Subject

Application of IMSBC Code 4th amendment

ClassNK

# Technical Information

No. TEC-1143
Date 22 December 2017

To whom it may concern

With regard to application of IMSBC Code 4th amendment, please be informed as follows.
The IMSBC Code amended by IMO Resolution MSC.426 (98) is referred to as "IMSBC Code 4th amendment" in this Technical Information. The current IMSBC Code ("IMSBC Code (2015 Edition)") based on IMSBC Code 3rd amendment previously informed in ClassNK Technical Information No.TEC-1057 is referred to as "IMSBC Code (2015 Edition)" in this Technical Information also.
Due to the release of this Technical Information, previous ClassNK Technical Information No.TEC-0979 dated 22 January 2014 and ClassNK Technical Information No.TEC-1014 dated 20 November 2014 are revoked.

1. Amendment of IMSBC Code
   The revised IMSBC Code (IMSBC Code 4th amendment) was adopted by IMO Maritime Safety Committee 98th session (MSC98) held in June 2017 and individual schedules of each cargo were amended.
   IMSBC Code 4th amendment will enter into force on or after 1 January 2019 and is mandatory for all ships that load solid bulk cargoes.

2. Guidance for application of IMSBC Code fitness certificate
   Regarding IMSBC Code (4th amendment) fitness certificate, please refer to the attachment 1."Guidance for application of IMSBC Code (4th amendment) fitness certificate".

3. Cargoes newly added
   Please note that there are cargoes newly added in IMSBC Code (4th amendment) that were not in IMSBC Code (2015 Edition). Please refer to attachment 2."Table G1 - Cargoes newly added and requirements on construction/equipment (IMSBC Code (4th amendment))".

(To be continued)

4. Application of IMSBC Code (4th amendment) on voluntary basis
IMSBC Code fitness certificate in accordance with IMSBC Code (4th amendment) may be issued upon requests from owners/shipbuilders as voluntary basis from 1 January 2018.
For cargoes listed in Table G1 as 'Group A and B' or 'Group B', IMSBC Code (4th amendment) fitness certificate will be issued in case where ships comply with requirements in Table G1. Onboard survey may be necessary to issue the certificate in some cases, therefore, if you need more information, please contact to ClassNK Material and Equipment Department (EQD).
Furthermore, in case where METAL SULPHIDE CONCENTRATES CORROSIVE (IMO class 8, UN No.1759) listed in the Table G1 is included in IMSBC Code fitness certificate for the carriage of the cargo, certificate of fitness for ship carrying dangerous goods (DG certificate) also shall be revised for including the cargo since the cargo is categorized as dangerous goods.

5. Revision of the exemption certificate for Fixed Gas Fire-Extinguishing system (FFEA)
(1) FFEA is exempted for loading following cargoes under IMSBC Code (4th amendment) and MSC.1/Circ.1395/Rev.3 (Please refer to attachment 3.).
- FERROSILICON with at least 25% but less than 30% silicon, or 90% or more silicon
- METAL SULPHIDE CONCENTRATES, CORROSIVE (Low fire risk)
- MONOAMMONIUM PHOSPHATE (M.A.P.), MINERAL ENRICHED COATING
- MONOCALCIUMPHOSPHATE (MCP)
- SAND, MINERAL CONCENTRATE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I)

For ships which FFEA is exempted, if the above mentioned cargoes are loaded, it is necessary to rewrite the exemption certificate, in order to add these cargoes names in list of cargoes attached to the certificate.

(2) In case where a full term exemption certificate has been issued by ClassNK, new exemption certificate is issued by ClassNK

(3) In case of Panamanian flagged ships, it is necessary for ship owner or management company to apply the issuance of full term exemption certificate to Panamanian Administration directly within 30 days after ClassNK issue the interim exemption certificate.

(4) In case of Liberian flagged ships, the issuance of the full term exemption certificate will be requested to Liberian Administration by ClassNK, upon the issuance of the interim exemption certificate.

(5) In case where a full term exemption certificate is issued by the flag Administration except Panamanian and Liberian Administrations, it is necessary for ship owner or management company to apply the issuance of exemption certificate to the Administration directly.

(To be continued)

For any questions about the above, please contact:

[IMSBC Code fitness certificate and related questions]
NIPPON KAIJI KYOKAI (ClassNK)
Material and Equipment Department, Administration Center Annex, Head Office
Address: 3-3 Kioi-cho, Chiyoda-ku, Tokyo 102-0094, Japan
Tel.: +81-3-5226-2020
Fax: +81-3-5226-2057
E-mail: eqd@classnk.or.jp

[Exemption certificate from Fixed Gas Fire-extinguishing system]
Classification Department, Information Center, Head Office
Address: 1-8-5 Ohnodai, Midori-ku, Chiba 267-0056, Japan
Tel.: +81-43-294-5784
Fax: +81-43-294-5449
E-mail: cld@classnk.or.jp

Attachment:

1. Guidance for application of IMSBC Code (4th amendment) fitness certificate
2. Table G1 - Cargoes newly added and requirements on construction/equipment (IMSBC Code (4th amendment))
3. Table 1, LIST OF SOLID BULK CARGOES FOR WHICH A FIXED GAS FIRE-EXTINGUISHING SYSTEM MAY BE EXEMPTED - MSC.1/Circ.1395/Rev.3

# Guidance for application of IMSBC Code (4th amendment) fitness certificate

## 0101 General

Under the IMSBC Code, solid bulk cargoes are classified as follows

(1) Cargoes likely to liquefy (Group A)
(2) Cargoes having chemical hazard (Group B)
(3) Cargoes other than formers (Group C).

In this guidance, they are referred to as “Group A cargoes”, “Group B cargoes” and “Group C cargoes” respectively.

## 0102 Requirements for construction and equipment

-1. A loading manual and a stability information booklet approved by ClassNK are required to be provided onboard regardless of the types of cargoes intended to be carried.

-2. In case where the moisture content of Group A cargoes exceeds the transportable moisture limit, the cargo is to be carried by the specially constructed or fitted cargo ship designed portable divisions or permanent structural boundaries to confine any shift of cargo. For details, please refer to IMSBC Code Section 7.

-3. The requirements for the carriage of Group B cargoes except COAL and BROWN COAL BRIQUETTES, please refer to Table 1.1 and 1.2.
The requirements for the carriage of COAL and BROWN COAL BRIQUETTES, please refer to Table 1.3.

*Note 1.1: The Code provides special requirements for construction and equipment for fire protection and personnel protection as well as operational precautions and information on properties of each material.*

*Note 1.2: The applications of the requirements of SOLAS74 Reg.II-2/53 and 54 for carriage of dangerous goods (Reg.II-2/10.7 and 19 under SOLAS2000) are also shown in Table 1.1 for convenience sake.*

## 0103 Application

-1. Applicant, the ship owner or their representative, or the shipbuilder, should submit an application containing the information on the items listed below to ClassNK local office in charge or Material and Equipment Department (EQD) prior to the survey onboard the ship. (Please refer to 0104)
   (1) List of cargoes to be included in the IMSBC Code fitness certificate (Group A cargoes, Group C cargoes and/or Group B cargoes. In case where the Group B cargoes are included, it is necessary to submit the list of Group B cargoes to EQD.)
   (2) In case where a survey onboard the ship is required, expected date and place of the survey and local agent to contact (only for existing ship)
   (3) A list of documents submitted together with the application and of those expected to be submitted later, if any.

-2. In case where dangerous goods having the UN No. are included in the cargoes, the applicant should also apply for the issue of a certificate of compliance with the requirements of SOLAS74 Reg.II-2/54 *(Reg.II-2/19 under SOLAS2000)* as necessary.

## 0104 Submission of documents

-1. In case where the certification is requested for the carriage of Group B cargoes, the applicant should submit the documents as shown in Table 1.4 (other than COAL and BROWN COAL BRIQUETTES) and/or Table 1.5 (COAL and BROWN COAL BRIQUETTES) to ClassNK local office or EQD. For existing ships, if ClassNK concludes that the condition of the ship’s compliance with the requirements can be checked by the survey onboard, submission of documents and documents examination may be omitted. If it is not clear whether the submission of documents and documents examination are necessary or not, please contact to EQD.

-2. In case where the certification is requested for the carriage of Group A cargoes without appropriate restrictions on their moisture contents, the applicant should submit three sets of relevant structural drawings, stability calculations and other documents considered necessary by ClassNK to EQD.

### 0105 Document examination, survey and issue of certificate

After documents examination at EQD (if necessary) and survey on board conducted at ClassNK local office, IMSBC Code fitness certificate will be issued.

### 0106 Renewal and rewriting of the certificate

-1. Rewriting of IMSBC Code fitness certificate due to the inclusion of Group A and B and/or Group B cargoes shown in Table G1

In case where there are no additional requirements (the survey on board is not required), application and list of cargoes should be submitted to EQD. In case that there are additional requirements (the survey on board is required.), application and list of cargoes should be submitted to ClassNK local office or EQD.

-2. Renewal of IMSBC Code fitness certificate

Document examination at EQD is not required. Application should be submitted to ClassNK local office.

-3. Rewriting of IMSBC Code fitness certificate due to change of flag or ship's name .

Document examination at EQD is not required. Application should be submitted to ClassNK local office.

**Table 1.1**

**Requirements of construction and equipment for individual cargoes**

**under the provisions of the IMSBC Code (4th amendment) and SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments)**

| a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARGOES | IMO class | UN No. | Group | Stowage | NO SMOKING sign | Ventilation | SCBA | Protective clothing | Bilge line | Explosion protected electrical equipment | Dual purpose nozzles | 4 jets of water | Heating arrangement | SOLAS Reg.II-2/54.2 or 19.3 | | | | | | | | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| | | | | | | | | | | | | | | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | Mechanical ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | |
| ALFALFA | | | C | | | | | | | | | | | | | | | | | | | |
| ALUMINA | | | C | | | | | | | | | | | | | | | | | | | |
| ALUMINA, CALCINED | | | C | | | | | | | | | | | | | | | | | | | |
| ALUMINA HYDRATE | MHB | | A and B | | | | Y | Y | | | | | | | | | | | | | | |
| ALUMINA SILICA | | | C | | | | | | | | | | | | | | | | | | | |
| ALUMINA SILICA, pellets | | | C | | | | | | | | | | | | | | | | | | | |
| ALUMINIUM FERROSILICON POWDER | 4.3 | 1395 | B | A, G | Y | ML,Sa | Y | | | IICT2 | | | | | | X | X | X | X | X | X | |
| ALUMINIUM FLUORIDE | | | A | | | | | | | | | | | | | | | | | | | |
| ALUMINIUM NITRATE | 5.1 | 1438 | B | | | | Y | Y | | | Y | Y | | X | X | | | | X | X | | (Yes) |
| ALUMINIUM SILICON POWDER, UNCOATED | 4.3 | 1398 | B | A, G | Y | ML,Sa | Y | | | IICT2 | | | | | | X | X | X | X | X | X | |
| ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS | 4.3 | 3170 | B | A, G | Y | ML,Sa | Y | | | IICT2 | | | | | | X | X | X | X | X | X | |
| ALUMINIUM SMELTING / REMELTING BY-PRODUCTS, PROCESSED | MHB | | A and B | G | Y | ML | | | F | | | | | | | | | | | | | Yes |
| AMMONIUM NITRATE | 5.1 | 1942 | B | A | Y | | Y | Y | | IS | | Y | N1 | X | X | X | | X[8] | X | X | X | (Yes) |
| AMMONIUM NITRATE BASED FERTILIZER (Type A) | 5.1 | 2067 | B | A | Y | | Y | Y | | IS | | Y | N1 or N2 | X | X | X | | X[8] | X | X | X | (Yes) |
| AMMONIUM NITRATE BASED FERTILIZER (Type B) | 9 | 2071 | B | A | Y | | Y | Y | | IS | | Y | N1 or N2 | X | X | X | | X[8] | X | X | X | (Yes) |
| AMMONIUM NITRATE BASED FERTILIZER (non-hazardous) | | | C | A | Y | | Y | Y | | IS | | Y | N1 or N2 | | | | | | | | | |
| AMMONIUM SULPHATE | | | C | | | | | | | | | | | | | | | | | | | |
| AMORPHOUS SODIUM SILICATE LUMPS | MHB | | B | | | | | | | | | | | | | | | | | | | |
| ANTIMONY ORE AND RESIDUE | | | C | | | | | | | | | | | | | | | | | | | |
| BARIUM NITRATE | 5.1 | 1446 | B | | | Nm | Y | Y | | | Y | Y | | X | X | | | | X | X | | (Yes) |
| BARYTES | | | C | | | | | | | | | | | | | | | | | | | |
| BAUXITE | | | C | | | | | | | | | | | | | | | | | | | |
| BIOSLUDGE | | | C | | | | | | | | | | | | | | | | | | | |
| BORAX (PENTAHYDRATE CRUDE) | | | C | | | | | | | | | | | | | | | | | | | |
| BORAX, ANHYDROUS, crude or refined | | | C | | | | | | | | | | | | | | | | | | | |
| BORIC ACID | MHB | | B | | | | | | | | | | | | | | | | | | | |
| BROWN COAL BRIQUETTES | MHB | | B | See Table 1.3 | | | | | | | | | | | | | | | | | | |

| a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARGOES | IMO class | UN No. | Group | Stowage | NO SMOKING sign | Ventilation | SCBA | Protective clothing | Bilge line | Explosion protected electrical equipment | Dual purpose nozzles | 4 jets of water | Heating arrangement | SOLAS Reg.II-2/54.2 or 19.3 | | | | | | | | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| | | | | | | | | | | | | | | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | Mechanical ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | |
| CALCIUM NITRATE | 5.1 | 1454 | B | | | | Y | Y | | | Y | Y | | X | X | | | | X | X | | (Yes) |
| CALCIUM NITRATE FERTILIZER | | | C | | | | | | | | | | | | | | | | | | | |
| CARBORUNDUM | | | C | | | | | | | | | | | | | | | | | | | |
| CASTOR BEANS [1] | 9 | 2969 | B | | | Nm | Y | Y | | | Y | | | X | X | | | | X | X | | Yes |
| CEMENT | | | C | | | | | | | | | | | | | | | | | | | |
| CEMENT CLINKERS | | | C | | | | | | | | | | | | | | | | | | | |
| CHAMOTTE | | | C | | | | | | | | | | | | | | | | | | | |
| CHARCOAL | MHB | | B | | | | | | | | | | | | | | | | | | | Yes |
| CHEMICAL GYPSUM | | | A | | | | | | | | | | | | | | | | | | | |
| CHOPPED RUBBER AND PLASTIC INSULATION | | | C | | | | | | | | | | | | | | | | | | | Yes [2] |
| CHROME PELLETS | | | C | | | | | | | | | | | | | | | | | | | |
| CHROMITE ORE | | | C | | | | | | | | | | | | | | | | | | | |
| CLAY | | | C | | | | | | | | | | | | | | | | | | | |
| CLINKER ASH | MHB | | A and B | | | | | Y | | | | | | | | | | | | | | |
| COAL | MHB | | A and B | See Table 1.3 | | | | | | | | | | | | | | | | | | |
| COAL SLURRY | | | A | | | N | | | | | | | | | | | | | | | | |
| COAL TAR PITCH | MHB | | B | | | | | Y | | | | | | | | | | | | | | |
| COARSE CHOPPED TYRES | | | C | | | | | | | | | | | | | | | | | | | Yes [2] |
| COARSE IRON AND STEEL SLAG AND ITS MIXTURE | | | C | | | | | | | | | | | | | | | | | | | |
| COKE | | | C | | | | | | | | | | | | | | | | | | | |
| COKE BREEZE | | | A | | | | | | | | | | | | | | | | | | | |
| COLEMANITE | | | C | | | | | | | | | | | | | | | | | | | |
| COPPER CONCENTRATE | | | A | | | | | | | | | | | | | | | | | | | |
| COPPER GRANULES | | | C | | | | | | | | | | | | | | | | | | | |
| COPPER MATTE | | | C | | | | | | | | | | | | | | | | | | | |
| COPPER SLAG | | | A | | | | | | | | | | | | | | | | | | | |
| COPRA (dry) | 4.2 | 1363 | B | A | Y | Nm | | | | | | | | X | X | | | | X | X | X | Yes |
| CRUSHED CARBON ANODES | | | C | | | | | | | | | | | | | | | | | | | |
| CRYOLITE | | | C | | | | | | | | | | | | | | | | | | | |
| DIAMMONIUM PHOSPHATE (D.A.P.) | | | C | | | | | | | | | | | | | | | | | | | |
| DIRECT REDUCED IRON, (A)<br>Briquettes, hot-moulded | MHB | | B | F | Y | Nm, Sp | | | | IICT2 | | | | | | | | | | | | |
| DIRECT REDUCED IRON, (B)<br>Lumps, pellets, cold-moulded briquettes [3] | MHB | | B | F | Y | | | | | IICT2 | | | | | | | | | | | | Yes |
| DIRECT REDUCED IRON, (C)<br>(By-product fines) [3] | MHB | | B | F | Y | | Y | | | IICT2 | | | | | | | | | | | | Yes |

| a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARGOES | IMO class | UN No. | Group | Stowage | NO SMOKING sign | Ventilation | SCBA | Protective clothing | Bilge line | Explosion protected electrical equipment | Dual purpose nozzles | 4 jets of water | Heating arrangement | SOLAS Reg.II-2/54.2 or 19.3 | | | | | | | | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| | | | | | | | | | | | | | | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | Mechanical ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | |
| DISTILLERS DRIED GRAINS WITH SOLUBLES | | | C | | | | | | | | | | | | | | | | | | | |
| DOLOMITE | | | C | | | | | | | | | | | | | | | | | | | |
| FELSPAR LUMP | | | C | | | | | | | | | | | | | | | | | | | |
| FERROCHROME | | | C | | | | | | | | | | | | | | | | | | | |
| FERROCHROME, exothermic | | | C | | | | | | | | | | | | | | | | | | | |
| FERROMANGANESE | | | C | | | | | | | | | | | | | | | | | | | |
| FERRONICKEL | | | C | | | | | | | | | | | | | | | | | | | |
| FERROPHOSPHORUS (including briquettes) | MHB | | B | | | ML, Sa | Y | | | IICT1 | | | | | | | | | | | | |
| FERROSILICON with 30% or more but less than 90% silicon (including briquettes) | 4.3 | 1408 | B | A, G | Y | ML,Sa | Y | Y | F,N | IICT1 | | | | | | X | X | X | X | X | X | |
| FERROSILICON with at least 25% but less than 30% silicon, or 90% or more silicon | MHB | | B | G | Y | ML,Sa | Y | | F,N | IICT1 | | | | | | | | | | | | |
| FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS | 4.2 | 2793 | B | A | Y | | Y | | | | | | | X | X | | | | X | X | X | Yes |
| FERROUS SULPHATE HEPTAHYDRATE | | | C | | | | | | | | | | | | | | | | | | | |
| FERTILIZERS WITHOUT NITRATES (non-hazardous) | | | C | | | | | | | | | | | | | | | | | | | |
| FISH (IN BULK) | | | A | | | | | | | | | | | | | | | | | | | |
| FISHMEAL (FISHSCRAP), STABILIZED | 9 | 2216 | B | | | Nm | Y | | | | | | | X | X | | | | X | X | | Yes |
| FLUORSPAR | MHB | | A and B | | | | | | | | | | | | | | | | | | | |
| FLY ASH, DRY | | | C | | | | | | | | | | | | | | | | | | | |
| FLY ASH, WET | | | A | | | | | | | | | | | | | | | | | | | |
| FOAM GLASS GRAVEL | | | C | | | | | | | | | | | | | | | | | | | |
| GLASS CULLET | | | C | | | | | | | | | | | | | | | | | | | |
| GRAIN SCREENING PELLETS | | | C | | | | | | | | | | | | | | | | | | | |
| GRANULAR FERROUS SULPHATE | | | C | | | | | | | | | | | | | | | | | | | |
| GRANULATED NICKEL MATTE (LESS THAN 2% MOISTURE CONTENT) | MHB | | B | | | | Y | Y | | | | | | | | | | | | | | |
| GRANULATED SLAG | | | C | | | | | | | | | | | | | | | | | | | |
| GRANULATE TYRE RUBBER | | | C | | | | | | | | | | | | | | | | | | | Yes [2] |
| GYPSUM | | | C | | | | | | | | | | | | | | | | | | | |
| GYPSUM GRANULATED | | | C | | | | | | | | | | | | | | | | | | | |
| ILMENITE CLAY | | | A | | | | | | | | | | | | | | | | | | | |
| ILMENITE (ROCK) | | | C | | | | | | | | | | | | | | | | | | | |
| ILMENITE SAND | | | A | | | | | | | | | | | | | | | | | | | |
| ILMENITE (UPGRADED) | | | A | | | | | | | | | | | | | | | | | | | |
| IRON AND STEEL SLAG AND ITS MIXTURE | | | A | | | | | | | | | | | | | | | | | | | |

| a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARGOES | IMO class | UN No. | Group | Stowage | NO SMOKING sign | Ventilation | SCBA | Protective clothing | Bilge line | Explosion protected electrical equipment | Dual purpose nozzles | 4 jets of water | Heating arrangement | SOLAS Reg.II-2/54.2 or 19.3 | | | | | | | | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| | | | | | | | | | | | | | | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | Mechanical ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | |
| IRON ORE | | | C | | | | | | | | | | | | | | | | | | | |
| IRON ORE FINES | | | A | | | | | | | | | | | | | | | | | | | |
| IRON ORE PELLETS | | | C | | | | | | | | | | | | | | | | | | | |
| IRON OXIDE, SPENT or IRON SPONGE, SPENT | 4.2 | 1376 | B | A | | Nm | Y | Y | | IIAT2 | Y | | | X | X | | | | X | X | X | Yes |
| IRON OXIDE TECHNICAL | | | A | | | | | | | | | | | | | | | | | | | |
| IRON SINTER | | | C | | | | | | | | | | | | | | | | | | | |
| IRON SMELTING BY-PRODUCTS | | | C | | | | | | | | | | | | | | | | | | | |
| IRONSTONE | | | C | | | | | | | | | | | | | | | | | | | |
| LABRADORITE | | | C | | | | | | | | | | | | | | | | | | | |
| LEAD NITRATE | 5.1 | 1469 | B | | | N | Y | Y | | | Y | Y | | X | X | | | | X | X | | (Yes) |
| LEAD ORE | | | C | | | | | | | | | | | | | | | | | | | |
| LIME (UNSLAKED) | MHB | | B | | | | | | | | | | | | | | | | | | | |
| LIMESTONE | | | C | | | | | | | | | | | | | | | | | | | |
| LINTED COTTON SEED | MHB | | B | | | | Y | | | | | | | | | | | | | | | Yes |
| MAGNESIA (DEADBURNED) | | | C | | | | | | | | | | | | | | | | | | | |
| MAGNESIA (UNSLAKED) | MHB | | B | | | | | | | | | | | | | | | | | | | |
| MAGNESITE, natural | | | C | | | | | | | | | | | | | | | | | | | |
| MAGNESIUM NITRATE | 5.1 | 1474 | B | | | | Y | Y | | | Y | Y | | X | X | | | | X | X | | (Yes) |
| MAGNESIUM SULPHATE FERTILIZERS | | | C | | | | | | | | | | | | | | | | | | | |
| MANGANESE COMPONENT FERROALLOY SLAG | | | C | | | | | | | | | | | | | | | | | | | |
| MANGANESE ORE | | | C | | | | | | | | | | | | | | | | | | | |
| MANGANESE ORE FINES | | | A | | | | | | | | | | | | | | | | | | | |
| MARBLE CHIPS | | | C | | | | | | | | | | | | | | | | | | | |
| METAL SULPHIDE CONCENTRATES | MHB | | A and B | | | | Y | | | | | | | | | | | | | | | Yes [9] |
| METAL SULPHIDE CONCENTRATES, CORROSIVE | 8 | 1759 | A and B | | | | Y | Y | | | | | | | | | | | Y | Y | | Yes [9] |
| MINERAL CONCENTRATES | | | A | | | | | | | | | | | | | | | | | | | |
| MONOAMMONIUM PHOSPHATE (M.A.P.) | | | C | | | | | | | | | | | | | | | | | | | |
| MONOAMMONIUM PHOSPHATE (M.A.P.), MINERAL ENRICHED COATING | MHB | | B | | | | Y | Y | | | | | | | | | | | | | | |
| MONOCALCIUMPHOSPHATE (MCP) | MHB | | A and B | | | | Y | Y | | | | | | | | | | | | | | |
| NICKEL ORE | | | A | | | | | | | | | | | | | | | | | | | |
| OLIVINE SAND | | | A | | | | | | | | | | | | | | | | | | | |
| OLIVINE GRANULAR AND GRAVEL AGGREGATE PRODUCTS | | | C | | | | | | | | | | | | | | | | | | | |
| PEANUTS (in shell) | | | C | | | | | | | | | | | | | | | | | | | |
| PEAT MOSS | MHB | | A and B | | | Nm | | | | | | | | | | | | | | | | |
| PEBBLES (sea) | | | C | | | | | | | | | | | | | | | | | | | |

| a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARGOES | IMO class | UN No. | Group | Stowage | NO SMOKING sign | Ventilation | SCBA | Protective clothing | Bilge line | Explosion protected electrical equipment | Dual purpose nozzles | 4 jets of water | Heating arrangement | SOLAS Reg.II-2/54.2 or 19.3 | | | | | | | | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| | | | | | | | | | | | | | | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | Mechanical ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | |
| PELLETS (concentrates) | | | C | | | | | | | | | | | | | | | | | | | |
| PERLITE ROCK | | | C | | | | | | | | | | | | | | | | | | | |
| PETROLEUM COKE (calcined or uncalcined) | MHB | | B | | | | Y | Y | | | Y | | | | | | | | | | | |
| PHOSPHATE (defluorinated) | | | C | | | | | | | | | | | | | | | | | | | |
| PHOSPHATE ROCK (calcined) | | | C | | | | | | | | | | | | | | | | | | | |
| PHOSPHATE ROCK (uncalcined) | | | C | | | | | | | | | | | | | | | | | | | |
| PIG IRON | | | C | | | | | | | | | | | | | | | | | | | |
| PITCH PRILL | MHB | | B | | | Nm | Y | Y | | | Y | | | | | | | | | | | |
| POTASH | | | C | | | | | | | | | | | | | | | | | | | |
| POTASSIUM CHLORIDE | | | C | | | | | | | | | | | | | | | | | | | |
| POTASSIUM NITRATE | 5.1 | 1486 | B | | | | Y | Y | | | Y | Y | | X | X | | | | X | X | | (Yes) |
| POTASSIUM SULPHATE | | | C | | | | | | | | | | | | | | | | | | | |
| PUMICE | | | C | | | | | | | | | | | | | | | | | | | |
| PYRITE (containing copper and iron) | | | C | | | | | | | | | | | | | | | | | | | |
| PYRITES, CALCINED (Calcined Pyrites) | MHB | | A and B | | | | | | | | | | | | | | | | | | | |
| PYROPHYLLITE | | | C | | | | | | | | | | | | | | | | | | | |
| QUARTZ | | | C | | | | | | | | | | | | | | | | | | | |
| QUARTZITE | | | C | | | | | | | | | | | | | | | | | | | |
| RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) | 7 | 2912 | B | | | | Y | Y | | | | | | | | | | | | | | |
| RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I) | 7 | 2913 | B | | | | Y | Y | | | | | | | | | | | | | | |
| RASORITE (ANHYDROUS) | | | C | | | | | | | | | | | | | | | | | | | |
| RUTILE SAND | | | C | | | | | | | | | | | | | | | | | | | |
| SALT | | | C | | | | | | | | | | | | | | | | | | | |
| SALT CAKE | | | C | | | | | | | | | | | | | | | | | | | |
| SALT ROCK | | | C | | | | | | | | | | | | | | | | | | | |
| SAND | | | C | | | | | | | | | | | | | | | | | | | |
| SAND, HEAVY MINERAL | | | A | | | | | | | | | | | | | | | | | | | |
| SAND, MINERAL CONCENTRATE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) | 7 | 2912 | A and B | | | | Y | Y | | | | | | | | | | | | | | |
| SAWDUST | MHB | | B | | | Nm | | | | | | | | | | | | | | | | Yes |
| SCALE GENERATED FROM THE IRON AND STEEL MAKING PROCESS | | | A | | | | | | | | | | | | | | | | | | | |
| SCRAP METAL | | | C | | | Nm | | | | | | | | | | | | | | | | |
| SEED CAKE (a) | 4.2 | 1386 | B | A | | | Y | | | | | | | X | X | | | | X | X | X | Yes |
| SEED CAKE (b) | 4.2 | 1386 | B | A [5] | Y | Nm, Sp | Y | | | IIAT3 [5] | | | | X | X | X[5] | X[5] | X[5] | X | X | X | Yes |

| a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARGOES | IMO class | UN No. | Group | Stowage | NO SMOKING sign | Ventilation | SCBA | Protective clothing | Bilge line | Explosion protected electrical equipment | Dual purpose nozzles | 4 jets of water | Heating arrangement | SOLAS Reg.II-2/54.2 or 19.3 | | | | | | | | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| | | | | | | | | | | | | | | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | Mechanical ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | |
| SEED CAKE | 4.2 | 2217 | B | A | Y | Nm, Sp | Y | | | IIAT3 | | | | X | X | X | X | X | X | X | X | Yes |
| SEED CAKE (non-hazardous) | | | C | | | | | | | | | | | | | | | | | | | |
| SILICOMANGANESE (carbo-thermic) | | | C | | | | | | | | | | | | | | | | | | | |
| SILICOMANGANESE (low carbon) | MHB | | B | | Y | M, Sa | Y | | | IICT1 | | | | | | | | | | | | |
| SILICON SLAG | | | C | | | | | | | | | | | | | | | | | | | |
| SODA ASH | | | C | | | | | | | | | | | | | | | | | | | |
| SODIUM NITRATE | 5.1 | 1498 | B | | | | Y | Y | | | Y | Y | | X | X | | | | X | X | | (Yes) |
| SODIUM NITRATE AND POTASSIUM NITRATE MIXTURE | 5.1 | 1499 | B | | | | Y | Y | | | Y | Y | | X | X | | | | X | X | | (Yes) |
| SOLIDIFIED FUELS RECYCLED FROM PAPER AND PLASTICS | MHB | | B | | | | | Y | | | | | | | | | | | | | | Yes |
| SPODUMENE (UPGRADED) | | | A | | | | | | | | | | | | | | | | | | | |
| STAINLESS STEEL GRINDING DUST | | | C | | | | | | | | | | | | | | | | | | | |
| STONE CHIPPINGS | | | C | | | | | | | | | | | | | | | | | | | |
| SUGAR | | | C | | | | | | | | | | | | | | | | | | | |
| SUGARCANE BIOMASS PELLETS | MHB | | B | | | | Y | | | | | | | | | | | | | | | Yes |
| SULPHATE OF POTASH AND MAGNESIUM | | | C | | | | | | | | | | | | | | | | | | | |
| SULPHUR (formed, solid) | | | C | | | Nm | | | | | | | | | | | | | | | | |
| SULPHUR (crushed lump and coarse grained) [6] | 4.1 | 1350 | B | A | Y | Nm, Sp | Y | | | IIAT4 | | | | X | X | X | | X[8] | X | X | X | |
| SUPERPHOSPHATE | | | C | | | | | | | | | | | | | | | | | | | |
| SUPERPHOSPHATE (triple, granular) | | | C | | | | | | | | | | | | | | | | | | | |
| SYNTHETIC CALCIUM FLUORIDE | | | A | | | | | | | | | | | | | | | | | | | |
| SYNTHETIC SILICON DIOXIDE | | | A | | | | | | | | | | | | | | | | | | | |
| TACONITE PELLETS | | | C | | | | | | | | | | | | | | | | | | | |
| TALC | | | C | | | | | | | | | | | | | | | | | | | |
| TANKAGE | MHB | | B | | | | Y | | | | | | | | | | | | | | | Yes |
| TAPIOCA | | | C | | | | | | | | | | | | | | | | | | | |
| TITANOMAGNETITE SAND | | | A | | | | | | | | | | | | | | | | | | | |
| UREA | | | C | | | | | | | | | | | | | | | | | | | |
| VANADIUM ORE | MHB | | B | | | | Y | | | | | | | | | | | | | | | |
| VERMICULITE | | | C | | | | | | | | | | | | | | | | | | | |
| WHITE QUARTZ | | | C | | | | | | | | | | | | | | | | | | | |
| WOODCHIPS | MHB | | B | | | | Y | | | | | | | | | | | | | | | Yes [7] |
| WOOD PELLETS CONTAINING ADDITIVES AND/OR BINDERS | MHB | | B | | | | Y | | | | | | | | | | | | | | | Yes |
| WOOD PELLETS NOT CONTAINING ANY ADDITIVES AND/OR BINDERS | MHB | | B | | | | Y | | | | | | | | | | | | | | | |
| WOOD PRODUCTS - GENERAL | MHB | | B | | | Nm | Y | | | | | | | | | | | | | | | |
| WOOD TORREFIED | MHB | | B | | | | Y | | | | | | | | | | | | | | | Yes |

| a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARGOES | IMO class | UN No. | Group | Stowage | NO SMOKING sign | Ventilation | SCBA | Protective clothing | Bilge line | Explosion protected electrical equipment | Dual purpose nozzles | 4 jets of water | Heating arrangement | SOLAS Reg.II-2/54.2 or 19.3 | | | | | | | | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| | | | | | | | | | | | | | | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | Mechanical ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | |
| ZINC ASHES | 4.3 | 1435 | B | A | Y | ML,Sa | Y | Y | | IICT2 | | | | | | X | X | X | X | X | X | |
| ZINC SLAG | | | C | | | | | | | | | | | | | | | | | | | |
| ZIRCON KYANITE CONCENTRATE | | | A | | | | | | | | | | | | | | | | | | | |
| ZIRCON SAND | | | C | | | | | | | | | | | | | | | | | | | |

The contents of each column in the Table 1.1 are as follows.

1. CARGOES (column “a”)
   Bulk Cargo Shipping Names are expressed in capital letters and identifies a bulk cargo during transport by sea.

2. IMO class (column “b”)
   Group B cargoes are categorized into the following classes.
   - Class 4.1 : Flammable solids
   - Class 4.2 : Substances liable to spontaneous combustion
   - Class 4.3 : Substances which, in contact with water, emit flammable gases
   - Class 5.1 : Oxidizing substances (agents)
   - Class 7 : Radioactive materials
   - Class 8 : Corrosive solid substances
   - Class 9 : Miscellaneous dangerous substances and articles
   - MHB : Materials which may possess chemical hazards when transported in bulk other than materials classified as dangerous goods in the IMDG Code.

3. UN No. (column “c”)
   This is a 4-digit number assigned to a particular dangerous substance included in the dangerous substance list (approximately 3,000 items) within the United Nations Recommendations on the Transport of Dangerous Goods issued by the Unite Nations Committee of Experts on the Transport of Dangerous Goods.

4. Group (column “d”)
   - A : Group A consists of cargoes which may liquefy if shipped at moisture content in excess of their transportable moisture limit.
   - B : Group B consists of cargoes which possess a chemical hazard which could give rise to a dangerous situation on a ship.
   - C : Group C consists of cargoes which are neither liable to liquefy (Group A) nor to possess chemical hazards (Group B).

5. Stowage (column “e”)
   - A : Bulkheads to the engine room are to be insulated to A-60 standard or to be isolated by the spaces (e.g. FOT, DOT, Void Space).
   - F : Boundaries of components are to be resistant to fire and passage of water.
   - G : Bulkheads to the engine room are to be of gastight.

6. NO SMOKING sign (column “f”)
   - Y : “NO SMOKING” signs are to be posted on decks and in areas adjacent to cargo compartments.

7. Ventilation (column “g”)
   - N : Natural ventilation system is to be provided for cargo holds.
   - Nm : Natural or mechanical ventilation system is to be provided for cargo holds.
   - M : Mechanical ventilation system is to be provided for cargo holds.
   - ML : At least two mechanical ventilation fans are to be provided for cargo holds. The total ventilation is to be at least six air changes per hour. Ventilation openings are to comply with the requirements of the Load Line Convention as amended for openings not fitted with means of closure. The height of coaming is to be equal to or more than regulated height (Position 1: 4.5 m, Position 2: 2.3 m).
   - Sa : Ventilation fans are to be safe for use in a flammable atmosphere.
   - Sp : Spark-arresting screens (wire mesh guards with max. 13mm X 13mm) are to be fitted to ventilation openings.

8. SCBA (column “h”)
   - Y : Two self contained breathing apparatuses with 200% spare cylinders are to be additionally provided.

9. Protective clothing resistant to chemical attack (column “i”)
   Y : Four sets of protective clothing which consists of a pair of gloves, boots, a protective clothing and helmet with goggles are to be additionally provided.

10. Bilge line (column “j”)
   F : In case where bilge lines are led to machinery space, bilge line is to be isolated either by fitting a blank flange or by a closed lockable valve.
   N : A notice is to be placed adjacent to the valve warning against opening without the master’s permission.

11. Electrical equipment (column “k”)
   Not suitable explosion protected type electrical equipment are to be disconnected (by removal of links in the system, other than fuses) from the power source at a point external to the space.
   IIAT2: Electrical equipment having an explosion protection grade of IIAT2 or upwards are considered as suitable explosion protected type electrical equipment.
   IIAT3: Electrical equipment having an explosion protection grade of IIAT3 or upwards are considered as suitable explosion protected type electrical equipment.
   IIAT4: Electrical equipment having an explosion protection grade of IIAT4 or upwards are considered as suitable explosion protected type electrical equipment.
   IICT1: Electrical equipment having an explosion protection grade of IICT1 or upwards are considered as suitable explosion protected type electrical equipment.
   IICT2: Electrical equipment having an explosion protection grade of IICT2 or upwards are considered as suitable explosion protected type electrical equipment.
   IS: Intrinsically safe type electrical equipment are considered as suitable explosion protected type electrical equipment.

12. Dual purpose nozzles (column “l”)
   Y : Nozzles provided with fire hoses are to be of dual-purpose type (i.e., spray/jet type).

13. 4 jets of water (column “m”)
   Y : The quantity of water delivered is to be capable of supplying four nozzles at pressure as specified in SOLAS regulation and being trained on any part of the cargo space when empty.

14. Heating Arrangement (column “n”)
   N1 : The means to disconnect heating arrangements for the tank(s) are to be provided.
   N2 : The means to monitor and control the temperature of boundary between the tank(s) and cargo space loading the cargo so that it does not exceed 50°C are to be provided.

15. Requirements of SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments) (column “n” ～ ”u”)
   X : Applicable.

16. FFEA (SOLAS Reg.II-2/10.7.1.3) (column “v”)
   Yes : Fixed CO2 fire extinguishing system for cargo holds are required by SOLAS Reg.II-2/10.7.1.3.
   (Yes): Fixed gas fire-extinguishing system is ineffective and for which a fixed fire-extinguishing system giving equivalent protection shall be available. According to the Unified Interpretation of IMO, water supplies defined in SOLAS Reg.II-2/19.3.1.2 are considered as the alternative of a fixed gas fire-extinguishing system in cargo spaces.

General notes:
- For the detailed requirements of the IMSBC Code, the relevant part of the Code should be referred to.
- The application of the requirements of SOLAS Reg.II-2/54.2 or 19.3 is shown just for ready reference. For the detailed requirements, the relevant part of the SOLAS should be referred to.
- Blank columns mean “Not applicable”.

Notes : 1. CASTER MEAL, CASTER POMACE and CASTER FLAKE shall not be carried in bulk.
2. For the planned voyage not exceeding 5 days from the commencement of loading to the completion of discharge, the ship may be exempted from the requirements of FFEA.

3. Consideration shall be given to providing the ship with the means to top up the cargo spaces with additional supplies of inert gas taking into account the duration of the voyage. The ship's fixed CO2 fire extinguishing system shall not be used for this purpose.
4. (blank)
5. Only applicable to Seedcake containing solvent extractions only.
6. Fine grained sulphur (flowers of sulphur) shall not be transported in bulk.
7. With moisture content of 15% or more, the ship may be exempted from the requirements of FFEA.
8. Only suitable wire mesh guards are required.
9. Except Metal Sulphide Concentrates considered as presenting a low fire-risk.

**Table 1.2**

**IMSBC Code - Initial Checklist**
**(for cargoes other than COAL and BROWN COAL BRIQUETTES)**

| Columns | Requirements | Results |
|---|---|---|
| e | Stowage:<br>☐ Bulkheads to the engine room are to be insulated to A-60 standard or to be isolated by the spaces (e.g. FOT, DOT, Void Space).<br>☐ Boundaries of components are to be resistant to fire and passage of water.<br>☐ Bulkheads to the engine room are to be of gastight. | ☐ |
| f | NO SMOKING sign:<br>☐ ”NO SMOKING” signs are to be posted on decks and in areas adjacent to cargo compartment. | ☐ |
| g | Ventilation:<br>☐ Natural ventilation systems are to be provided for cargo holds.<br>☐ Natural or mechanical ventilation systems are to be provided for cargo holds.<br>☐ Mechanical ventilation systems are to be provided for cargo holds.<br>☐ At least two mechanical ventilation fans are to be provided for cargo holds. The total ventilation are to be at least six air changes per hour. Ventilation openings are to comply with the requirements of the Load Line Convention as amended for openings not fitted with means of closure. The height of coaming is to be equal to or more than regulated height (Position 1: 4.5 m, Position 2: 2.3 m).<br>☐ Ventilation fans are to be safe for use in a flammable atmosphere.<br>☐ Spark-arresting screens (wire mesh guards with max. 13mm×13mm) are to be fitted to ventilation openings. | ☐ |
| h | SCBA:<br>☐ Two self contained breathing apparatuses with 200% spare cylinders are to be additionally provided. | ☐ |
| i | Protective clothing resistant to chemical attack:<br>☐ Four sets of protective clothing which consists of boots, gloves, coverall and headgear are to be additionally provided. | ☐ |
| j | Bilge line:<br>☐ In case where bilge lines are led to machinery space, bilge lines are to be isolated either by fitting a blank flange or by a closed lockable valve.<br>☐ A notice is to be placed adjacent to the valve warning against opening without the master’s permission. | ☐ |
| k | Electrical equipment:<br>☐ Electrical equipment fitted in the cargo holds, including motors of mechanical ventilation systems, are to be of safe type having an explosion protection grade/type stated below or upwards. Not suitable explosion protected type electrical equipment are to be capable of being positively isolated from outside of the spaces.<br>( ☐ IIAT2 / ☐ IIAT3 / ☐ IIAT4 / ☐ IICT1 /<br>☐ IICT2 / ☐ IICT3 / ☐ IICT4 / ☐ Intrinsically safe type ) | ☐ |
| l | Dual purpose nozzles<br>☐ Nozzles provided with fire hoses are to be of dual-purpose type (i.e., spray/jet type). | ☐ |
| m | 4 jets of water<br>☐ The quantity of water delivered is to be capable of supplying four nozzles at pressure as specified in SOLAS regulation and being trained on any part of the cargo space when empty. | ☐ |
| n | Heating arrangement<br>☐ The means to disconnect heating arrangement for the tank(s) are to be provided (spectacle flange).<br>☐ The means to monitor and control the temperature so that it does not exceed 50℃are to be provided. | ☐ |
| w | FFEA<br>☐ Fixed CO2 fire extinguishing system is to be provided for cargo holds. | ☐ |

Note: 1. The requirements checked are applied to the ship.
2. The results of confirmation survey on board have been shown in the right columns. For the requirements complied with, the columns should be checked. For the requirements not applied, “NA” should be entered in the columns.

Ship’s name :
Class number :
Date :

( )
Surveyor

**Table 1.3**

**IMSBC Code - Initial Checklist**
**(for COAL and BROWN COAL BRIQUETTES)**

| | | |
|---|---|---|
| 1 | Boundaries of cargo spaces are to be resistant to fire and liquids. | ☐ |
| 2 | Electrical equipment fitted in the cargo holds are to be of safe type having an explosion protection grade of IIAT4 or upwards. Not suitable explosion protected type electrical equipment are to be capable of being positively isolated from outside of the spaces and have the enclosure having a protection degree of IP55 or upwards, and caution plates to ensure isolation of electrical equipment are to be provided. | ☐ |
| 3 | Suitable means for measuring following gases, etc. in cargo spaces without entry into such spaces are to be provided.<br>Methane<br>Oxygen<br>Carbon monoxide<br>pH value<br>Temperature( 0 - 100ºC) | ☐ |
| 4(*) | Two sets of self-contained breathing apparatus are to be provided. (Note: The apparatus required by SOLAS Reg.II-2/17(00E) or Reg.II-2/10(00N) may be used for this purpose) | ☐ |
| 5 | “No Smoking" signs are to be posted in conspicuous places. | ☐ |
| 6(*) | Natural ventilation system is to be provided for cargo spaces and air holes should be provided at the upper part of web plates of longitudinal and transverse girders fitted to deck plates with appropriate spacing.<br>Note: Air holes should not be located at any part that may be subject to stress concentration. | ☐ |
| 7 | Natural or mechanical ventilation systems are to be provided for adjacent enclosed working spaces, such as store rooms, carpenter's shops, passage ways, tunnels. In the case of mechanical ventilation, only the equipment which is safe type for use in an explosive atmosphere can be used in cargo area. | ☐ |
| 8 | Two sampling holes per hold, one on the port side and one on the starboard side of the hatch cover or upper parts of hatch coamings are to be provided with threaded stub and sealing cap. | ☐ |

Note: 1. The items marked with (*) are not applicable to brown coal (lignite) briquettes.

2. The results of confirmation survey on board have been shown in the right columns. For the requirements complied with, the columns should be checked. For the requirements not applied, “NA” should be entered in the columns.

Ship’s name :

Class number :

Date :

( )

Surveyor

**Table 1.4**

**Documents/information to be submitted**

| Required items<br>(1) Column of Table 4.2<br>(1) | (2) | (2) Regulation of SOLAS II-2/54 (II-2/19) | Documents/information to be submitted<br>The meanings of "H" and "L" are specified under this table. | |
|---|---|---|---|---|
| e | 2.8<br>(3.8) | "A-60" class insulation of bulkheads between the cargo space and engine room | H | Drawings of fire protection construction Type and manufacture of the material |
| f | -- | "NO SMOKING" signs | L | Number and locations of the signs |
| g | -- | Natural ventilation. | H | Drawings of the system |
| | 2.4.3<br>(3.4.3) | Natural or mechanical ventilation. | | |
| | -- | Mechanical ventilation | | |
| | 2.4.1<br>(3.4.1) | Mechanical ventilation (total ventilation at least six air changes per hour) | H | Drawings of the system<br>Calculations of the air changes |
| | 2.4.2<br>(3.4.2) | Non-sparking fans | L | Specifications |
| | | Spark-arresting screens (wire mesh guard) | L | Specifications |
| h | 2.6.2<br>(3.6.2) | Self-contained breathing apparatus | L | Type, manufacturer and specifications |
| i | 2.6.1<br>(3.6.1) | Protective clothing resistant to chemicals | | |
| j | -- | Stop valves and blank flanges on the bilge lines on machinery space side | H | Drawing of bilge lines |
| k | 2.2<br>(3.2) | Electrical equipment to be of safe type. | H | Arrangement and wiring diagram of electrical equipment fitted in the space including grade of each equipment. |
| l | - | Jet/spray dual purpose type nozzle | L | Type, manufacturer and specifications |
| m | 2.1.2<br>(3.1.2) | Capacity of fire pumps to supply four nozzles | H | Fire main piping diagram with arrangement of hydrant and pump capacity. |
| n | - | Heating arrangement | H | Drawing of heating arrangement.<br>Drawing of the system for measuring and monitoring temperature. |
| w | - | Fixed $CO_2$ fire extinguishing system for cargo hold (FFEA) | H | Drawing of the system |

H: To be submitted to Material and Equipment department for examination by the Head office.
L: To be submitted to the local office for their checking.

**Table 1.5**

**Documents/information to be submitted for COAL/BROWN COAL BRIQUETTES**

| Requirements on Table 2.3 | Documents/information to be submitted<br>The meaning of "L" is specified under this table | |
|---|---|---|
| Boundaries of cargo spaces should be resistant to fire and liquids. | — | — |
| Electrical cables and components situated in cargo spaces and adjacent spaces should be free from defects and safe for use in explosive atmosphere or positively isolated. | L | Arrangement and wiring diagram of electrical equipment fitted in the space including grade of each equipment, such as IIAT4. |
| Appropriate instruments for measuring followings into cargo spaces without entry into such spaces should be provided.<br>Methane<br>Oxygen<br>Carbon monoxide<br>pH value<br>Temperature( 0 - 100ºC) | L | Type, manufacturer and specifications |
| Two sets of self-contained breathing apparatus to be provided. | L | Type, manufacturer and specifications |
| "No Smoking" sign and "No naked flames" sign should be posted in conspicuous places. | L | Number and locations of the signs |
| Natural surface ventilation should be provided for cargo spaces. | L | Drawings of the ventilation systems<br>Arrangement of air holes |
| Natural or mechanical ventilation should be provided for enclosed working spaces, such as store rooms, carpenter's shops, passage ways, tunnels. Mechanical ventilation, if used, should be of safe type for use in explosive atmosphere. | L | Drawings of the system |
| Two sampling holes per hold, one on each side of the hatch cover should be provided with threaded stub and sealing cap. | L | Drawings of the system |

L: To be submitted to the local office for their checking.

**Table G1 - Cargoes newly added and requirements on construction/equipment (IMSBC Code (4th amendment))**

**Revised points are shown in red.**

| a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARGOES | IMO class | UN No. | Group | Stowage | NO SMOKING sign | Ventilation | SCBA | Protective clothing | Bilge line | Explosion protected electrical equipment | Dual purpose nozzles | 4 jets of water | Heating arrangement | SOLAS Reg.II-2/54.2 or 19.3 | | | | | | | | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| | | | | | | | | | | | | | | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | Mechanical ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | |
| FERROSILICON with at least 25% but less than 30% silicon, or 90% or more silicon | MHB | | B | G | Y | ML,Sa | Y | | F, N | IICT1 | | | | | | | | | | | | |
| FOAM GLASS GRAVEL | | | C | | | | | | | | | | | | | | | | | | | |
| ILMENITE SAND | | | A | | | | | | | | | | | | | | | | | | | |
| IRON SMELTING BY-PRODUCTS | | | C | | | | | | | | | | | | | | | | | | | |
| METAL SULPHIDE CONCENTRATES, CORROSIVE | 8 | 1759 | A and B | | | | Y | Y | | | | | | | | | | | Y | Y | | Yes[9] |
| MONOAMMONIUM PHOSPHATE (M.A.P.), MINERAL ENRICHED COATING | MHB | | B | | | | Y | Y | | | | | | | | | | | | | | |
| MONOCALCIUMPHOSPHATE (MCP) | MHB | | A and B | | | | Y | Y | | | | | | | | | | | | | | |
| OLIVINE SAND | | | A | | | | | | | | | | | | | | | | | | | |
| OLIVINE GRANULAR AND GRAVEL AGGREGATE PRODUCTS | | | C | | | | | | | | | | | | | | | | | | | |
| SAND, MINERAL CONCENTRATE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) | 7 | 2912 | A and B | | | | Y | Y | | | | | | | | | | | | | | |
| SILICOMANGANESE (carbo-thermic) | | | C | | | | | | | | | | | | | | | | | | | |
| SUGARCANE BIOMASS PELLETS | MHB | | B | | | | Y | | | | | | | | | | | | | | | Yes |
| SYNTHETIC CALCIUM FLUORIDE | | | A | | | | | | | | | | | | | | | | | | | |
| SYNTHETIC SILICON DIOXIDE | | | A | | | | | | | | | | | | | | | | | | | |
| TITANOMAGNETITE SAND | | | A | | | | | | | | | | | | | | | | | | | |

The contents of each column in the Table G1 are same as that in the Table 1.1

Note 9 : Except Metal Sulphide Concentrates considered as presenting a low fire-risk

E

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

MSC.1/Circ.1395/Rev.3
16 June 2017

# LISTS OF SOLID BULK CARGOES FOR WHICH A FIXED GAS FIRE-EXTINGUISHING SYSTEM MAY BE EXEMPTED OR FOR WHICH A FIXED GAS FIRE-EXTINGUISHING SYSTEM IS INEFFECTIVE

1 The Maritime Safety Committee, at its sixty-fourth session (5 to 9 December 1994), agreed that there was a need to provide Administrations with guidelines regarding the provisions of SOLAS regulation II-2/10 concerning exemptions from the requirements for fire-extinguishing systems.

2 Consequently, the Committee approved MSC/Circ.671 whereby it agreed to:

.1 a list of solid bulk cargoes, for which a fixed gas fire-extinguishing system may be exempted (table 1) and recommended Member States to take into account the information contained in table 1 when granting exemptions under the provisions of SOLAS regulation II-2/10.7.1.4; and

.2 a list of solid bulk cargoes for which a fixed gas fire-extinguishing system is ineffective (table 2), and recommended that cargo spaces in a ship engaged in the carriage of cargoes listed in table 2 be provided with a fire-extinguishing system which provides equivalent protection. The Committee also agreed that Administrations should take account of the provisions of SOLAS regulation II-2/19.3.1 when determining suitable requirements for an equivalent fire-extinguishing system.

3 The Maritime Safety Committee, at its seventy-ninth session (1 to 10 December 2004), reviewed the above-mentioned tables and approved MSC.1/Circ.1146. The Committee decided that the annexed tables should be periodically reviewed and invited Member States to provide the Organization, when granting exemptions to ships for the carriage of cargoes not included in table 1, with data on the non-combustibility or fire risk properties of such cargoes. Member States were also requested to provide the Organization, when equivalent fire-extinguishing systems are required for the agreed carriage of cargoes not included in table 2, with data on the inefficiency of fixed gas fire-extinguishing systems for such cargoes.

4 The Maritime Safety Committee, at its eighty-ninth session (11 to 20 May 2011), noting the mandatory status of the IMSBC Code, reviewed the aforementioned lists of solid bulk cargoes to align certain names in the lists with those in the recent version of the IMDG Code and approved MSC.1/Circ.1395 on *Lists of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted or for which a fixed gas fire-extinguishing system is ineffective*, superseding MSC.1/Circ.1146. The Maritime Safety Committee, at its ninety-second session (12 to 21 June 2013), approved a revision to MSC.1/Circ.1395.

5 The Maritime Safety Committee, at its ninety-fifth session (3 to 12 June 2015), considering the proposal by the Sub-Committee on Carriage of Cargoes and Containers, at its first session, approved a revision to MSC.1/Circ.1395/Rev.1.

6 The Maritime Safety Committee, at its ninety-eighth session (7 to 16 June 2017), considering the proposal by the Sub-Committee on Carriage of Cargoes and Containers, at its third session, approved a revision to MSC.1/Circ.1395/Rev.2, as set out in tables 1 and 2 of the annex.

7 The purpose of this circular is to provide guidance to Administrations. It should not, however, be considered as precluding Administrations from their right to grant exemptions for cargoes not included in table 1 or to impose any conditions when granting such exemptions under the provisions of SOLAS regulation II-2/10.7.1.4.

8 This circular supersedes MSC.1/Circ.1395/Rev.2.

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**ANNEX**

**TABLE 1**

**LIST OF SOLID BULK CARGOES FOR WHICH A FIXED GAS FIRE-EXTINGUISHING SYSTEM MAY BE EXEMPTED**

1 Cargoes including, but not limited to, those listed in SOLAS regulation II-2/10:

Ore
Coal (COAL and BROWN COAL BRIQUETTES)
Grain
Unseasoned timber

2 Cargoes listed in the International Maritime Solid Bulk Cargoes (IMSBC) Code, which are not combustible or constitute a low fire risk, as follows:

.1 all cargoes not categorized into Group B in the IMSBC Code;

.2 the following cargoes categorized into Group B in the IMSBC Code:

ALUMINA HYDRATE
ALUMINIUM SMELTING BY-PRODUCTS, UN 3170
(Both the names ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS are in use as proper shipping name)
ALUMINIUM FERROSILICON POWDER, UN 1395
ALUMINIUM SILICON POWDER, UNCOATED, UN 1398
AMORPHOUS SODIUM SILICATE LUMPS
BORIC ACID
CALCINED PYRITES (Pyritic ash)
CLINKER ASH
COAL TAR PITCH
DIRECT REDUCED IRON (A) Briquettes, hot moulded
FERROPHOSPHORUS (including briquettes)
FERROSILICON UN 1408, with 30% or more but less than 90% silicon (including briquettes)
FERROSILICON, with at least 25% but less than 30% silicon, or 90% or more silicon
FLUORSPAR (calcium fluoride)
GRANULATED NICKEL MATTE (LESS THAN 2% MOISTURE CONTENT)
LIME (UNSLAKED)
LOGS
MAGNESIA (UNSLAKED)
MONOCALCIUMPHOSPHATE (MCP)
MONOAMMONIUM PHOSPHATE (M.A.P.), MINERAL ENRICHED COATING
PEAT MOSS
PETROLEUM COKE*
PITCH PRILL
PULP WOOD
RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY MATERIAL (LSA-1), (non-fissile or fissile – excepted) UN 2912

* When loaded and transported under the provisions of the IMSBC Code.

RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECT(S) (SCO-I or SCO-II), (non-fissile or fissile – excepted) UN 2913
ROUNDWOOD
SAND, MINERAL CONCENTRATE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) UN 2912
SAW LOGS
SILICOMANGANESE
SULPHUR, UN 1350
TIMBER
VANADIUM ORE
WOODCHIPS, with moisture content of 15% or more
WOOD PELLETS (NOT CONTAINING ANY ADDITIVES AND/OR BINDERS)
ZINC ASHES, UN 1435

.3 cargoes assigned to the following generic Group B shipping schedules when they do not exhibit any self-heating, flammability, or water-reactive flammability hazards in accordance with the MHB tests and classification criteria contained in the Code:

METAL SULPHIDE CONCENTRATES
METAL SULPHIDE CONCENTRATES, CORROSIVE UN 1759

3 Solid bulk cargoes which are not listed in the IMSBC Code, provided that:

.1 they are assessed in accordance with section 1.3 of the Code;

.2 they do not present hazards of Group B as defined in the Code; and

.3 a certificate has been provided by the competent authority of the port of loading to the master in accordance with 1.3.2 of the Code.

**TABLE 2**

**LIST OF SOLID BULK CARGOES FOR WHICH A FIXED GAS FIRE-EXTINGUISHING SYSTEM IS INEFFECTIVE AND FOR WHICH A FIRE-EXTINGUISHING SYSTEM GIVING EQUIVALENT PROTECTION SHALL BE AVAILABLE**

The following cargoes are categorized into Group B of the IMSBC Code:

ALUMINIUM NITRATE, UN 1438
AMMONIUM NITRATE, UN 1942 (with not more than 0.2% total combustible material, including any organic substance, calculated as carbon to the exclusion of any other added substance)
AMMONIUM NITRATE BASED FERTILIZER, UN 2067
AMMONIUM NITRATE BASED FERTILIZER, UN 2071
BARIUM NITRATE, UN 1446
CALCIUM NITRATE, UN 1454
LEAD NITRATE, UN 1469
MAGNESIUM NITRATE, UN 1474
POTASSIUM NITRATE, UN 1486
SODIUM NITRATE, UN 1498
SODIUM NITRATE AND POTASSIUM NITRATE, MIXTURE, UN 1499