INTERNATIONAL MARITIME ORGANIZATION

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4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

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GUIDELINES FOR THE SUBMISSION OF INFORMATION AND COMPLETION OF THE FORMAT FOR THE PROPERTIES OF CARGOES NOT LISTED IN THE INTERNATIONAL MARITIME SOLID BULK CARGOES (IMSBC) CODE AND THEIR CONDITIONS OF CARRIAGE

1 The Maritime Safety Committee, at its 107th session (31 May to 9 June 2023), following the adoption of resolution MSC.500(105) on *Amendments to the International Maritime Solid Bulk Cargoes (IMSBC) Code* and considering the proposal by the Sub-Committee on Carriage of Cargoes and Containers, at its eighth session, with regard to implementation of 1.3.3 of the IMSBC Code, approved a revision of the *Guidelines for the submission of information and completion of the format for the properties of cargoes not listed in the IMSBC Code and their conditions of carriage* (MSC.1/Circ.1453/Rev.1), as set out in the annex.

2 Member Governments are invited to bring the annexed Guidelines to the attention of all concerned, taking into account the voluntary application date of 1 January 2023 for amendment 06-21 of the IMSBC Code, pending its envisaged mandatory entry-into-force date of 1 December 2023.

3 This circular supersedes MSC.1/Circ.1453/Rev.1.

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ANNEX

GUIDELINES FOR THE SUBMISSION OF INFORMATION AND COMPLETION OF THE FORMAT FOR THE PROPERTIES OF CARGOES NOT LISTED IN THE INTERNATIONAL MARITIME SOLID BULK CARGOES (IMSBC) CODE AND THEIR CONDITIONS OF CARRIAGE

Foreword

When a cargo which is not listed in the International Maritime Solid Bulk Cargoes (IMSBC) Code is intended to be carried in bulk, the competent authority of the port of loading should provide to the master a certificate stating the characteristics of the cargo and the required conditions for carriage and handling of that shipment. The competent authority of the port of loading should also submit an application to the Organization to incorporate this solid bulk cargo into appendix 1 of the IMSBC Code. The format of this application should be as outlined in 1.3.3 of the IMSBC Code. These Guidelines provide guidance on the type and structure of information which is required in the application.

General

The application should be supported as a minimum by relevant data such as may be contained in Material Safety Data Sheet (MSDS), Safety Data Sheet (SDS) or other relevant documentation. Applicants should therefore complete and submit the questionnaire in the appendix. Where applications indicate use of equipment or systems, references to relevant internationally agreed standards for such equipment or systems should be indicated.

1 Section "TENTATIVE BULK CARGO SHIPPING NAME"

This is the proposed Bulk Cargo Shipping Name (BCSN) to be identified in capital letters. When the cargo constitutes dangerous goods, the BCSN is to be supplemented with the United Nations (UN) number. Secondary names which are proposed to be indicated in appendix 4 "Index" of the IMSBC Code may also be listed in this section.

2 Section "Description"

This section should be used to specify the type of material, the manufacturing process, the raw material, the particle size and form, the colour, the composition of the material and its variability, the moisture content, properties of the cargo such as in/soluble in water, dusty, hygroscopic, and other specific characteristics.

3 Section "Characteristics"

3.1 The table specifying the characteristics of the cargo should be completed as follows:

.1 **Angle of repose:** This box should be used to indicate the angle of repose for non-cohesive granular materials. If the evaluation of the properties of the material proved that the cargo is cohesive, the entry should be "Not applicable".

.2 **Bulk density:** This box should be used to indicate the bulk density or the range of bulk density, as applicable, in kg/m^3.

.3 **Stowage factor:** This box should be used to indicate the stowage factor or range of stowage factor, as applicable, in m^3/t.

.4 **Size:** This box should be used to indicate the form and size or size-range of particles, pellets, lumps, etc., in mm and its variability, as applicable.

.5 **Class:** This box should be used to indicate the hazard classification in accordance with 9.2 of the IMSBC Code. If the cargo does not fall under group B, the entry should be "Not applicable". In addition, if the cargo constitutes dangerous goods and has subsidiary risks, the subsidiary risks should be indicated. If the class of the cargo corresponds to materials hazardous only in bulk (MHB), 9.2.3 of the Code should be also observed. (See also section for hazardous properties in the appendix).

.6 **Group:** This box should be used to indicate the cargo group in accordance with 1.7 of the IMSBC Code (possible entries are "A and B", "A", "B" or "C").

4 Section "Hazard"

4.1 This section should be used to specify the hazard(s) of the material relevant for sea transport, such as combustibility, toxicity, corrosivity, radiotoxicity, hygroscopicity, liability to oxygen depletion, decomposition, self-heating, spontaneous ignition, liquefaction, dynamic separation, emission of flammable and/or toxic gases or vapours, reactivity with water, fuel oil or other organic materials.

4.2 If the cargo class is MHB and the existing hazard corresponding to the cargo does not meet any of the hazards identified in 9.2.3 of the IMSBC Code, the other hazard (OH) corresponding to that cargo should be described in detail.

4.3 In case of non-hazardous cargo, write "No special hazards". If the cargo is non-combustible or constitutes a low fire-risk, write "This cargo is non-combustible or has a low fire-risk".

5 Section "Stowage and segregation"

5.1 This section should be used to specify the requirements for stowage and segregation of the cargo, such as separation from foodstuff, from wooden boundaries or from other cargoes, stowage away from sources of heat or ignition, away from fuel oil tanks, away from machinery space boundaries.

5.2 Furthermore this section should be used to stipulate requirements for fire/heat insulation for fuel oil tanks and machinery space bulkheads arranged adjacent to the cargo spaces, for resistance of cargo hold boundaries to fire and/or passage of liquids, for gas-tight machinery space bulkheads, for escaping gases away from accommodation spaces.

5.3 If no stowage and/or segregation requirements are appropriate, write "No special requirements".

6 Section "Hold cleanliness"

6.1 This section should give advice on the preparation of cargo spaces prior to loading, such as cleanliness and dryness of cargo spaces and bilge wells, washing with fresh or sea water, free from salt, provision of protective coating or lime-wash, removal of wooden dunnage.

6.2 If no requirement is necessary, write "No special requirements".

7 Section "Weather precautions"

7.1 This section should provide requirements relating to weather conditions and protective measures to be applied prior to and during loading and/or during unloading, such as moisture content of the cargo, prohibition of cargo handling during precipitation, closing of hatch covers.

7.2 If no requirement is necessary, write "No special requirements".

8 Section "Loading"

8.1 This section should be used to specify requirements and precautions during loading, such as trimming procedure, prevention of overstressing of the tank top, prevention of dust, dust control equipment, inerting of cargo spaces, gas and temperature measurement.

8.2 If no requirement is necessary, write "No special requirements".

9 Section "Precautions"

9.1 This section should be used to specify precautions to be taken prior to loading, such as protection of the ship and the crew from dust of the cargo, posting of "NO SMOKING" signs on deck, electrical equipment to be of certified safe type (explosion protection), removal of electrical links, spark arresting screens for ventilation openings, safety locking device for cargo space bilge-lines, protection of bilge wells, gas-tightness of machinery space bulkheads, pressure test of fuel tanks adjacent to the cargo hold.

9.2 Furthermore this section should be used to describe specific conditions of the cargo prior to loading, such as permissible limits of temperature in stockpile, other conditions of stockpile and test certificates to be provided prior to loading, e.g. certificate of moisture content and transportable moisture limit, weathering certificate, exemption certificate.

9.3 If no requirement is necessary, write "No special requirements".

10 Section "Ventilation"

10.1 This section should be used to specify requirements for ventilation of cargo spaces (refer to 3.5 of the IMSBC Code) with regard to the ventilation system and the operation of ventilation during the voyage.

10.2 If no requirement is necessary, write "No special requirements".

11 Section "Carriage"

11.1 This section should be used to specify requirements and instructions to be observed during the voyage, such as procedures and equipment for gas and temperature measurement, sealing of hatches, ventilators and other openings of cargo holds in order to prevent ingress of water or leaking of inert gas, maintaining an inert atmosphere, checking the cargo surface for liquefaction, dynamic separation and decomposition, checking of cargo spaces for condensation, testing of the acidity of bilge water and instructions for bilge pumping, ventilating of cargo holds and adjacent spaces.

11.2 If no requirement is necessary, write "No special requirements".

12 Section "Discharge"

12.1 This section should be used to specify requirements to be observed prior to and during unloading, such as precaution for entry of personnel into cargo spaces, use of personnel protection, gas measurement, restrictions for bunkering or pumping of fuel oil, trimming of hardened cargo, prevention of dust, protection of the ship.

12.2 If no requirement is necessary, write "No special requirements".

13 Section "Clean-up"

13.1 This section should be used to specify requirements for cleaning up of cargo spaces and bilge wells, such as removal of cargo residues and spillages, decontamination, use of fresh water or seawater, use of personnel protection, precautions for the use of the shipborne bilge system.

13.2 If no requirement is necessary, write "No special requirements".

14 Section "Emergency procedures"

14.1 The table specifying the emergency procedures should be completed for materials of group B as follows:

.1 **Special emergency equipment to be carried:** This box should be used to specify the special emergency equipment to be carried, such as protective clothing, self-contained breathing-apparatuses, fire-fighting equipment. Otherwise, write "Nil".

.2 **Emergency procedures:** This box should be used to specify protective measures for entering the cargo spaces. Otherwise, write "Nil".

.3 **Emergency action in the event of fire:** This box should be used to specify emergency action in the event of fire, such as supply or exclusion of air, use of water, CO_2 or whether a fixed gas fire-extinguishing system may be exempted, etc. Otherwise, write "Nil".

.4 **Medical first aid:** Reference should be made to the *Medical First Aid Guide (MFAG)*, as applicable.

APPENDIX

IMO SOLID BULK CARGO INFORMATION REPORTING QUESTIONNAIRE

It is recommended to provide the following information, in addition to the information described in 1.3.3 of the IMSBC Code.

Basic background information

- Are there other synonyms or trade names in use?
- How is it manufactured, how is it made, or where does it originate?
- What is it used for?
- Where is it produced? In what countries? In what volumes?
- What experience do you have with the cargo?

Basic cargo properties

The following information may be included in the Description section of the draft individual schedule.

- What colour is it?
- Does it have an odour?
- What form is the cargo in? What particle sizes?
- How much moisture is in the cargo? How much oil is in the cargo?
- How is it stored? Outside? Under cover?
- Does the cargo cake when wet?
- Is it a cohesive cargo or a free-flowing cargo?

Hazardous properties

For this section of the questionnaire, each answer should be supported by test data on multiple samples from difference sources. If a question is not applicable, a detailed explanation of why it is not applicable should be made.

- Does it meet the definition of dangerous goods (hazard classes 1 to 9)? Which hazard classes?
- Is the cargo easily ignitable, combustible or flammable?
- Can the cargo contribute to fire or accelerate a fire?
- Does the cargo self-heat? What causes the self-heating? Fungal or bacterial growth? Oxidation?
- Does the cargo react with water causing toxic or flammable gases to be released? Which gases? How toxic or flammable are the gases? What is the rate of evolution?
- Is the cargo toxic? Toxic by inhalation? Toxic by skin contact or ingestion? How toxic? Acute or chronic toxicity?
- Does the cargo exhibit any long-term health effects, such as carcinogenic, mutagenic or reprotoxic properties?
- Is the cargo a respiratory sensitizer?
- Does the cargo contain known pathogens?
- Does the cargo react with water reaction causing corrosion? Corrosion to eyes, skin, or metal? What is the rate of corrosion?
- Is the cargo corrosive without water? Corrosion to eyes, skin, or metal? What is the rate of corrosion?
- Is the cargo hazardous to the environment?

- Is the dust flammable or explosive?
- Can the cargo deplete oxygen in cargo spaces and adjacent spaces? By how much?
- Is the cargo incompatible with other cargoes or chemicals? Which cargoes or chemicals?
- Can the cargo liquefy or undergo dynamic separation during a voyage? What is the transportable moisture limit (TML) of the cargo?
- If the cargo is MHB, indicate on the following notational list the identified cargo related hazards:

Chemical hazard	Notational reference	Yes/No
Combustible solids	CB	
Self-heating solids	SH	
Solids that evolve flammable gas when wet	WF	
Solids that evolve toxic gas when wet	WT	
Toxic solids	TX	
Corrosive solids	CR	
Other hazards	OH	

If your answer is "OH", please provide a description:_____"

Operational questions

- How is the cargo loaded? Conveyor? Clam shell?
- Does the cargo need to be trimmed?
- What type of ship will be used? Bulk carrier? OBO? Self-unloading ship? General cargo ship? Barge?
- What experience do you have carrying the cargo in bulk by ship? By road and rail?
- Have there been any incidents when transporting the cargo as a result of the cargo properties or hazards?
- Are there any recommendations for tank or hold cleaning?

Emergency response questions

- In the event of a fire can the cargo be extinguished with water? CO_2?
- In the event of personal exposure what procedures should be followed?
- What happens in the event of an accidental release to water during transport?

Testing questions

- Which hazards have been assessed?
- Which tests were conducted?
- What were the results of these tests?
- What was the actual data from the tests?
- How many tests were conducted?
- What samples were tested? Are the samples representative of the cargo to be shipped?

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