RESOLUTION MSC.575(110)
(adopted on 26 June 2025)

AMENDMENTS TO THE INTERNATIONAL MARITIME SOLID BULK CARGOES CODE (IMSBC CODE)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution MSC.268(85) by which it adopted the International Maritime Solid Bulk Cargoes Code (hereinafter referred to as "the IMSBC Code"), which has become mandatory under chapter VI of the International Convention for the Safety of Life at Sea, 1974, as amended ("the Convention"),

RECALLING FURTHER article VIII(b) and regulation VI/1-1.1 of the Convention concerning amendment procedure for amending the IMSBC Code,

HAVING CONSIDERED, at its 110th session, amendments to the IMSBC Code, proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the IMSBC Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2026, unless prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2027 upon their acceptance in accordance with paragraph 2 above;

4 AGREES that Contracting Governments to the Convention may apply the aforementioned amendments in whole or in part on a voluntary basis as from 1 January 2026;

5 REQUESTS the Secretary-General, for the purpose of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

6 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

**AMENDMENTS TO THE
INTERNATIONAL MARITIME SOLID BULK CARGOES CODE (IMSBC CODE)
AMENDMENT 08-25**

Section 9 – Materials possessing chemical hazards

9.3 Stowage and segregation requirements

9.3.3 Segregation between bulk materials possessing chemical hazards and dangerous goods in packaged form

Table in 9.3.3 is amended as follows:

The oblique line in the first cell on the left is deleted; the cell is separated into two, and the right cell is merged to the next cell after the separation.

The heading of the first column on the left is replaced to read "Bulk materials (classified as dangerous goods)".

In the heading of the fourth column, the term "1.6" is added after the term "1.3".

In the first column on the left, the words "Radioactive materials" are replaced by the words "Radioactive material".

In the second column on the left, the word "MHB" is deleted.

In paragraph 3 ("Separated by a complete compartment or hold from"), replace the words "Means either" by the word "Either".

Section 13 – References to related information and recommendations

13.2 Reference list

In paragraph 13.2.3, "MSC.1/Circ.1395/Rev.6" is replaced by "MSC.1/Circ.1395/Rev.7".

In paragraphs 13.2.6 and 13.2.9, the words "Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo holds (MSC.1/Circ.1264, as amended by MSC.1/Circ.1396)" are replaced by the words "Revised recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo holds (MSC.1/Circ.1264/Rev.1)".

APPENDIX 1

INDIVIDUAL SCHEDULES OF SOLID BULK CARGOES

Amendments to existing individual schedules

The following individual schedules are amended as indicated below:

ALUMINIUM FERROSILICON POWDER UN 1395

In the individual schedule for "ALUMINIUM FERROSILICON POWDER UN 1395", in the section for "Precautions", the last sentence is deleted.

ALUMINIUM SILICON POWDER, UNCOATED UN 1398

In the individual schedule for "ALUMINIUM SILICON POWDER, UNCOATED UN 1398", in the section for "Precautions", the last sentence is deleted.

ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS UN 3170

In the individual schedule for "ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS UN 3170", in the section for "Precautions", the sentence *"At least two sets of self-contained breathing apparatus, in addition to those required by SOLAS regulation II-2/10.10, shall be provided on board"* is deleted.

CASTOR BEANS or CASTOR MEAL or CASTOR POMACE or CASTOR FLAKE UN 2969

In the individual schedule for "CASTOR BEANS or CASTOR MEAL or CASTOR POMACE or CASTOR FLAKE UN 2969", BCSN is replaced to read "CASTOR BEANS UN 2969". In the table for "Characteristics", in the box for "MHB", the words "TX and/or CR" are inserted. In the section for "Hazard", the sentence "This cargo is non-combustible or has a low fire risk." is inserted at the end of the section.

DIRECT REDUCED IRON (A), Briquettes, hot-moulded

The text in the section for "Description" is replaced to read as follows:

> "**Direct reduced iron (DRI) (A)** is a metallic grey material, emanating from a densification process, whereby the DRI feed material is hot-moulded into a briquette form with total iron (Fe) content of at least 88% by weight at a temperature greater than 650°C."

The first and second paragraphs in the section for "Loading" are replaced, as follows :

> "Prior to loading this cargo, the shipper shall provide the master with a certificate issued by a competent person recognized by the competent authority of the port of loading stating that the cargo, at the time of loading, is suitable for shipment and that it conforms with the requirements of this Code: that the apparent density is greater than 5,000 kg/m^3; the quantity of fines and small particles (under 6.35 mm in size) does not exceed 5% by weight; the moisture content does not exceed 1.0%; and the temperature does not exceed 65°C.
>
> This cargo shall not be loaded and shipped under the provisions of this schedule if the temperature is in excess of 65°C, if its moisture content is in excess of 1.0%, if

the quantity of fines and small particles (under 6.35 mm in size) exceeds 5% by weight or if the apparent density is equal to or less than 5,000 kg/m^3."

The third paragraph in the section for "Loading" is replaced, as follows:

"Appropriate precautions shall be taken prior to and during loading in order that the cargo be substantially composed of essentially whole and intact briquettes with minimal presence of exposed or loose uncompacted pellets. The cargo shall be loaded in such a way so as to minimize breakage of briquettes and the additional generation of fines and small particles (under 6.35 mm in size) and concentration of fines in any area of the cargo and to minimize the presence of exposed or loose uncompacted pellets and concentration thereof in any area of the cargo. The addition of fines and small particles (under 6.35 mm in size) or dust or loose pellets in homogeneous cargoes of DRI (A) shall be prohibited."

DIRECT REDUCED IRON (B), Lumps, pellets, cold-moulded briquettes

The text in the section for "Description" is replaced, as follows :

"**Direct reduced iron (DRI) (B)** is a highly porous, black/grey metallic material formed by the reduction (removal of oxygen) of iron oxide at temperatures below the fusion point of iron. Cargoes in briquette form are defined as those with total iron (Fe) content of at least 88% by weight which have been moulded at a temperature not greater than 650°C or which have an apparent density of not greater than 5,000 kg/m^3."

FERROSILICON UN 1408 with 30% or more but less than 90% silicon (including briquettes)

In the individual schedule for "FERROSILICON UN 1408 with 30% or more but less than 90% silicon (including briquettes)", in the "Appendix", in the section for "General requirements for carriage of ferrosilicon", the first paragraph is deleted and the following paragraphs are renumbered, accordingly.

FERROSILICON with at least 25% but less than 30% silicon, or 90% or more silicon

In the individual schedule for "FERROSILICON with at least 25% but less than 30% silicon, or 90% or more silicon", in the "Appendix", in the section for "General requirements for carriage of ferrosilicon", the text in paragraph 1 is replaced to read:

"1 Two sets of self-contained breathing apparatus shall be carried in the ship in addition to those required by SOLAS regulation II-2/10.10. Self-contained breathing apparatus sets carried in accordance with SOLAS regulation II-2/19.3.6.2 may be used to comply with this requirement."

FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS UN 2793 in a form liable to self-heating

In the individual schedule for "FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS UN 2793 in a form liable to self-heating", in the section for "Carriage", in the second sentence, the words "or, alternatively, entry is required for this purpose, at least two sets of self-contained breathing apparatus, additional to those required by SOLAS regulation II-2/10.10 shall be provided" are deleted.

FISH MEAL (FISH SCRAP), STABILIZED Anti-oxidant treated

In the individual schedule for "FISH MEAL (FISH SCRAP), STABILIZED Anti-oxidant treated" (as adopted by resolution MSC.539(107)), BCSN is replaced to read "FISH MEAL (FISH

SCRAP), STABILIZED UN 2216 Anti-oxidant treated. Moisture content greater than 5% but not exceeding 12%, by mass. Fat content not more than 15%"; in the section for "Description", the words "Moisture content: greater than 5% but not exceeding 12%, by mass." and the words "Fat content: not more than 15%, by mass." are deleted; and in the table for "Characteristics", in the box for "Class", the words "Not applicable" are replaced by the number "9"; and in the box for "MHB", the word "SH" is replaced by the word "Not applicable". In the section for "Precautions", the text in paragraph 1 is replaced to read as follows:

"1 Stabilization of fish meal shall be achieved to prevent spontaneous combustion by the effective application of ethoxyquin or BHT (butylated hydroxytoluene) or tocopherols at the time of production. The said application shall occur within 12 months prior to shipment. Fish scrap or fish meal shall contain remnant measurable anti-oxidant levels of at least 100 ppm (mg/kg) of ethoxyquin, or 100 ppm (mg/kg) of BHT or 250 ppm (mg/kg) of tocopherol at the time of shipment."

IRON ORE PELLETS

In the individual schedule for "IRON ORE PELLETS", in the section for "Description", the second and third sentences are replaced to read "This iron oxide is formed into pellets by using binders, such as clay, and then hardening by firing at 1,200°C to 1,315°C. Moisture content: up to 6%."; and in the table for "Characteristics", in the box for "Bulk density", "1,900" is replaced by "1,800"; and in the box for "Stowage factor", the terms "0.45" and "0.52" are replaced by the terms "0.42" and "0.56", respectively.

New individual schedules

The following new individual schedules are inserted in alphabetical order:

"**ALUMINIUM SULPHATE GRANULAR**

Description
Aluminium sulphate granular consists of inorganic white granules. Hygroscopic in nature. Soluble in water. Used as a coagulant for drinking and wastewater treatment.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3 /t)**
less than 3 mm	40° to 45°	900 to 1,100	0.91 to 1.11
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	CR	B

Hazard
Causes serious eye damage.
This cargo is hygroscopic and will cake if wet.
This cargo is highly soluble and will be acidic when wet.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
Contact with certain metals, e.g. aluminium and zinc, may form hydrogen gas.
"Separated from" most other cargoes since it is a drinking water product.

Hold cleanliness
Clean and dry as relevant to the quality and hazards of the cargo.

Weather precautions
This cargo shall be kept as dry as practicable. It shall not be handled during precipitation. During handling of this cargo, all non-working hatches of the cargo spaces into which this cargo is loaded, or to be loaded, shall be closed.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code.

Precautions
Persons who may be exposed to the dust of the cargo shall wear protective gloves and goggles or other equivalent dust eye-protection, face protection and dust filter masks, as necessary. Minimize dust generation when loading.

Ventilation
The cargo spaces carrying this cargo shall not be ventilated during the voyage.

Carriage
Hatches of the cargo spaces shall be weathertight to prevent water ingress.

Discharge
This cargo is hygroscopic and may cake in overhangs, impairing safety during discharge. If this cargo has hardened, it shall be trimmed to avoid the formation of overhangs, as necessary.

Clean-up
After discharge of this cargo, the cargo spaces and the bilge wells shall be swept clean and then thoroughly washed out.

Emergency procedures

Special emergency equipment to be carried Protective clothing (gloves, boots, face protection and coveralls). Self-contained breathing apparatus.
Emergency procedures Wear protective clothing and self-contained breathing apparatus. **Emergency action in the event of fire** Use extinguishers appropriate for surrounding materials. The cargo itself is not combustible. **Medical first aid** Refer to the *Medical First Aid Guide* (MFAG), as amended.

"

"**APATITE CONCENTRATE**

Description
Crystalline fine powder of grey colour.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
Less than 0.5 mm	Not applicable	1,429 to 2,000	0.5 to 0.7
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	A

Hazard
This cargo may liquefy if shipped at a moisture content in excess of its transportable moisture limit (TML). See sections 7 and 8 of this Code.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
No special requirements.

Hold cleanliness
No special requirements.

Weather precautions
When a cargo is carried in a ship other than a ship complying with the requirements in 7.3.2 of this Code, the following provisions shall be complied with:

.1 the moisture content of the cargo shall be kept less than its TML during loading operations and the voyage;

.2 unless expressly provided otherwise in this individual schedule, the cargo shall not be handled during precipitation;

.3 unless expressly provided otherwise in this individual schedule, during handling of the cargo, all non-working hatches of the cargo spaces into which the cargo is loaded, or to be loaded, shall be closed;

.4 the cargo may be handled during precipitation under the conditions stated in the procedures required in 4.3.3 of this Code; and

.5 the cargo in a cargo space may be discharged during precipitation provided that the total amount of the cargo in the cargo space is to be discharged in the port.

Loading
Hatch covers, manholes and vent openings shall be checked for weather-tightness. Prior to loading, the holds shall be surveyed carefully to ensure a proper condition of ballast, bilge, fire-extinguishing and other systems. Additionally, manholes of the ballast tanks shall be checked for water leakage into the cargo spaces.

This cargo shall be trimmed to ensure that the height difference between peaks and troughs does not exceed 5% of the ship's breadth and that the cargo slopes uniformly from the hatch boundaries to the bulkheads and to avoid steep surfaces of cargo that collapse during the voyage. When the stowage factor of this cargo is equal to or less than 0.56 m^3/t, the tank top

may be overstressed unless the cargo is evenly spread across the tank top to equalize the weight distribution. Due consideration shall be given to ensure that the tank top is not overstressed during the voyage and during loading by a pile of the cargo forming.

Precautions
Appropriate precautions shall be taken to protect machinery and accommodation spaces from the dust of the cargo. Bilge wells of the cargo spaces shall be protected from ingress of the cargo. Due consideration shall be given to protect equipment from the dust of the cargo. Persons who may be exposed to the dust of the cargo shall wear protective clothing, goggles or other equivalent dust eye-protection and dust filter masks, as necessary. Bilge wells shall be clean, dry and covered, as appropriate, to prevent ingress of the cargo.

Ventilation
The cargo spaces carrying this cargo shall not be ventilated during the voyage

Carriage
The appearance of the surface of this cargo shall be checked regularly during the voyage. If free water above the cargo or fluid state of the cargo is observed during the voyage, the master shall take appropriate action to prevent cargo shifting and potential capsize of the ship and give consideration to seeking emergency entry into a place of refuge.

Discharge
No special requirements.

Clean-up
After discharge of this cargo, the bilge wells and the scuppers of the cargo spaces shall be checked and any blockage in the bilge wells and the scuppers shall be removed."

"**ASPHALT GRANULATES**

Description
Granulates from the demolition of asphalt roads. The granulates are re-used for the foundation/sub-base for new roads. The cargo has a dark grey/black colour and contains no more than 10% asphalt. The material has, in principle, no odour, but a light bitumen odour may be possible. The cargo is stored outside (open air).

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
Up to 60 mm	30° to 45°	1,700 to 1,800	0.55 to 0.59

Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	C

Hazard
No special hazards.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
"Away from" alkalis, oxidizing substances, acids, food, drink and animal feeding stuffs.

Hold cleanliness
No special requirements.

Weather precautions
No special requirements.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code. When the stowage factor of this cargo is equal to or less than 0.56 m^3/t, the tank top may be overstressed unless the cargo is evenly spread across the tank top to equalize the weight distribution. Due consideration shall be given to ensure that the tank top is not overstressed during the voyage and during loading by a pile of the cargo.

Precautions
Bilge wells shall be clean, dry and covered as appropriate, to prevent ingress of the cargo.
Bilge wells of the cargo spaces shall be protected from ingress of the cargo. Persons who may be exposed to cargo shall wear eye/face protection and applicable filter masks (in case of inadequate ventilation).

Ventilation
No special requirements.

Carriage
No special requirements.

Discharge
No special requirements.

Clean-up
Contaminated washing water shall be retained and disposed of in an appropriate manner/facility."

"CRUSHED GRANODIORITE, COARSE

The provisions of this schedule shall apply only to cargoes containing less than 0.1% respirable quartz and less than 7% of particles under 2 mm.

Description
Crushed granodiorite is made by blasting, crushing and sieving the common rock species granodiorite, a grey, very hard and compact mineral stone. The aggregate is used as a component in asphalt, concrete and hydraulically unbound materials.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
Up to 200 mm and less than 7% of particles less than 2 mm	34° to 40°	1,340 to 1,900	0.53 to 0.75
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	C

Hazard
No special hazards.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
No special requirements.

Hold cleanliness
No special requirements.

Weather precautions
No special requirements.

Loading
During loading, due consideration shall be given to minimize dust generation. Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code. When the stowage factor of this cargo is equal to or less than 0.56 m^3/t, the tank top may be overstressed unless the cargo is evenly spread across the tank top to equalize the weight distribution. Due consideration shall be given to ensure that the tank top is not overstressed during the voyage and during loading by a pile of the cargo.

Precautions
Appropriate precautions shall be taken to protect machinery and accommodation spaces from the dust of the cargo. Bilge wells of the cargo spaces shall be protected from ingress of the cargo. Due consideration shall be given to protect equipment from the dust of the cargo. Persons who may be exposed to the dust of the cargo shall wear goggles or other equivalent dust eye-protection and dust filter masks. Those persons shall wear protective clothing, as necessary.

Ventilation
No special requirements.

Carriage
No special requirements.

Discharge
No special requirements.

Clean-up
No special requirements."

"**FERRIC SULPHATE GRANULAR**

Description
Ferric sulphate consists of inorganic granules, usually yellow, brown or grey in colour. Hygroscopic in nature. Soluble in water. Used as a coagulant for water treatment. No special odour. Moisture normally around 10% (measured at 105°C); no oil in the cargo. Stored under cover.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
less than 5 mm	38° to 42°	1,000 to 1,300	0.77 to 1.00
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	CR	B

Hazard
Harmful if swallowed.
Causes skin irritation.
May cause an allergic skin reaction due to sensitization.
Causes serious eye damage.
This cargo is highly soluble and will be acidic when wet.
This cargo is hygroscopic and will cake if wet.
This cargo may be subject to decomposition if heated strongly. Decomposition may produce gases that are toxic (sulphur oxides). However, this cargo is not subject to an explosion hazard.
Corrodes metals under the influence of moisture.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
"Away from" certain metals, e.g. aluminium and zinc, that may form hydrogen gas in case of contact with the cargo.
Avoid contact with unalloyed steel or galvanized surfaces; materials not resistant to acid, copper, aluminium and iron.
"Away" from sources of heat.

Hold cleanliness
Clean and dry as relevant to the hazards of the cargo.

Weather precautions
This cargo shall be kept as dry as practicable. It shall not be handled during precipitation.
During handling of this cargo, all non-working hatches of the cargo spaces into which this cargo is loaded, or to be loaded, shall be closed.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code.

Precautions
Avoid contact with eyes and skin. Persons who may be exposed to the dust of the cargo shall wear protective clothing, gloves and eye-protection, as necessary. Minimize dust generation when loading.
Bilge wells shall be clean, dry and covered, as appropriate, to prevent ingress of the cargo.

Ventilation
The cargo spaces carrying this cargo shall not be ventilated during the voyage.

Carriage
Hatches of the cargo spaces shall be weathertight to prevent water ingress.

Discharge
The product is hygroscopic and may cake in overhangs, impairing safety during discharge. If this cargo has hardened, it shall be trimmed to avoid the formation of overhangs, as necessary. No discharge operations during precipitation.

Clean-up
After discharge of this cargo, the cargo spaces and the bilge wells shall be swept clean and then thoroughly washed out.

Emergency procedures

Special emergency equipment to be carried
Protective clothing (gloves, boots and coveralls). Self-contained breathing apparatus.
Emergency procedures
Wear protective clothing and self-contained breathing apparatus. **Emergency action in the event of fire** Use extinguishers appropriate for surrounding materials. The cargo itself is not combustible. **Medical first aid** Refer to the *Medical First Aid Guide* (MFAG), as amended.

"

"FISH MEAL (FISH SCRAP), STABILIZED

This schedule shall only apply to fish meal that does not meet any of the criteria on dangerous goods or materials hazardous only in bulk specified in sections 9.2.2 or 9.2.3, respectively.

Description
Fresh whole pelagic fish or trimmings for food grade fillet factories that are cooked, dried, with added anti-oxidants and milled before storage. The product is light brown to brown in colour. Water content between 5% to 10%, Fat content below 12%. Most particles between 0.08 mm to 1.2 mm. Smells of fish.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
Not applicable	Not applicable	300 to 700	1.43 to 3.33
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	C

Hazard
Liable to cause oxygen depletion in cargo space.

This cargo is non-combustible or has a low fire risk.

Stowage and segregation
No special requirements.

Hold cleanliness
Clean and dry as relevant to the hazards of the cargo.

Weather precautions
This cargo shall be kept as dry as practicable. This cargo shall not be handled during precipitation. During handling of this cargo, all non-working hatches of the cargo spaces into which this cargo is loaded, or to be loaded, shall be closed.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code. The cargo shall not be accepted for loading when the temperature of the cargo exceeds 35°C or 5°C above the ambient temperature, whichever is higher. The cargo may be loaded without weathering/curing prior to loading.

A certificate from an entity recognized by the competent authority of the port of loading shall be provided by the shipper prior to loading, stating that the material does not meet the MHB (SH) criteria specified in 9.2.3.3 of this Code.

Precautions
The shipper shall further provide the master with a certificate issued by an entity recognized by the competent authority of the port of loading specifying:

.1 moisture content;

.2 fat content; and

.3 details of anti-oxidant treatment.

A suitable equipment for quantitative measurement of the concentration of oxygen in the cargo space shall be provided on board the ship. Entry of personnel into cargo spaces for this cargo shall not be permitted until tests have been carried out and it has been established that the oxygen content has been restored to a normal level.

Ventilation
No special requirements.

Carriage
No special requirements.

Discharge
No special requirements.

Clean-up
No special requirements."

"**IRON ORE BRIQUETTES**

Description
This cargo is composed of hard briquettes generated in the process of cold agglomeration of iron ore and binders, such as sodium silicate. Iron ore briquettes are odourless and vary in

colour, from beige to dark grey, always granular in form, pillow-shaped, not soluble in water and resistant to ageing.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
10 mm to 40 mm	Not applicable	1,800 to 2,400	0.42 to 0.56
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	C

Hazard
This cargo may affect magnetic compasses.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
No special requirements.

Hold cleanliness
No special requirements.

Weather precautions
No special requirements.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code.

As the density of the cargo is extremely high, the tank top may be overstressed unless the cargo is evenly spread across the tank top to equalize the weight distribution. Due consideration shall be given to ensure that the tank top is not overstressed during the voyage and during loading by a pile of the cargo.

Precautions
Loading rates of this cargo are normally very high. Due consideration shall be given to the ballasting operation in developing the loading plan required by SOLAS regulation VI/7.3. Bilge wells shall be clean, dry and protected as appropriate to prevent ingress of the cargo.

Ventilation
No special requirements.

Carriage
No special requirements.

Discharge
No special requirements.

Clean-up
No special requirements."

"**PEA PROTEIN CONCENTRATE PELLETS**

Description
Fermented and flash-dried raw material containing main components of pea protein, fat, ash and crude fibre. The material is pelletized. Creamy (yellowish) coloured with a neutral odour.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
5 mm to 15 mm	24° to 28°	600 to 800	1.25 to 1.67

Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	C

Hazard
Loading of dry pellets using cargo blowers may present a risk of dust explosion.
This cargo flows freely like grain.
This cargo will cake if wet.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
No special requirements.

Hold cleanliness
Clean and dry as relevant to the hazards of the cargo.

Weather precautions
This cargo shall be kept as dry as practicable. This cargo shall not be handled during precipitation. During handling of this cargo, all non-working hatches of the cargo spaces into which this cargo is loaded, or to be loaded, shall be closed.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code.

Precautions
Persons who may be exposed to the dust of the cargo shall wear goggles or other equivalent dust eye-protection, dust filter masks and protective gloves, as necessary.

Ventilation
Surface ventilation, either natural or mechanical, shall be conducted during the voyage for the cargo spaces carrying this cargo, as necessary.

Carriage
No special requirements.

Discharge
No special requirements.

Clean-up
No special requirements."

"**PHOSPHATE ROCK FINES (uncalcined)**

Description
Phosphate rock is an ore in which phosphorus and oxygen are chemically united. Depending on the source, it is tan to dark grey, dry and dusty. It is crushed and washed with a sand-like appearance. Abrasive and dusty. It is a non-cohesive cargo.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
Up to 5 mm	30° to 45°	1,250 to 1,800	0.56 to 0.80
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	A

Hazard
This cargo may liquefy if shipped at a moisture content in excess of its transportable moisture limit (TML). See sections 7 and 8 of this Code.
Dust may cause eye, nose and respiratory irritation.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
No special requirements.

Hold cleanliness
No special requirements.

Weather precautions
When a cargo is carried in a ship other than a ship complying with the requirements in 7.3.2 of this Code, the following provisions shall be complied with:

.1 the moisture content of the cargo shall be kept less than its TML during loading operations and the voyage;

.2 unless expressly provided otherwise in this individual schedule, the cargo shall not be handled during precipitation;

.3 unless expressly provided otherwise in this individual schedule, during handling of the cargo, all non-working hatches of the cargo spaces into which the cargo is loaded, or to be loaded, shall be closed;

.4 the cargo may be handled during precipitation under the conditions stated in the procedures required in 4.3.3 of this Code; and

.5 the cargo in a cargo space may be discharged during precipitation provided that the total amount of the cargo in the cargo space is to be discharged in the port.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code. When the stowage factor of this cargo is equal to or less than 0.56 m^3/t, the tank top may be overstressed unless the cargo is evenly spread across the tank top to equalize the weight distribution. Due consideration shall be given to ensure that the tank top is not overstressed during the voyage and during loading by a pile of the cargo.

Precautions
Appropriate precautions shall be taken to protect machinery and accommodation spaces from the dust of the cargo. Bilge wells of the cargo spaces shall be protected from ingress of the cargo. Due consideration shall be given to protect equipment from the dust of the cargo. Persons who may be exposed to the dust of the cargo shall wear protective clothing, goggles or other equivalent dust eye-protection and dust filter masks, as necessary.

Ventilation
No special requirements.

Carriage
The appearance of the surface of this cargo shall be checked regularly during the voyage. If free water above the cargo or fluid state of the cargo is observed during the voyage, the master shall take appropriate actions to prevent cargo shifting and potential capsize of the ship and give consideration to seeking emergency entry into a place of refuge.

Discharge
No special requirements.

Clean-up
No special requirements."

"**TUFF, COARSE**

The provisions of this schedule shall apply only to cargoes containing less than 0.1% respirable quartz.

The provisions of this schedule shall apply only to tuff cargoes with the following particle size distribution:

.1 not more than 10% by weight of particles less than 1 mm (D_{10} > 1 mm); or

.2 not more than 50% by weight of particles less than 10 mm (D_{50} > 10 mm); or

.3 both.

Description
Porous rock of volcanic origin. Colour may vary from yellow, light brown to red, grey or black.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
Up to 80 mm. Not more than 10% of particles less than 1 mm and/or not more than 50% of particles less than 10 mm	Not applicable	900 to 1,200	0.83 to 1.11
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	C

Hazard
Dust of this cargo is abrasive and may cause skin and eye irritation.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
No special requirements.

Hold cleanliness
No special requirements.

Weather precautions
No special requirements.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code.

Precautions
Appropriate precautions shall be taken to protect machinery and accommodation spaces from the dust of the cargo. Bilge wells shall be clean and dry and covered, as appropriate, to prevent ingress of the cargo. Persons who may be exposed to the cargo shall wear protective clothing, gloves, goggles or other equivalent dust eye-protection and dust filter masks, as necessary.

Ventilation
No special requirements.

Carriage
No special requirements.

Discharge
No special requirements.

Clean-up
No special requirements."

"**ZINC SLAG (coarse)**

Description
Coarse residue generated from zinc smelting process. This cargo is highly permeable and pore water of this cargo drains quickly. It is black or red-brown in colour and either granular or lump.

Characteristics

Physical properties			
Size	**Angle of repose**	**Bulk density (kg/m^3)**	**Stowage factor (m^3/t)**
80%: larger than 10 mm Up to 60 mm	Not applicable	1,500 to 2,800	0.36 to 0.67
Hazard classification			
Class	**Subsidiary hazard(s)**	**MHB**	**Group**
Not applicable	Not applicable	Not applicable	C

Hazard
This cargo is abrasive.
This cargo is non-combustible or has a low fire risk.

Stowage and segregation
No special requirements.

Hold cleanliness
No special requirements.

Weather precautions
No special requirements.

Loading
Trim in accordance with the relevant provisions required under sections 4 and 5 of this Code. When the stowage factor of this cargo is equal to or less than 0.56 m^3/t, the tank top may be overstressed unless the cargo is evenly spread across the tank top to equalize the weight distribution. Due consideration shall be given to ensure that the tank top is not overstressed during the voyage and during loading by a pile of the cargo.

Precautions
Appropriate action shall be taken to protect machinery and accommodation spaces from the dust of the cargo. Bilge wells of the cargo spaces shall be protected from ingress of the cargo. Due consideration shall be given to protect equipment from the dust of the cargo. Persons who may be exposed to the dust of the cargo shall wear protective clothing, goggles or other equivalent dust eye-protection and dust filter masks, as necessary.

Ventilation
No special requirements.

Carriage
Bilge water shall be removed regularly during the voyage.

Discharge
No special requirements.

Clean-up
No special requirements."

APPENDIX 3

PROPERTIES OF SOLID BULK CARGOES

1 Non-cohesive cargoes

1.1 In the list, add the following new entries in alphabetical order:

"ALUMINIUM SULPHATE GRANULAR"

"ASPHALT GRANULATES"

"CRUSHED GRANODIORITE, COARSE"

"FERRIC SULPHATE GRANULAR"

"PEA PROTEIN CONCENTRATE PELLETS"

"PHOSPHATE ROCK FINES (uncalcined)"

APPENDIX 4

INDEX

Delete the entries for "CASTOR FLAKE UN 2969", "CASTOR MEAL UN 2969" and "CASTOR POMACE UN 2969".

Replace the BCSNs for "FISH MEAL, STABILIZED" and "FISH SCRAP, STABILIZED" by "FISH MEAL, STABILIZED UN 2216" and "FISH SCRAP, STABILIZED UN 2216", respectively.

Insert the following new entries in alphabetical order:

"

Material	Group	Reference
ALUMINIUM SULPHATE GRANULAR	B	
APATITE CONCENTRATE	A	
ASPHALT GRANULATES	C	
CRUSHED GRANODIORITE, COARSE	C	
FERRIC SULPHATE GRANULAR	B	
FISH MEAL, STABILIZED	C	
FISH SCRAP, STABILIZED	C	
IRON ORE BRIQUETTES	C	
PEA PROTEIN CONCENTRATE PELLETS	C	
PHOSPHATE ROCK FINES (uncalcined)	A	
TUFF, COARSE	C	
ZINC SLAG (coarse)	C	

"

APPENDIX 5

BULK CARGO SHIPPING NAMES IN THREE LANGUAGES (ENGLISH, SPANISH AND FRENCH)

Delete the entries for "CASTOR FLAKE UN 2969", "CASTOR MEAL UN 2969" and "CASTOR POMACE UN 2969".

Replace the BCSNs for "FISH MEAL, STABILIZED" and "FISH SCRAP, STABILIZED" by "FISH MEAL, STABILIZED UN 2216" and "FISH SCRAP, STABILIZED UN 2216", respectively.

Insert the following new entries in the corresponding alphabetical order:

"

English	French	Spanish
ALUMINIUM SULPHATE GRANULAR	SULFATE D'ALUMINIUM EN GRAINS	SULFATO DE ALUMINIO GRANULAR
APATITE CONCENTRATE	CONCENTRÉ D'APATITE	CONCENTRADO DE APATITA
ASPHALT GRANULATES	GRANULATS D'ASPHALTE	GRANULADOS ASFÁLTICOS

English	French	Spanish
CRUSHED GRANODIORITE, COARSE	GRANODIORITE CONCASSÉE (GROS GRAINS)	GRANODIORITA TRITURADA, GRUESA
FERRIC SULPHATE GRANULAR	SULFATE DE FER EN GRAINS	SULFATO FÉRRICO GRANULAR
FISH MEAL, STABILIZED	FARINE DE POISSON STABILISÉE	HARINA DE PESCADO ESTABILIZADA
FISH SCRAP, STABILIZED	DÉCHETS DE POISSON STABILISÉS	DESECHOS DE PESCADO ESTABILIZADOS
IRON ORE BRIQUETTES	BRIQUETTES DE MINERAI DE FER	BRIQUETAS DE MINERAL DE HIERRO
PEA PROTEIN CONCENTRATE PELLETS	GRANULÉS DE CONCENTRÉ DE PROTÉINES DE POIS	PÉLETS DE CONCENTRADOS DE PROTEÍNAS DE GUISANTES
PHOSPHATE ROCK FINES (uncalcined)	FINES DE ROCHE PHOSPHATÉE (non calcinée)	FINOS DE FOSFATO EN ROCA (no calcinado)
TUFF, COARSE	TUF (à gros grains)	TOBA VOLCÁNICA (GRUESA)
ZINC SLAG (coarse)	SCORIES DE ZINC (à gros grains)	ESCORIA DE CINC (gruesa)

"