroxides.			
Class 6:	Toxic and infectious substances.			
Class 6.1:	Toxic substances.			
Class 6.2:	Infectious substances.			
Class 7:	Radioactive material.			
Class 8:	Corrosive substances.			
Class 9:	Class 9: Miscellaneous dangerous substances and articles.			
Note: The numerical order of the classes and divisions is not that of the degree of danger.				



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- .3 Dangerous goods are assigned to UN numbers and Proper Shipping Names (PSN) according to their hazard classification and composition. Within each of the 9 hazard classes dangerous goods are uniquely identified by two pieces of information:
 - .1 A four-digit number known as **UN Number** which is preceded by the letters UN.
 - .2 The corresponding Proper Shipping Name (PSN).

For example, kerosene is identified in the IMDG Code by UN 1223 and PSN Kerosene.

8. Carriage of dangerous goods in packaged form.

- .1 The dangerous goods, except dangerous goods in solid form in bulk listed in Section 9 below, paragraph 9.4, are carried in packaged form in compliance with:
 - .1 SOLAS Chapter VII, Part A.
 - .2 The relevant provisions of the IMDG Code.
- .2 Unless expressly provided otherwise, SOLAS Chapter VII, Part A applies to the carriage of dangerous goods in packaged form in all ships, to which the SOLAS regulations apply and in cargo ships of less than 500 gross tonnage. The carriage of dangerous goods in packaged form is prohibited except in accordance with the provisions of SOLAS Chapter VII Part A.
- IMDG Code Part 4 provides provisions for using of packaging, including intermediate bulk .3 containers (IBCs), large packaging, portable tanks, multiple-element gas containers (MEGCs) and bulk containers. Dangerous goods shall be packed in good quality packagings, including IBCs and large packagings, which shall be strong enough to withstand the shocks and loadings normally encountered during transport, including transshipment between cargo transport units and between cargo transport units and warehouses as well as any removal from a pallet or overpack for subsequent manual or mechanical handling. Packagings, including IBCs and large packagings, shall be constructed and closed so as to prevent any loss of contents when prepared for transport which may be caused under normal conditions of transport, by vibration, or by changes in temperature, humidity or pressure (resulting from altitude, for example). Packagings, including IBCs and large packagings, shall be closed in accordance with the information provided by the manufacturer. No dangerous residue shall adhere to the outside of packages, IBCs and large packagings during transport. These provisions apply, as appropriate, to new, re-used, reconditioned or remanufactured packagings, and to new, re-used, repaired or remanufactured IBCs, and to new or re-used large packagings.
- .4 Parts of packagings, including IBCs and large packagings, which are in direct contact with dangerous goods:
 - .1 Shall not be affected or significantly weakened by those dangerous goods; and
 - .2 Shall not cause a dangerous effect, such as catalysing a reaction or reacting with the dangerous goods; and
 - .3 Shall not allow permeation of the dangerous goods that could constitute a danger under normal conditions of transport.
- .5 IMDG Code Part 4 Chapter 4.3 provides provisions applicable to the use of containers for the transport of solid substances in bulk. Substances shall be transported in bulk containers conforming to the applicable bulk container instruction identified by the letters BK1, BK2 and BK3 in column 13 of the Dangerous Goods List (IMDG Code Volume 2). Sheeted bulk containers (BK1) shall not be used for sea transport, except as indicated in 4.3.3 of that Chapter. Bulk containers shall only be used when a substance is assigned a bulk container code in column 13 of the Dangerous Goods List.

CS CLASS

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- .6 Transport information relating to the carriage of dangerous goods in packaged form and the container/vehicle packing certificate shall be in accordance with the relevant provisions of the IMDG Code and shall be made available to the person or organization designated by the port State authority.
- .7 Each ship carrying dangerous goods in packaged form shall have a special list, manifest or stowage plan setting forth, in accordance with the relevant provisions of the IMDG Code, the dangerous goods on board and the location thereof. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority.
- .8 Cargo, cargo units, and cargo transport units, shall be loaded, stowed and secured throughout the voyage in accordance with the **Cargo Securing Manual** (CSM) approved by the Administration or RO. The CSM is required on all types of ships engaged in the carriage of all cargoes other than solid and liquid bulk cargoes.
- .9 The CSM shall be revised and approved by ICS Class in accordance with:
 - .1 SOLAS Chapter VI, regulations 5.
 - .2 SOLAS Chapter VII, regulations 5.
 - .3 Code of Safe Practice for Cargo Stowage and Securing (CSS Code).
 - .4 MSC.1/Circular.1353/Rev.1-Guidelines for the preparation of the CSM.
- .10 The CSM shall be revised and approved by the acting Surveyor using the following forms: Checklist for the Approval of the CSM (2016/12) and CSM/Approval/IC (2016/12). The approval made by the Surveyor shall be verified by the Marine Division before issuing the Full-Term Certificate of Approval.
- .11 When an incident takes place involving the loss or likely loss overboard of dangerous goods in packaged form into the sea, the Master, or other person having charge of the ship, shall report the particulars of such an incident without delay and to the fullest extent possible to the nearest coastal State. The report shall be drawn up based on general principles and guidelines set out in Resolution A.851(20), as amended.
- .12 In addition to complying with the requirements above, the carriage of dangerous goods in packaged form are also subject to additional safety measures under SOLAS Chapter II-2, regulation 19.3 or 54.2, as appropriate, in accordance with Section 10 below.

9. Carriage of dangerous goods in solid form in bulk.

- .1 The carriage of dangerous goods in solid form in bulk shall be in compliance with:
 - .1 SOLAS Chapter VII, Part A-1.
 - .2 The relevant provisions of the IMSBC Code, according to SOLAS Chapter VI, regulation 1-1.1.
 - .3 The relevant provisions of the IMDG Code.
- .2 Unless expressly provided otherwise, SOLAS Chapter VII, Part A-1 applies to the carriage of dangerous goods in solid form in bulk in all ships to which the SOLAS regulations apply and in cargo ships of less than 500 gross tonnage. The carriage of dangerous goods in solid form in bulk is prohibited except in accordance with the provisions of SOLAS Chapter VII, Part A-1.
- .3 SOLAS Chapter VII, regulation 7 defines dangerous goods in solid form in bulk. For the purpose of the IMSBC Code, dangerous goods in solid form in bulk shall be classified in accordance with Part 2 of the IMDG Code, as follows:



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- .1 **Class 4.1:** Flammable solids: The materials in this class are readily combustible solids and solids which may cause fire through friction.
- .2 **Class 4.2:** Substances liable to spontaneous combustion: The materials in this class are materials, other than pyrophoric materials, which, in contact with air without energy supply, are liable to self-heating.
- .3 **Class 4.3:** Substances which, in contact with water, emit flammable gases: The materials in this class are solids which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.
- .4 **Class 5.1:** Oxidizing substances: The materials in this class are materials that, while in themselves not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material.
- .5 **Class 6.1:** Toxic substances: The materials in this class are materials liable either to cause death or serious injury or to harm human health if swallowed or inhaled, or by skin contact.
- .6 **Class 7**: Radioactive material: The materials in this class are any materials containing radionuclides where both the activity concentration and the total activity in the consignment exceed the values specified in 2.7.2.2.1 to 2.7.2.2.6 of the IMDG Code.
- .7 **Class 8:** Corrosive substances: The materials in this class are materials which, by chemical action, will cause severe damage when in contact with living tissue or will materially damage, or even destroy, other goods or the means of transport.
- .8 **Class 9:** Miscellaneous dangerous substances and articles: The materials in this class are materials and articles which, during transport, present a danger not covered by other classes.

Cargo		IMO Class
Sulphur (crushed lump and coarse grained)		4.1
Copra (dry)		4.2
Ferrous Metal Borings, Shavings, Turnings or Cuttings		4.2
Iron Oxide, Spent or Iron Sponge, Spent	1376	4.2
Metal Sulphide Concentrates, self-heating	3190	4.2
Seed Cake (a)	1386	4.2
Seed Cake (b)	1386	4.2
Seed Cake	2217	4.2
Aluminium Ferrosilicon Powder	1395	4.3
Aluminium Silicon Powder, Uncoated		4.3
Aluminium Smelting by-products or Aluminium Remelting by-products		4.3
Ferrosilicon with 30% or more but less than 90% silicon (including briquettes)		4.3
Zinc Ashes	1435	4.3
Aluminium Nitrate	1438	5.1
Ammonium Nitrate	1942	5.1
Ammonium Nitrate Based Fertilizer	2067	5.1
Barium Nitrate	1446	5.1
Calcium Nitrate	1454	5.1
Lead Nitrate	1469	5.1
Magnesium Nitrate		5.1

.4 The dangerous goods that are carried in solid form in bulk are the following:



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Cargo		IMO
	N°.	Class
Potassium Nitrate	1486	5.1
Sodium Nitrate	1498	5.1
Sodium Nitrate and Potassium Nitrate Mixture	1499	5.1
Poisonous (toxic) Substances	-	6.1
Radioactive Material, Low Specific Activity (LSA-1)	2912	7
Radioactive Material, Surface Contaminated Object (SCO-1)	2913	7
Sand, Mineral Concentrate, Radioactive Material, Low Specific Activity (LSA-I)	2912	7
Metal Sulphide Concentrates, corrosive	1759	8
Ammonium Nitrate Based Fertilizer	2071	9
Castor Beans	2969	9
Fishmeal (Fishscrap), Stabilized	2216	9

- .5 In all documents relating to the carriage of dangerous goods in solid form in bulk by sea, the correct Bulk Cargo Shipping Name of the goods (cargo's official name used in the IMSBC Code) shall be used (trade names alone shall not be used).
- .6 Each ship carrying dangerous goods in solid form in bulk shall have a special list or manifest setting forth the dangerous goods on board and the location thereof. A detailed stowage plan, which identifies by class and sets out the location of all dangerous goods on board, may be used in place of such a special list or manifest. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority.
- .7 For carrying dangerous goods in solid form in bulk, the following stowage and segregation requirements shall be met:
 - .1 Dangerous goods in solid form in bulk shall be loaded and stowed safely and appropriately in accordance with the nature of the goods. Incompatible goods shall be segregated from one another.
 - .2 Dangerous goods in solid form in bulk which are liable to spontaneous heating or combustion shall not be carried unless adequate precautions have been taken to minimize the likelihood of the outbreak of fire.
 - .3 Dangerous goods in solid form in bulk which give off dangerous vapours shall be stowed in a well-ventilated cargo space.
- .8 When an incident takes place involving the loss or likely loss overboard of dangerous goods in solid form in bulk into the sea, the Master, or other person having charge of the ship, shall report the particulars of such an incident without delay and to the fullest extent possible to the nearest coastal State. The report shall be drawn up based on general principles and guidelines set out in Resolution A.851(20), as amended.
- .9 In addition to complying with the requirements above, the carriage of dangerous goods in solid form in bulk are also subject to additional safety measures under SOLAS Chapter II-2, regulation 19.3 or 54.2, as appropriate, in accordance with Section 10 below.
- .10 The carriage of dangerous goods in solid form in bulk shall also be in compliance with ICS Class-Technical Instructive PO02-TI24-Statutory certification for International Maritime Solid Bulk Cargoes Code (IMSBC Code).



10. Carriage of dangerous goods under SOLAS Chapter II-2, regulation 19 or 54.

10.1 Purpose.

- .1 SOLAS Chapter II-2, regulation 19 (or 54) provides additional safety measures for ships carrying dangerous goods, except when carrying:
 - .1 Dangerous goods of classes 6.2 and 7.
 - .2 Dangerous goods in limited quantities, as required in Chapter 3.4 of the IMDG Code.
 - .3 Dangerous goods in excepted quantities, as required in Chapter 3.5 of the IMDG Code.
- .2 The purpose of regulation 19 (or 54) is to provide additional safety measures in order to address the fire safety objectives of SOLAS Chapter II-2 for ships carrying dangerous goods. For this purpose, the following functional requirements shall be met:
 - .1 Fire protection systems shall be provided to protect the ship from the added fire hazards associated with carriage of dangerous goods;
 - .2 Dangerous goods shall be adequately separated from ignition sources; and
 - .3 Appropriate personnel protective equipment shall be provided for the hazards associated with the carriage of dangerous goods.

10.2 General requirements.

- .1 In addition to complying with the requirements of regulations in Parts B, C, D, E and regulations 18 and 20 of SOLAS Chapter II-2, as appropriate, ships types and cargo spaces, referred to in paragraph 10.2.3 below, intended for the carriage of dangerous goods shall comply with the requirements of regulation 19 (or 54), except when carrying dangerous goods in limited quantities and excepted quantities unless such requirements have already been met by compliance with the requirements elsewhere in that Chapter II-2.
- .2 The types of ships and modes of carriage of dangerous goods are referred to in paragraph 10.2.3 below and in table 19.1 (or 54.1) of regulation 19 (or 54). Cargo ships of less than 500 gross tonnage shall comply with regulation 19 (or 54), but the Administration may reduce the requirements and such reduced requirements shall be recorded in the Document of Compliance referred to in regulation 19.4 (or 54.3).
- .3 The following ship types and cargo spaces shall govern the application of tables 19.1 and 19.2 (or 54.1 and 54.2) of regulation 19 (or 54):
 - 1 Ships and cargo spaces not specifically designed for the carriage of freight containers, but intended for the carriage of dangerous goods in packaged form including goods in freight containers and portable tanks (Not specifically designed).
 - **2A** Purpose-built container ships and cargo spaces intended for the carriage of dangerous goods in freight containers and portable tanks (Open and closed freight containers).
 - **2B** Purpose-built container ships and cargo spaces intended for the carriage of dangerous goods in freight containers and portable tanks (Closed freight containers and portable tanks only).
 - **3A** Ro-ro ships and ro-ro spaces intended for the carriage of dangerous goods (Closed ro-ro cargo spaces not capable of being sealed).
 - **3B** Ro-ro ships and ro-ro spaces intended for the carriage of dangerous goods (Closed ro-ro cargo spaces capable of being sealed).
 - **3C** Ro-ro ships and ro-ro spaces intended for the carriage of dangerous goods (Open ro-ro cargo spaces).
 - 4 Ships and cargo spaces intended for the carriage of solid dangerous goods in bulk.



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- **5** Ships and cargo spaces intended for carriage of dangerous goods other than liquids and gases in bulk in shipborne barges.
- 6 Weather decks (space types 1 to 5 inclusive).

10.3 Special requirements for construction and equipment.

.1 Unless otherwise specified, the following requirements shall govern the application of tables 19.1, 19.2 and 19.3 (or 54.1, 54.2 and 54.3) of regulation 19 (or 54) to both "on-deck" and "under-deck" stowage of dangerous goods where the numbers of the following paragraphs are indicated in the first column of the aforementioned tables.

Requirements	Regulation II-2/19 Paragraphs	Regulation II-2/54 Paragraphs
Water supplies	3.1 (3.1.1 to 3.1.5)	2.1 (2.1.1 to 2.1.4)
Source of ignition	3.2	2.2
Detection system	3.3	2.3
Ventilation arrangement	3.4 (3.4.1 to 3.4.3)	2.4 (2.4.1, 2.4.2)
Bilge pumping	3.5 (3.5.1 to 3.5.5)	2.5
Personnel protection	3.6 (3.6.1, 3.6.2)	2.6 (2.6.1, 2.6.2)
Portable fire extinguishers	3.7	2.7
Insulation of machinery space boundaries	3.8	2.8
Water spray system	3.9	2.9
Separation of ro-ro spaces	3.10 (3.10.1, 3.10.2)	No requirements

Note: Survey Reports for the issuance of the IMDG-Document of Compliance, under regulations 19 or 54, as appropriate, contains in details all requirements relevant for carriage of various classes of dangerous goods.

- .2 The application of the requirements to different modes of carriage of dangerous goods in ships and cargo spaces, as specified in Section 10.2 above, paragraph 10.2.3, shall be in accordance with table 19.1 (or 54.1) of regulation 19 (or 54).
- .3 The application of the requirements to different classes of dangerous goods for ships and cargo spaces carrying solid dangerous goods in bulk shall be in accordance with table 19.2 (or 54.2) of regulation 19 (or 54).
- .4 The application of the requirements to different classes of dangerous goods except solid dangerous goods in bulk shall be in accordance with table 19.3 (or 54.3) of regulation 19 (or 54).
- .5 For the proper application of the requirements to different modes of carriage of dangerous goods in ships and cargo spaces; to different classes of dangerous goods for ships and cargo spaces carrying solid dangerous goods in bulk; and to different classes of dangerous goods except solid dangerous goods in bulk, in accordance with paragraphs 10.3.2 to 10.3.4 above, the following indications shall be met:
 - .1 For classes 2, 3, 6.1 and 8 when carried in closed freight containers, the ventilation rate may be reduced to not less than two air changes per hour. For classes 4 and 5.1 liquids when carried in closed freight containers, the ventilation rate may be reduced to not less than two air changes per hour. For the purpose of this requirement, a portable tank is a closed freight container.
 - .2 Special category spaces shall be treated as closed ro-ro spaces when dangerous goods are carried.



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- .3 Classes 1.1 to 1.6 shall be stowed 3 meters horizontally away from the machinery space boundaries in all cases.
- .4 Stowage of class 2.3 having subsidiary risk class 2.1 under deck or in enclosed ro-ro spaces is prohibited.

Subsidiary risk clarification: Many dangerous goods present the hazards of more than one class or division. Such goods are assigned to a class according to their primary hazard. The other hazard or hazards are referred to as subsidiary risks. Examples: Methanol is a highly flammable liquid that is also toxic.

- .5 Stowage of class 4.3 liquids having a flashpoint less than 23°C under deck or in enclosed ro-ro spaces is prohibited.
- .6 Stowage of class 5.2 under deck or in enclosed ro-ro spaces is prohibited.
- .7 As an alternative to the insulation of bulkheads forming boundaries between cargo spaces and machinery spaces of category A to A-60 standard, all dangerous goods must be stowed at least 3 meters horizontally from such bulkheads. If the uninsulated deck above the machinery space is a weather deck, dangerous goods are prohibited only for the portion of the deck located above the machinery space.
- .8 Stowage and segregation of freight containers of different classes of dangerous goods in the hold and on the upper deck in compliance with the applicable requirements of the IMDG Code remain the responsibility of the Master.

11. Verification and certification activities.

11.1 Requirements for surveys.

- .1 The special requirements for construction and equipment for the carriage of dangerous goods are contained in SOLAS Chapter II-2, regulation 19 or 54, as appropriate, in accordance with Section 2 above "Application", paragraphs 2.4 and 2.5.
- .2 The application of the special requirements for construction and equipment for the carriage of dangerous goods shall comply with the provisions of Section 10 above. The survey requirements will differ depending on which cargoes are to be carried.
- .3 A Cargo Securing Manual (CSM) approved by ICS Class or by a RO on behalf of the relevant Administration, is required to be provided onboard on all types of ships engaged in the carriage of all cargoes other than solid and liquid bulk cargoes. Cargo, cargo units, and cargo transport units, shall be loaded, stowed and secured throughout the voyage in accordance with the approved CSM (refer to Section 8 above, paragraphs 8.8 to 8.10).
- .4 Surveyors conducting dangerous goods surveys are to be familiar with the applicable requirements for construction and equipment for the carriage of dangerous goods under SOLAS Chapter II-2, regulation 19 (or 54) and the provisions of the IMDG Code.
- .5 During surveys, only those requirements applicable to the classes of dangerous goods, and type of ship/cargo space in which the dangerous goods are to be carried, need be verified. It shall be confirmed that all of the requirements applicable to a particular cargo are met, and all equipment and arrangements shall be confirmed as being found in a satisfactory condition. If any shortcomings are noted then the IMDG-Document of compliance shall not be issued and the Marine Division shall be consulted for instructions.
- .6 Where new installations or major modifications are proposed which may affect the carriage of dangerous goods, modifications are to be submitted to the Marine Division for approval before the work is commenced.



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- .7 Where an Owner wishes to discontinue compliance with the requirements for the carriage of dangerous goods, the IMDG-Document of Compliance is to be withdrawn, returned to Marine Division and the action taken recorded in the survey report.
- .8 The purpose of the surveys is to ensure that:
 - .1 The ship and its equipment are maintained to conform to the requirements of SOLAS Chapter II-2, regulation 19 or 54, as appropriate; and
 - .2 The ship remains fit in all respects to carry those classes of dangerous goods listed on the IMDG-Document of Compliance.

11.2 Shipowner's application.

.1 Prior to the survey onboard the ship, the shipowner or their representative (applicant) shall submit to the acting Surveyor the list of dangerous goods to be included in the IMDG-Document of Compliance. All dangerous goods shall be identified with its UN Number and Proper Shipping Name (PSN). For dangerous goods in solid form in bulk reference to be made to ICS Class-Technical Instructive PO02-TI24, Section 17.2.

11.3 Document's submission for checking.

- .1 The applicant shall submit to the acting Surveyor a general arrangement or other information, clearly indicating:
 - .1 Each cargo space in which it is intended to carry dangerous goods;
 - .2 The type of cargo space, according to SOLAS Chapter II-2, regulation 19.2.2 (or 54.1.2), in which the dangerous goods are to be carried, (e.g., weather deck, purpose-built container space, ro-ro cargo space capable of being sealed, ro-ro cargo space not capable of being sealed, etc.). Refer to Section 10.2 above, paragraph 10.2.3.
- .2 In addition to above, and for dangerous goods in solid form in bulk, reference to be made to ICS Class-Technical Instructive PO02-TI24, Section 17.3.

11.4 Surveys and issuance of Interim IMDG-Document of Compliance.

- .1 Taking into account that: The IMDG-Document of Compliance issued pursuant to SOLAS Chapter II-2, regulation 19.4 (or 54.3), in accordance with Resolution MSC/Circ.1266, is: A SOLAS Certificate harmonized with the expire date of the Cargo Ship Safety Construction Certificate, that is subject to requirements for survey of cargo ships set out in SOLAS Chapter I, regulation 10, and the Harmonized System of Survey and Certification, the ship certification shall be carried out by conducting the following surveys:
 - .1 **Initial Survey:** It shall be held before the ship is put in service, or before the IMDG-Document of Compliance is issued for the first time.
 - .2 **Annual Survey:** It shall be held within three months before or after each anniversary date of the Full-Term IMDG-Document of Compliance, harmonized with the existing Full-Term Cargo Ship Safety Construction Certificate (CSSC).
 - .3 **Renewal Survey:** It shall be held at the same time when the renewal survey of the existing Full-Term Cargo Ship Safety Construction Certificate (CSSC) is completed. The renewal survey shall be held when the existing Full-Term IMDG-Document of Compliance expires. The renewal survey shall be carried out onboard even if the dangerous goods list is not changed.



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- .4 Additional Survey: It shall be held after the repair of a defect or replacement or renewal of equipment which affects the safety of a ship or the completeness of its equipment with respect to the applicable requirements of SOLAS regulation II-2/19. An additional survey shall also be conducted due to the new inclusion cargoes in the IMDG-Certificate of Compliance.
- .2 All surveys specified in previous paragraph 11.4.1 (initial, annual, renewal and additional) shall be conducted using the following Survey Report, as appropriate:
 - .1 Survey Report for the issuance of the Document of Compliance-Special Requirements for Ships carrying Dangerous Goods, under provisions of regulation II-2/19.
 - .2 Survey Report for the issuance of the Document of Compliance-Special Requirements for Ships carrying Dangerous Goods, under provisions of regulation II-2/54.
- .3 For rewriting the IMDG-Document of Compliance due to change of flag or ship's name, an additional survey onboard is required even if the cargo list is not changed.
- .4 The scope of the initial and renewal survey is the following:
 - .1 The initial and renewal survey shall be a thorough and complete examination with tests where appropriate. On completion, the equipment shall, given adequate routine maintenance, be expected to remain in good condition and working order until the next renewal survey.
 - .2 It shall be verified that all equipment and materials are of an approved type. Where appropriate, equipment shall be examined and tested to ensure it is in good working order.
- .5 On satisfactory completion of the initial or renewal survey, an Interim IMDG-Document of Compliance will be issued by the acting Surveyor. This certificate shall be issued valid for five (5) months counted from the completion date of the initial or renewal survey. The list of cargoes permitted to be carried shall be included in the Appendix, attached to this certificate. The Interim IMDG-Document of Compliance will not be supplemented by any Record of Construction and Equipment.
- .6 The scope of the annual survey is the following:
 - .1 The IMDG-Document of Compliance shall cease to be valid if the annual survey is not carried out within the specified period.
 - .2 Four annual surveys are required during the period of validity of the IMDG-Document of Compliance. The surveys shall be held within the permitted range dates.
 - .3 The shipowner shall confirm that no unapproved modifications to the equipment on board have been made since the last survey.
 - .4 Verification that the IMDG-Document of Compliance on board is in good order and an examination of all the various items of equipment, together with tests as considered necessary, all to an extent which, in the acting Surveyor's judgement, indicates adequate condition until the next due survey given proper maintenance. The stringency of the survey is to be to the surveyor's satisfaction and in general will depend upon the condition of the equipment.
 - .5 Upon satisfactory completion of the annual survey, the existing Full-Term IMDG-Document of Compliance shall be endorsed. If any shortcomings are noted then the cargo to which that requirement is applicable cannot be carried and shall be removed from the Document of Compliance.
- .7 A ship can be considered suitable for the carriage of dangerous goods only when all of the applicable requirements of SOLAS Chapter II-2, regulation 19 (or 54) are in compliance with. Conditional issues are not permitted and the documents shall not be issued if any shortcomings are noted.



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- .8 For the inclusion of new cargoes, refer to Section 11.6 below.
- .9 The forms which shall be used to certification of the ship, in accordance with SOLAS Chapter II-2, regulation 19 or 54, as appropriate, are specified in Section 13 below.

11.5 Issuance of Full-Term IMDG-Document of Compliance.

- .1 Upon satisfactory verification of the initial or renewal survey carried out by the acting Surveyor, the Full-Term IMDG-Document of Compliance will be issued by the Marine Division. The list of cargoes permitted to be carried shall be included in the Appendix, attached to this certificate. The Full-Term IMDG-Document of Compliance will not be supplemented by any Record of Construction and Equipment.
- .2 The Full-Term IMDG-Document of Compliance shall be issued with the same validity date of the existing Cargo Ship Safety Construction Certificate.
- .3 The validity of the Full-Term IMDG-Document of Compliance shall not be extended beyond the expiry date of the existing Cargo Ship Safety Construction Certificate.
- .4 The validity of the Full-Term IMDG-Document of Compliance shall be subject to mandatory annual surveys.
- .5 The Full-Term IMDG-Document of Compliance will cease to be valid when the existing Cargo Ship Safety Construction Certificate loses its validity.
- .6 A ship can be considered suitable for the carriage of dangerous goods only when all of the applicable requirements of SOLAS Chapter II-2, regulation 19 (or 54) are in compliance with. Conditional issues are not permitted and the documents shall not be issued if any shortcomings are noted.

11.6 Inclusion of new cargoes.

- .1 For the inclusion of new cargoes, the following procedure shall be met:
 - .1 The applicant shall comply with the provisions of Section 11.2 and 11.3 above.
 - .2 An additional survey onboard shall be conducting using the Survey Report for the issuance of the IMDG-Document of Compliance, under provisions of regulation II-2/19 or II-2/54, as appropriate.
 - .3 On satisfactory completion of the additional survey, an Interim IMDG-Document of Compliance will be issued by the acting Surveyor. This interim certificate shall be issued valid for five (5) months counted from the completion date of the additional survey. The list of cargoes permitted to be carried shall be included in the Appendix, attached to this certificate. The existing Full-Term IMDG-Document of Compliance issued by the Marine Division loses its validity and shall be withdrawn onboard.
 - .4 A new Full-Term IMDG-Document of Compliance will be issued by the Marine Division with the same validity of the existing certificate (previous one). The list of cargoes permitted to be carried, with the inclusion of the new cargoes, will be included in the Appendix, attached to this certificate.

12. Record of Information (supporting documentation).

- .1 Upon completion of the initial, annual, renewal or additional survey, the acting Surveyor shall provide to ICS Class-Head Office (Operation Department) with the following supporting documentation properly completed, as appropriate:
 - .1 Interim IMDG-Document of Compliance issued valid for five (5) months. The list of cargoes permitted to be carried shall be included in the Appendix, attached to this certificate.
 - .2 Full-Term IMDG-Document of Compliance endorsed at annual survey.



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- .3 Survey Reports for the issuance of the IMDG-Document of Compliance, under provisions of regulation II-2/19 or II-2/54, as appropriate.
- .4 Certificate of Approval of the Cargo Securing Manual, except for dangerous goods in bulk.
- .5 Any other documentation as requested by the Marine Division.

13. Applicable Forms.

- .1 IMDG-Code/IC (2021/07)-Document of Compliance-Special Requirements for Ships carrying Dangerous Goods.
- .2 IMDG-Code/FT (2021/07)-Document of Compliance-Special Requirements for Ships carrying Dangerous Goods.
- .3 IMDG-Code Survey Report (2021/07)-Survey Report for the issuance of the Document of Compliance-Special Requirements for Ships carrying Dangerous Goods, under provisions of regulation II-2/19.
- .4 IMDG-Code Survey Report (2021/07)-Survey Report for the issuance of the Document of Compliance-Special Requirements for Ships carrying Dangerous Goods, under provisions of regulation II-2/54.

14. Rewriting the existing Full-Term IMDG-Document of Compliance.

- .1 The existing Full-Term IMDG-Document of Compliance shall be rewritten at the next mandatory annual survey carried out on or after **01 October 2021**, in accordance with the following procedure:
 - .1 The annual survey shall be conducted using the Survey Reports for the issuance of the IMDG-Document of Compliance, under provisions of regulations II-2/19 or II-2/54, as appropriate, (2021/07).
 - .2 Upon satisfactory completion of the annual survey, an Interim IMDG-Document of Compliance (2021/07) will be issued by the acting Surveyor. This interim certificate shall be issued valid for five (5) months counted from the completion date of the annual survey. The list of cargoes permitted to be carried shall be included in the Appendix, attached to this certificate. The Interim IMDG-Document of Compliance will not be supplemented by any Record of Construction and Equipment.
 - .3 The existing Full-Term IMDG-Document of Compliance issued by the Marine Division, including the corresponding Record of Construction and Equipment for Ships carrying Dangerous Goods, loses its validity and both documents shall be withdrawn onboard.
 - .4 Upon satisfactory verification of the Interim IMDG-Document of Compliance issued by the acting Surveyor, included the list of cargoes permitted to be carried, the Marine Division will issue a new Full-Term IMDG-Document of Compliance (2021/07) with the same validity of the existing certificate (previous one). The list of cargoes permitted to be carried will be included in the Appendix, attached to this new certificate. The new Full-Term IMDG-Document of Compliance will not be supplemented by any Record of Construction and Equipment. The validity of the new Full-Term IMDG-Document of Compliance will be subject to mandatory annual surveys.



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15. Documented information revoked and modification.

- .1 Statutory Notice N°. 45/2011-Amendments to the requirements for the carriage of dangerous goods (Changes to SOLAS, Chapter II-2, Regulation 19) has been revoked.
- .2 Statutory Notice N°. 55/2011-Amendments to the IMDG Code come into force on 01 January 2012 has been revoked.
- .3 IMDG-Code (DOC)/IC (2011/03)-Document of Compliance-Special Requirements for Ships carrying Dangerous Goods has been modified in new version (2021/07).
- .4 IMDG-Code (DOC)/FT (2011/03)-Document of Compliance-Special Requirements for Ships carrying Dangerous Goods has been modified in new version (2021/07).
- .5 IMDG-Code Record of Construction and Equipment/IC (2011/03) has been revoked.
- .6 IMDG-Code Record of Construction and Equipment/FT (2011/03) has been revoked.
- .7 IMDG-Code/Survey Report (2011/03)-Survey Report for Ships carrying Dangerous Goods has been revoked.

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