# 主题:

# **ClassNK**

### IMSBC规则适装证书指导意见修订

# 技术通函

序号: TEC-0936

日期: 2012年12月14日

### 致有关人士

由于《国际海运固体散货(IMSBC)规则》的修订,关于 IMSBC 规则适装证书的指导意见做了相应的修订。本技术信息取代了 2009 年 5 月 21 日发行的技术信息 No. TEC-0722。

请注意,在本文件中,"IMSBC(2009年版)"指的是目前的国际海运固体散货规则,"IMSBC规则(2012年版)"指的是经修订的国际海运固体散货规则。

相应修订总结如下:

1. IMSBC 规则的修订

IMO 海上安全委员会第 89 届会议(MSC89)通过了修订的 IMSBC 规则(2012 年版),其中包括了每种货物规则的具体修订。

IMSBC 规则(2012 年版)于 2013年1月1日生效,对所有装载固体散装货物的船舶是强制性的。

2. 关于 IMSBC 规则适装证书的指导意见

请参阅附件,"关于 IMSBC 规则适装证书的指导意见"。

3. 对于某些货物的运输,船舶构造及设备要求做出修订

请注意,IMSBC 规则(2012 年版)对于部分货物,额外增加了对船舶构造和设备的要求。相关改变,请参照 "表 G1,货物与构造及设备要求对照表新增部分"。

4. 木制品—常规

木制品—常规,列于表G1,包括原木、制浆木材、木材、圆材和锯木。

豁免固定式气体灭火系统的船舶可以装载列于MSC.1/Circ. 1395 (代替MSC.1/Circ.1146,请参阅附件)的 "表1,可免除固定式气体灭火系统的固体散装货物清单"中的货物。

如果豁免证书不包括这些货物,则证书需要修改。

5. 对于固定式气体灭火系统豁免证书的修订 如上4中所述,在某些情况下需要修改豁免证书。

1) 如果长期豁免证书是由日本船级社颁发,巴拿马船旗国或利比里亚旗船国签发,修 改豁免证书的流程如以下(i)和(ii)所示。

如果是巴拿马旗船,在日本船级社发临时豁免证书后,船东或管理公司需直接向巴拿马海事局申请长期豁免证书。

如果是利比里亚旗船,日本船级社在发临时豁免证书后,向利比里亚政府申请长期豁免证书。

- (I) 如需进行检验\* 请向日本船级社支部提交豁免证书申请(如果有必要请提交IMSBC规则适装证 书的申请)
- (II) 如不需进行检验\*

请向日本船级社材料舾装部(EQD)提交豁免证书申请(如果有必要请提交 IMSBC规则适装证书的申请)

- \*: "如需进行检验"是指为增加"木制品—常规"而颁发IMSBC规则适装证书进行的检验, "如不需进行检验"是指除了前面所提到的情况。
  - 2) 如果长期豁免证书是除了巴拿马和利比里亚之外的船旗国颁发,船东或管理公司需直接向船旗国申请豁免证书。
  - 6. 包含木片和木球团的IMSBC规则适装证书如"表G1,货物与构造及设备要求对照表新增部分"所示,如果IMSBC规则适装证书包含木片和木球团,并且今后仍要运载这些货物,则自2013年1月1日之后船舶需要增加额外两套带有200%备用气瓶的自给式呼吸器(SCBAs)。如果船上没有附加的SCBAs,请在2012年12月31日之前安装。日本船级社的验船师将在2013年1月1日之
  - 7. 在2013年1月1日之后怎样处理现存的IMSBC规则适装证书 对于根据IMSBC(2009年版)所颁布的现存IMSBC规则适装证书有如下考虑。

后的第一个定期检验时确认是否已安装额外的SCBAs。

- (1) 除了表G1中所列的货物,对于其他货物,构造及设备的要求没有改变。 因此,如果没有表G1中所列货物,则现存的IMSBC规则适装证书在2013年1月1 日之后仍然有效,不必进行修改。
- (2) 对于表G1中所列的A类和C类货物,没有构造及设备要求。 因此,这些货物被当做包括于IMSBC规则适装证书所列"ALL MATERIALS OF GROUP A AND GROUP C"中的货物。 基于上述,如果现存的IMSBC规则适装证书包含了"ALL MATERIALS OF GROUP A AND GROUP C",在2013年1月1日之后该证书仍然对表G1中所列的A类和C类货物仍然有效,不必进行修改。
- (3) 对于木片和木球团,新增条款要求配备额外的自给式呼吸器(SCBAs)。(请参照表G1)。

只有在船舶配备所要求的SCBAs的情况下,现存的IMSBC规则适装证书才可在 2013年1月1日之后仍然有效,证书没有必要进行修改。

如果对以上有所疑问,请联系:

[关于IMSBC规则适装证书及相关问题]

日本船级社(ClassNK)

总部,管理中心,材料舾装部

地址:东京都千代田区纪尾井町4番7号

电话: +81-3-5226-2020 传真: +81-3-5226-2057 电子邮件: <u>eqd@classnk.or.jp</u>

[关于固定式气体灭火系统豁免证书的问题]

总部,信息中心,船级部

地址: 日本千叶县千叶市绿区大野台1丁目8番5号

电话: +81-43-294-5784 传真: +81-43-294-5449 电子邮件: <u>cld@classnk.or.jp</u>

### 附页:

- 1. 表G1,货物与构造及设备要求对照表新增部分
- 2. 关于IMSBC规则适装证书的指导意见
- 3. MSC.1/Circ. 1395 中 "表1,可免除固定式气体灭火系统的固体散装货物清单"

Table G1 –Cargoes for which requirements on construction/equipment are added.

## Additional requirements are shown in red.

| a                                     | b         | c      | d     | e       | f               | g           | h    | i                   | j          | k  | 1                    | m               | n                           | 0               | p  | q                      | r             | s                   | t                    | u               | v                              |
|---------------------------------------|-----------|--------|-------|---------|-----------------|-------------|------|---------------------|------------|--|----------------------|-----------------|-----------------------------|-----------------|--|------------------------|---------------|---------------------|----------------------|-----------------|--------------------------------|
|                                       |           |        |       |         |                 |             |      |                     |            |  |                      |                 |                             | so              | LAS 1                                    | Reg.II                 | -2/54.        | 2 or 1              | 9.3                  |                 |                                |
| MATERIALS                             | 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 | 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 | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| DISTILLERS DRIED GRAINS WITH SOLUBLES |           |        | C     |         |                 |             |      |                     |            |  |                      | -               |                             | -               |  |                        |               |                     |                      | ·               |                                |
| FERROUS SULPHATE HEPTAHYDRATE         |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FLY ASH, DRY                          |           |        | С     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FLY ASH, WET                          |           |        | A     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| GRANULAR FERROUS SULPHATE             |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| MAGNESIUM SULPHATE FERTILIZERS        |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| WOODCHIPS                             | МНВ       |        | В     |         |                 |             | Yes  |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes 7                          |
| WOOD PELLETS                          | МНВ       |        | В     |         |                 |             | Yes  |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes                            |
| WOOD PRODUCTS - GENERAL               | МНВ       |        | В     |         |                 | Nm          | Yes  |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| WOOD PULP PELLETS                     | MHB       |        | B     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | <del>Yes </del> <sup>7</sup>   |

#### **Guidance for IMSBC Code fitness certificate**

#### 0101 General

Under the IMSBC Code, materials are classified into those likely to liquefy (Group A), those having chemical hazard (Group B) and others (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 are required to be provided onboard regardless of the types of cargoes intended to be carried.
- -2. No special construction and equipment is required for the carriage of Group A and C cargoes except that specially designed portable divisions or permanent structural boundaries to confine any shift of cargo to an acceptable limit are required for the carriage of Group A cargoes without appropriate restrictions on their moisture contents.
- -3. For the carriage of Group B cargoes, ships are to comply with the requirements for special construction and/or equipment specified in IMSBC Code. The requirements for the carriage of Group B cargoes except coal and brown coal (lignite) briquettes are summarized in Table 1.1 and 1.2. The requirements for the carriage of coal and brown coal (lignite) briquettes are shown in Table 1.3.
- Note 2.1: 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 2.2: 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 the ClassNK local office or Material and Equipment Department (EQD) prior to the survey onboard the ship.
  - (1) List of cargoes to be included in the IMSBC Code fitness certificate
  - (2) In case where a survey onboard the ship is required, expected date and place of the survey and local agent to be contacted
  - (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 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.
- -3. In case where a conversion or an alteration affecting a class requirement including the case mentioned in -2 above is made, the applicant should also apply for a class survey.

#### 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 (lignite) briquettes) and/or Table 1.5 (coal and brown coal (lignite) briquettes) to the ClassNK local office or EQD. For the specific construction and equipment of existing ship, if the ship's compliance with the requirements, in the opinion of the surveyor, is capable of being c q hecked by the survey on board. Submission of documents and document examination may be omitted.
- -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 relevant structural drawings, stability calculations and other documents considered necessary by ClassNK to EQD.

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

- -1. Certification for cargoes other than Group B cargoes
  - (1) For certification for the carriage of cargoes other than Group B cargoes, the document examination is not required, in principle. The ClassNK local office can issue a certificate and/or checklist.
    - (a) In case where any Group A cargo is intended to be carried without appropriate restrictions on its moisture content, the examination of drawings of subdivision is required at EQD.
    - (b) Even if the ship is less than 100 meters in length (even if the ship is less than 65 meters in length, if its building contract was placed on or after 1 July 1998), the ClassNK local office will check that an appropriate loading manual containing information on allowable nominal specific gravity of cargo for each hold and longitudinal strength of the ship is provided onboard the ship.
- -2. For certification for the carriage of cargoes including only coal and/or brown coal (lignite) briquettes as Group B cargo, (1) and (2) below should be followed.
  - (1) Document examination at EQD is not required. The ClassNK local office issues a certificate and checklist.
  - (2) Based on the results of examination into the documents listed in Table 1.5, the ClassNK local office carries out a survey on board and issues a certificate.
- -3. For certification for the carriage of cargoes including Group B cargoes (except where Group B cargo is only coal and/or brown coal (lignite) briquettes), (1) and (2) below should be followed.
  - (1) Document examination at EQD is required. Based on the results of examination into the documents listed in Table 1.4, EQD instructs Class NK local office.
  - (2) The ClassNK local office carries out a survey on board and issues a certificate in accordance with instruction from EQD.
- -4. The surveyor will confirm that the ship which has already had IMSBC Code fitness certificate complies with following (1) and (2) at the ship's first periodical survey on or after 1 January 2013.
  - (1) IMSBC Code fitness certificate including WOODCHIPS, WOOD PELLETS and WOOD PRODUCTS GENERAL
    - When the ship has IMSBC Code fitness certificate including WOODCHIPS, WOOD PELLETS and WOOD PRODUCTS GENERAL, surveyor will confirm the ship complies with the requirements listed in Table G1.
  - (2) IMSBC Code fitness certificate including WOOD PULP PELLETS WOOD PULP PELLETS will be deleted from IMSBC Code fitness certificate because the cargo is deleted under IMSBC Code (2012 Edition).

Table 1.1

Requirements of construction and equipment for individual cargoes
under the provisions of the IMSBC Code and SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments)

| under the provision   | 113 01 111                                       | ic iivibb | C Couc | and 50   | LAS N           | cg.11-2/    | J7.2 (IX | cg.11-2             | 117.5  | on or a                                     | 1101 20              | oo ame          | iuiiic                      | 1163)           |  | 1                      |               | 1                   |                      | 1               |  |
|---|--|-----------|--------|----------|-----------------|-------------|----------|---------------------|--|---|----------------------|-----------------|-----------------------------|-----------------|--|------------------------|---------------|---------------------|----------------------|-----------------|--|
| a   | b  | с         | d      | e        | f               | g           | h        | i                   | j  | k   | 1                    | m               | n                           | О               | p  | q                      | r             | s                   | t                    | u               | v  |
|   |  |           |        |          |                 |             |          |                     |  |   |                      |                 |                             | S               | OLAS                                     | Reg.II                 | -2/54.2       | 2 or 19             | 0.3                  |                 |  |
|   |  |           |        |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | 1  |
|   |  |           |        |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | .3)  |
|   |  |           |        |          |                 |             |          |                     |  |   |                      |                 | _                           |                 | al                                       |                        |               |                     |                      |                 | FFEA (SOLAS Reg.II-2/10.7.1.3)                   |
|   |  |           |        |          |                 |             |          |                     |  |   |                      |                 | dun                         |                 | tric                                     |                        |               |                     |                      |                 | 10.  |
| MATERIALS   |  |           |        |          |                 |             |          |                     |  |   |                      |                 | o pu                        |                 | leci                                     | u                      |               |                     |                      |                 | 1-2/   |
| WATERIALS   |  |           |        |          | us              |             |          | 50                  |  | g t   | les                  |                 | Remote control of fire pump |                 | Explosion protected electrical equipment | Mechanical ventilation |               | _                   | uc                   |                 | g.i  |
|   |  |           |        |          | NO SMOKING sign |             |          | Protective clothing |  | Explosion protected<br>electrical equipment | Dual purpose nozzles |                 | Jo l                        |                 | ecte                                     | ıtil                   |               | Natural ventilation | Personnel protection | _               | Re   |
|   |  |           |        |          | Ž               |             |          | loth                |  | rote  | e n                  | ter             | [tro]                       | er              | rote                                     | vei                    | п             | tila                | rote                 | tior            | A.S  |
|   | SS   |           |        |          | ΣX              | on          |          | e c                 | o  | n p   | sod                  | wat             | con                         | wat             | n p<br>nt                                | cal                    | e fa          | /en                 | I p                  | ula             | 10   |
|   | cla  | jo.       | 0.     | ıge      | M               | lati        | _        | ctiv                | lin  | sio   | bur                  | of              | te (                        | of              | sio                                      | ani                    | ype           | al,                 | nne                  | ins             | (S)  |
|   | MO class   | UN No.    | Group  | Stowage  | s o             | Ventilation | SCBA     | ote                 | Bilge line                                       | splc<br>setr                                | ual                  | 4 jets of water | smc                         | 4 jets of water | splc<br>uip                              | ech                    | Safe type fan | atuı                | rso                  | A-60 insulation | iE.^   |
| AVENUE  | 4  | 5         |        | St       | ž               | Š           | SC       | Pr                  | Bi   | 田田  | <u>Ā</u>             | 4               | Re                          |                 | Ey                                       | M                      | Sa            | ž                   | Pe                   | Ą.              | 崫  |
| ALFALFA ALUMINA   |  |           | C<br>C | 1        |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | $\vdash$   |
| ALUMINA, CALCINED   |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| ALUMINA, SILICA   |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| ALUMINA SILICA ALUMINA SILICA, pellets                        |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | $\vdash$   |
| ALUMINIUM FERROSILICON POWDER                                 | 4.3  | 1395      | В      | A, G     | Yes             | ML,Sa       | Yes      |                     |  | IICT2                                       |                      |                 |                             |                 | X  | X                      | X             | X                   | X                    | X               | <del>                                     </del> |
| ALUMINIUM NITRATE   | 5.1  | 1438      | В      | A, U     | 168             | wit,5a      | Yes      | Yes                 |  | 11012                                       | Yes                  | Yes             | X                           | X               | Λ  | Λ                      | Λ             | X                   | X                    | Λ               | (Yes)  |
| ALUMINIUM SILICON POWDER, UNCOATED                            | 4.3  | 1398      | В      | A, G     | Yes             | ML,Sa       | Yes      | 103                 |  | IICT2                                       | 103                  | 103             | Λ                           | Λ               | X  | X                      | X             | X                   | X                    | X               | (103)  |
| ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM                   |  |           |        |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| REMELTING BY-PRODUCTS   | 4.3  | 3170      | В      | A, G     | Yes             | ML,Sa       | Yes      |                     |  | IICT2                                       |                      |                 |                             |                 | X  | X                      | X             | X                   | X                    | X               | 1  |
| AMMONIUM NITRATE  | 5.1  | 1942      | В      | Α        | Yes             |             | Yes      | Yes                 |  | IS  |                      | Yes             | X                           | X               | X  |                        | $X^8$         | X                   | X                    | X               | (Yes)  |
| AMMONIUM NITRATE BASED FERTILIZER (Type A)                    | 5.1  | 2067      | В      | A        | Yes             |             | Yes      | Yes                 |  | IS  |                      | Yes             | X                           | X               | X  |                        | $X^8$         | X                   | X                    | X               | (Yes)  |
| AMMONIUM NITRATE BASED FERTILIZER (Type B)                    | 9  | 2071      | В      | A        | Yes             |             | Yes      | Yes                 |  | IS  |                      | Yes             | X                           | X               | X  |                        | $X^8$         | X                   | X                    | X               | (Yes)  |
| AMMONIUM NITRATE, BASED FERTILIZER (non-hazardous)            |  |           | C      | <u>A</u> | Yes             |             | Yes      | Yes                 |  | IS  |                      | Yes             |                             |                 |  |                        |               |                     |                      |                 |  |
| AMMONIUM SULPHATE   |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| ANTIMONY ORE AND RESIDUE                                      |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| BARIUM NITRATE  | 5.1  | 1446      | В      |          |                 | Nm          | Yes      | Yes                 |  |   | Yes                  | Yes             | X                           | X               |  |                        |               | X                   | X                    |                 | (Yes)  |
| BARYTES   |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | <b></b>  |
| BAUXITE   |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | <del>                                     </del> |
| BIOSLUDGE  BODAY ANHADROUS and a surfaced                     |  |           | C<br>C |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | <b>—</b>   |
| BORAX, ANHYDROUS, crude or refined BORAX (PENTAHYDRATE CRUDE) |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | <del>                                     </del> |
| BROWN COAL BRIQUETTES   | MHB  |           | В      |          |                 |             | Saa      | Table 2.            | 2  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| CALCIUM NITRATE   | 5.1  | 1454      | В      |          |                 |             | Yes      | Yes                 | .s.<br>T   |   | Yes                  | Yes             | X                           | X               |  |                        |               | X                   | X                    |                 | (Yes)  |
| CALCIUM NITRATE  CALCIUM NITRATE FERTILIZER                   | 3.1  | 1434      | С      |          |                 |             | 168      | 168                 |  |   | 168                  | 168             | Λ                           | Λ               |  |                        |               | Λ                   | Λ                    |                 | (168)  |
| CARBORUNDUM  CARBORUNDUM                                      | 1  |           | C      | -        |                 |             |          |                     | <b> </b>   |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| CASTOR BEANS <sup>1</sup>                                     | 9  | 2969      | В      | 1        |                 | Nm          | Yes      | Yes                 | <del>                                     </del> | 1   | Yes                  |                 | X                           | X               |  |                        |               | X                   | X                    |                 | Yes  |
| CEMENT  | <del>                                     </del> | 2,0,      | C      | t        |                 | 1,111       | 100      | 105                 |  | † †   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | 105  |
| CEMENT CLINKERS   |  |           | C      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| CEMENT COPPER   |  |           | A      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| CHAMOTTE  |  |           | С      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |  |
| CHARCOAL  | MHB  |           | В      |          |                 |             |          |                     |  |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes  |

| a  | b         | С      | d       | e       | f               | g           | h    | i                   | j  | k  | 1                    | m               | n                           | О               | p  | q                      | r             | s                   | t                    | u               | v                              |
|--|-----------|--------|---------|---------|-----------------|-------------|------|---------------------|--|--|----------------------|-----------------|-----------------------------|-----------------|--|------------------------|---------------|---------------------|----------------------|-----------------|--------------------------------|
|  |           |        |         |         |                 |             |      |                     |  |  |                      |                 |                             | S               | OLAS                                     | Reg.II                 | -2/54.2       | 2 or 19             | .3                   |                 |                                |
| MATERIALS  | 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 | 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 | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| CHOPPED RUBBER AND PLASTIC INSULATION                        |           |        | С       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes <sup>2</sup>               |
| CHROME PELLETS   |           |        | С       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| CHROMITE ORE   |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| CLAY   |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| COAL   | MHB       |        | A and B |         |                 |             | See  | Table 2.            | 3  | <u>l</u>                                 |                      | l               |                             |                 |  |                        |               |                     |                      |                 | $\vdash$                       |
| COAL SLURRY  | WILLD     |        | A and B |         |                 | N           | 500  | Table 2.            |  |  |                      | l               |                             |                 |  |                        |               |                     |                      |                 | $\vdash$                       |
| COARSE CHOPPED TYRES   |           |        | C       |         |                 | IN          |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | <b>V</b> 2                     |
|  |           |        |         |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes 2                          |
| COKE   |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | <b> </b>                       |
| COKE BREEZE  |           |        | A       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | <b>  </b>                      |
| COLEMANITE   |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| COPPER CONCENTRATE   |           |        | A       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| COPPER GRANULES  |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| COPPER MATTE   |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| COPRA (dry)  | 4.2       | 1363   | В       | Α       | Yes             | Nm          |      |                     |  |  |                      |                 | X                           | X               |  |                        |               | X                   | X                    | X               | Yes                            |
| CRYOLITE   |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| DIAMMONIUM PHOSPHATE (D.A.P.)                                |           |        | С       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| DIRECT REDUCED IRON, (A)                                     | MIID      |        | D       | г       | 3.7             | Nm,         |      |                     |  | нста                                     |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| Briquettes, hot-moulded                                      | MHB       |        | В       | F       | Yes             | Sp          |      |                     |  | IICT2                                    |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| DIRECT REDUCED IRON, (B)                                     |           |        | _       | _       |                 | •           |      |                     |  | TT CITE                                  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| Lumps, pellets, cold moulded briquettes 3                    | MHB       |        | В       | F       | Yes             |             |      |                     |  | IICT2                                    |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes                            |
| DIRECT REDUCED IRON, (C) (By product fines) 3                | МНВ       |        | В       | F       | Yes             |             | Yes  |                     |  | IICT2                                    |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes                            |
| DOLOMITE   |           |        | С       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| DISTILLERS DRIED GRAINS WITH SOLUBLES                        |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FELSPAR LUMP   |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FERROCHROME  |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FERROCHROME, exothermic                                      |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FERROMANGANESE   |           |        | C       |         |                 |             |      |                     |  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FERRONICKEL  |           |        | C       |         | <u> </u>        |             |      |                     | 1  |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | $\vdash$                       |
| FERROPHOSPHORUS (including briquettes)                       | MHB       | -      | В       |         | <b>-</b>        | ML, Sa      | Yes  |                     | <b>-</b>   | IICT1                                    |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FERROSILICON with 30% or more but less than 90% silicon      |           |        | В       |         |                 |             | 108  |                     | <del>                                     </del> | пстт                                     |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| (including briquettes)                                       | 4.3       | 1408   | В       | A, G    | Yes             | ML,Sa       | Yes  | Yes                 | F,N  | IICT1                                    |                      |                 |                             |                 | X  | X                      | X             | X                   | X                    | X               |                                |
| FERROSILICON 25% to 30% silicon, or 90% or more with silicon | МНВ       |        | В       | G       | Yes             | ML,Sa       | Yes  |                     | F,N  | IICT1                                    |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| (including briquettes)                                       |           |        |         |         |                 | .,,a        |      |                     | 1,11   | 11011                                    |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FERROUS METAL BORINGS, SHAVINGS, TURNINGS or                 | 4.2       | 2793   | В       | Α       | Yes             |             | Yes  |                     |  |  |                      |                 | X                           | X               |  |                        |               | X                   | X                    | X               | Yes                            |

| a  | b        | с        | d        | e       | f               | g  | h    | i                   | j          | k   | 1                    | m               | n                           | 0               | p  | q                      | r             | s                   | t                    | u               | v                              |
|--|----------|----------|----------|---------|-----------------|--|------|---------------------|------------|---|----------------------|-----------------|-----------------------------|-----------------|--|------------------------|---------------|---------------------|----------------------|-----------------|--------------------------------|
|  |          |          |          |         |                 |  |      |                     |            |   |                      |                 |                             | S               | OLAS                                     | Reg.II                 | -2/54.2       | 2 or 19             | 0.3                  |                 |                                |
| MATERIALS                                    | MO class | No.      | Group    | Stowage | NO SMOKING sign | Ventilation                                      | SCBA | Protective clothing | Bilge line | Explosion protected<br>electrical equipment | Dual purpose nozzles | 4 jets of water | 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 | FFEA (SOLAS Reg.II-2/10.7.1.3) |
|  | M        | S        | Ğ        | Sto     | S               | \Secondary                                       | SC   | Pro                 | Bil        | Ex <sub>j</sub>                             | DΩ                   | 4 je            | Reı                         | 4 je            | Ex <sub>j</sub>                          | Me                     | Saf           | Nai                 | Рег                  | A-(             | Ē                              |
| CUTTINGS                                     |          |          |          |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FERROUS SULPHATE HEPTAHYDRATE                |          |          | <u>C</u> |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FERTILIZERS WITHOUT NITRATES (non-hazardous) |          |          | C        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FISH (IN BULK)                               |          |          | A        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FISHMEAL (FISHSCRAP), STABILIZED             | 9        | 2216     | В        |         |                 | Nm   | Yes  |                     |            |   |                      |                 | X                           | X               |  |                        |               | X                   | X                    |                 | Yes                            |
| FLUORSPAR                                    | MHB      |          | A and B  |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FLY ASH, DRY                                 |          |          | С        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| FLY ASH, WET                                 |          |          | A        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| GRANULAR RERROUS SULPHATE                    |          |          | С        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| GRANULATED SLAG                              |          |          | C        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| GRANULATE TYPE RUBBER                        |          |          | С        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes <sup>2</sup>               |
| GYPSUM                                       |          |          | С        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| ILMENITE CLAY                                |          |          | A        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| ILMENITE SAND                                |          |          | C        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| IRON ORE                                     |          |          | C        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| IRON ORE PELLETS                             |          |          | C        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| IRON OXIDE, SPENT or IRON SPONGE, SPENT      | 4.2      | 1376     | В        | Α       |                 | Nm   | Yes  | Yes                 |            | IIAT2                                       | Yes                  |                 | X                           | X               |  |                        |               | X                   | X                    | X               | Yes                            |
| IRONSTONE                                    | 1.2      | 1370     | C        | 7.1     |                 | 1111   | 103  | 103                 |            | 11/11/2                                     | 103                  |                 | - 11                        | - 11            |  |                        |               | - 11                |                      | 21              | 103                            |
| LABRADORITE                                  |          |          | C        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| LEAD NITRATE                                 | 5.1      | 1469     | В        |         |                 | N  | Yes  | Yes                 |            |   | Yes                  | Yes             | X                           | X               |  |                        |               | X                   | X                    |                 | (Yes)                          |
| LEAD ORE                                     | 5.1      | 1107     | C        |         |                 | - 1  | 103  | 105                 |            |   | 103                  | 105             | - 11                        | - 2 %           |  |                        |               | - 1 1               |                      |                 | (103)                          |
| LIME (UNSLAKED)                              | MHB      |          | В        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| LIMESTONE                                    | THILD    |          | C        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| LINTED COTTON SEED                           | MHB      |          | В        |         |                 |  | Yes  |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes                            |
| MAGNESIA (DEADBURNED)                        | WILID    |          | C        |         |                 |  | 103  |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | 103                            |
| MAGNESIA (DEADBURNED)  MAGNESIA (UNSLAKED)   | MHB      |          | В        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| MAGNESITE, natural                           | WIIID    |          | C        |         |                 |  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| MAGNESIUM NITRATE                            | 5.1      | 1474     | В        |         |                 |  | Yes  | Yes                 |            |   | Yes                  | Yes             | X                           | X               |  |                        |               | X                   | X                    |                 | (Yes)                          |
| MAGNESIUM SULPHATE FERTILIZERS               | J.1      | 14/4     | С        |         | <del> </del>    | <del>                                     </del> | 168  | 168                 |            |   | 168                  | 168             | Λ                           | Λ               |  |                        |               | Λ                   | Λ                    |                 | (108)                          |
| MANGANESE ORE                                | 1        |          | C        |         |                 | 1  |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| MARBLE CHIPS                                 | +        | 1        | C        |         | 1               | 1  |      |                     | 1          |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| METAL SULPHIDE CONCENTRATES                  | MHB      | -        |          |         | -               | <b> </b>   | Yes  |                     | -          |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes                            |
|  | MHB      | -        | A and B  |         | -               | 1  | res  |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 | 1 es                           |
| Mineral Concentrates                         | 1        | 1        | A        |         | 1               | <del>                                     </del> |      |                     | }          |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| MONOAMMONIUM PHOSPHATE (M.A.P.)              | +        | -        | C        |         | -               | <b> </b>   |      |                     |            |   |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| PEANUTS (in shell)                           |          | <u> </u> | C        | Α       | <u> </u>        |  |      |                     |            |   |                      |                 | <u> </u>                    |                 |  |                        |               |                     | <u> </u>             |                 |                                |

| a   | b         | c      | d       | e       | f               | g  | h    | i                   | j          | k  | 1                    | m               | n                           | 0               | p  | q             | r             | S                   | t                    | u               | v                              |
|---|-----------|--------|---------|---------|-----------------|--|------|---------------------|------------|--|----------------------|-----------------|-----------------------------|-----------------|--|---------------|---------------|---------------------|----------------------|-----------------|--------------------------------|
|   |           |        |         |         |                 |  |      |                     |            |  |                      |                 |                             | S               | OLAS                                     | Reg.II        | -2/54.        | 2 or 19             | .3                   |                 |                                |
| MATERIALS   | 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 | Remote control of fire pump | 4 jets of water | Explosion protected electrical equipment | l ventilation | Safe type fan | Natural ventilation | Personnel protection | A-60 insulation | FFEA (SOLAS Reg.II-2/10.7.1.3) |
|   |           | Ś      |         | Stc     | ž               |  | SC   | Prc                 | Bi         | Exele                                    | Ŋ                    | 4<br>ig         | Re                          | 4 j             | Eğ.                                      | Ĭ             | Sa            | Za                  | Pe                   | Ą-              | 뚶                              |
| PEAT MOSS   | MHB       |        | A and B |         |                 | Nm   |      |                     | <u> </u>   |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PEBBLES (sea)                                       |           |        | C       |         |                 | 1  |      |                     | <u> </u>   |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PELLETS (concentrates)                              |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PERLITE ROCK  |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PETROLEUM COKE, calcined or uncalcined              | MHB       |        | В       |         |                 |  | Yes  | Yes                 |            |  | Yes                  |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PHOSPHATE, defluorinated                            |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PHOSPHATE ROCK, calcined                            |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PHOSPHATE ROCK, uncalcined                          |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PIG IRON  |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PITCH PRILL   | MHB       |        | В       |         |                 | Nm   | Yes  | Yes                 |            |  | Yes                  |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| POTASH  |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| POTASSIUM CHLORIDE                                  |           |        | С       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| POTASSIUM NITRATE                                   | 5.1       | 1486   | В       |         |                 |  | Yes  | Yes                 |            |  | Yes                  | Yes             | X                           | X               |  |               |               | X                   | X                    |                 | (Yes)                          |
| POTASSIUM SULPHATE                                  |           |        | С       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PUMICE  |           |        | С       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PYRITE (containing copper and iron)                 |           |        | С       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PYRITES, CALCINED (Calcined Pyrites)                | MHB       |        | A and B |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| PYROPHYLLITE  |           |        | С       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| QUARTZ  |           |        | С       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| QUARTZITE   |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-1) | 7         | 2912   | В       |         |                 |  | Yes  | Yes                 |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| RADIOACTIVE MATERIAL, SURFACE CONTAMINATED          |           |        |         |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| OBJECTS (SCO-1)                                     | 7         | 2913   | В       |         |                 |  | Yes  | Yes                 |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| RASORITE (ANHYDROUS)                                |           |        | С       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| RUTILE SAND   |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| SALT  |           |        | C       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| SALT CAKE   |           |        | Č       |         |                 |  |      |                     |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| SALT ROCK   | 1         |        | C       |         |                 | <u>†                                      </u> |      | <u> </u>            |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| SAND  | 1         |        | C       | A 4     |                 | <u> </u>                                       |      | <u> </u>            |            |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| SAWDUST   | MHB       |        | В       |         |                 | Nm   |      |                     | <b>†</b>   |  |                      |                 |                             |                 |  |               |               |                     |                      |                 | Yes                            |
| SCRAP METAL   |           |        | C       |         |                 | Nm   |      |                     | <b> </b>   |  |                      |                 |                             |                 |  |               |               |                     |                      |                 |                                |
| SEED CAKE Type (a)                                  | 4.2       | 1386   | В       | Α       |                 | 1,111  | Yes  |                     |            |  |                      |                 | X                           | X               |  |               |               | X                   | X                    | X               | Yes                            |
| SEED CAKE Type (b)                                  | 4.2       | 1386   | В       | A 5     | Yes             | Nm, Sp   | Yes  |                     |            | IIAT3 <sup>5</sup>                       |                      |                 | X                           | X               | $X^5$                                    | $X^5$         | $X^5$         | X                   | X                    | X               | Yes                            |
| SEED CAKE   | 4.2       | 2217   | В       | A       | Yes             | Nm, Sp   | Yes  |                     |            | IIAT3                                    |                      |                 | X                           | X               | X  | X             | X             | X                   | X                    | X               | Yes                            |
| SEED CAKE (non-hazardous)                           | 1.2       |        | C       | <b></b> | 100             | , s.p  | 100  | 1                   |            | 11.113                                   |                      |                 |                             |                 |  |               |               |                     |                      |                 | 1 20                           |

| a  | b         | с      | d     | e       | f               | g           | h    | i                   | j          | k  | 1                    | m               | n                           | 0               | р  | q                      | r             | s                   | t                    | u               | v                              |
|--|-----------|--------|-------|---------|-----------------|-------------|------|---------------------|------------|--|----------------------|-----------------|-----------------------------|-----------------|--|------------------------|---------------|---------------------|----------------------|-----------------|--------------------------------|
|  |           |        |       |         |                 |             |      |                     |            |  |                      |                 |                             | SC              | DLAS                                     |                        | 2/5/10        | ) on 10             | 2                    |                 |                                |
|  |           |        |       |         |                 |             |      |                     |            |  |                      |                 |                             | 30              | JLAS .                                   | Keg.II                 | -2/34.2       | 2 or 19             | .3                   |                 | .                              |
| MATERIALS  | 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 | 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 | FFEA (SOLAS Reg.II-2/10.7.1.3) |
| SILICOMANGANESE (low carbon) (with known hazard profile or   | MHB       |        | В     |         | Yes             | M, Sa       | Yes  |                     |            | IICT1                                    |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| known to evolve gases) (with silicon content of 25% or more) | WILLD     |        |       |         | 103             | 111, 54     | 103  |                     |            | nerr                                     |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| SODA ASH   |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| SODIUM NITRATE   | 5.1       | 1498   | В     |         |                 |             | Yes  | Yes                 |            |  | Yes                  | Yes             | X                           | X               |  |                        |               | X                   | X                    |                 | (Yes)                          |
| SODIUM NITRATE AND POTASSIUM NITRATE MIXTURE                 | 5.1       | 1499   | В     |         |                 |             | Yes  | Yes                 |            |  | Yes                  | Yes             | X                           | X               |  |                        |               | X                   | X                    |                 | (Yes)                          |
| STAINLESS STEEL GRINDING DUST                                |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| STONE CHIPPINGS  |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| SUGAR  |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| SULPHATE OF POTASH AND MAGNESIUM                             |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| SULPHUR (crushed lump and coarse grained) <sup>6</sup>       | 4.1       | 1350   | В     | Α       | Yes             | Nm, Sp      | Yes  |                     |            | IIAT4                                    |                      |                 | X                           | X               | X  |                        | $X^8$         | X                   | X                    | X               |                                |
| SULPHUR (formed, solid)                                      |           |        | С     |         |                 | Nm          |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| SUPERPHOSPHATE   |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| SUPERPHOSPHATE (triple, granular)                            |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| TACONITE PELLETS   |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| TALC   |           |        | C     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| TANKAGE  | MHB       |        | В     |         |                 |             | Yes  |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes                            |
| TAPIOCA  |           |        | С     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| UREA   |           |        | С     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| VANADIUM ORE   | MHB       |        | В     |         |                 |             | Yes  |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| VERMICULITE  |           |        | С     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| WHITE QUARTZ   |           |        | С     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| WOODCHIPS  | MHB       |        | В     |         |                 |             | Yes  |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes 7                          |
| WOOD PELLETS   | MHB       |        | В     |         |                 |             | Yes  |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes                            |
| WOOD PRODUCTS - GENERAL                                      | MHB       |        | В     |         |                 | Nm          | Yes  |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |
| WOOD PULP PELLETS  | MHB       |        | В     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 | Yes 7                          |
| ZINC ASHES   | 4.3       | 1435   | В     | Α       | Yes             | ML,Sa       | Yes  | Yes                 |            | IICT2                                    |                      |                 |                             |                 | X  | X                      | X             | X                   | X                    | X               |                                |
| ZIRCON SAND  |           |        | С     |         |                 |             |      |                     |            |  |                      |                 |                             |                 |  |                        |               |                     |                      |                 |                                |

The contents of each column in the Table 2.1 are as follows.

#### MATERIALS (column "a")

Bulk Cargo Shipping Names are expressed in capital letters and identifies a bulk cargo during transport by sea.

#### 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 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.

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")

Yes: "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.

 $Nm \hspace{3mm}: \hspace{3mm} Natural \hspace{3mm} or \hspace{3mm} mechanical \hspace{3mm} ventilation \hspace{3mm} system \hspace{3mm} is \hspace{3mm} to \hspace{3mm} be \hspace{3mm} provided \hspace{3mm} for \hspace{3mm} cargo \hspace{3mm} holds.$ 

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.

Sa : Ventilation fans are to be safe for use in a flammable atmosphere.

 $Sp \quad : \quad Spark-arresting \ screens \ (wire \ mesh \ guards \ with \ max. \ 13mm \ X \ 13mm) \ are \ to \ be \ fitted \ to \ ventilation \ openings.$ 

#### 8. SCBA (column "h")

Yes: Two self contained breathing apparatuses with 200% spare cylinders are to be additionally provided.

#### 9. Protective clothing resistant to chemical attack (column "i")

Yes: 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")

Yes: Nozzles provided with fire hoses are to be of dual-purpose type (i.e., spray/jet type).

#### 13. 4 jets of water (column "m")

Yes: 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. Requirements of SOLAS Reg.II-2/54.2 (Reg.II-2/19.3 on or after 2000 amendments) (column "n" ~ "u")

X : Applicable.

#### 15. 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 vessel may be exempted from the requirements of FFEA.
- 3. Consideration shall be given to providing the vessel 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. Only applicable to Industrial sand coated with resin.
- 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 vessel may be exempted from the requirements of FFEA.
- 8. Only suitable wire mesh guards are required.

#### Table 1.2

# $IMSBC\ Code\ \hbox{-}\ Initial\ Checklist}$ (for cargoes other than COAL and BROWN COAL BRIQUETTES)

| Column |   |        |
|--------|---|--------|
| of     |   | D 14   |
| Table  | Requirements  | Result |
| 2.1    |   |        |
|        | Stowage:  |        |
|        | ☐ Bulkheads to the engine room are to be insulated to A-60 standard.  |        |
| e      | ☐ Boundaries of components are to be resistant to fire and passage of water.                                      |        |
|        | ☐ Bulkheads to the engine room are to be of gastight.   |        |
| c      | NO SMOKING sign:  |        |
| f      | □ "NO SMOKING" signs are to be posted on decks and in areas adjacent to cargo compartment.                        |        |
|        | Ventilation:  |        |
|        | ☐ Natural ventilation systems are to be provided for cargo holds.   |        |
|        | ☐ Natural or mechanical ventilation systems are to be provided for cargo holds.                                   |        |
|        | ☐ Mechanical ventilation systems are to be provided for cargo holds.  |        |
| g      | ☐ 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.  |        |
|        | ☐ Ventilation fans are to be safe for use in a flammable atmosphere.  |        |
|        | ☐ Spark-arresting screens (wire mesh guards with max. 13mm×13mm) are to be fitted to ventilation openings.        |        |
| h      | SCBA:   |        |
| п      | ☐ Two self contained breathing apparatuses with 200% spare cylinders are to be additionally provided.             |        |
|        | Protective clothing resistant to chemical attack:   |        |
| i      | ☐ Four sets of protective clothing which consists of boots, gloves, coverall and headgear are to be additionally  |        |
|        | provided.   |        |
|        | Bilge line:   |        |
| i      | ☐ In case where bilge lines are led to machinery space, bilge lines are to be isolated either by fitting a blank  |        |
| j      | flange or by a closed lockable valve.   |        |
|        | ☐ A notice is to be placed adjacent to the valve warning against opening without the master's permission.         |        |
|        | Electrical equipment:   |        |
|        | ☐ Electrical equipment fitted in the cargo holds, including motors of mechanical ventilation systems, are to be   |        |
| k      | 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.    |        |
|        | (☐ IIAT2 /☐ IIAT3 /☐ IIAT4 /☐ IICT1 /☐ IICT2 /☐ IICT3 /☐ IICT4 /☐ Intrinsically safe type)                        |        |
| 1      | Dual purpose nozzles  |        |
| 1      | □ Nozzles provided with fire hoses are to be of dual-purpose type (i.e., spray/jet type).                         |        |
|        | 4 jets of water   |        |
| m      | ☐ 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.   |        |

Note:

- 1. The requirements checked are applied to the vessel.
- 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 :

Signature:

#### 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.  Methane Oxygen Carbon monoxide pH value Temperature( 0 - 100°C)  |  |
| 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.  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.

| Date         | : | Signature: |
|--------------|---|------------|
| Class number | : |            |
| Ship's name  | : |            |

**Table 1.4 Documents/information to be submitted** 

| (1) | (2)              | Required items (1) Column of Table 2.2 (2) Regulation of SOLAS II-2/54 (II-2/19) |   | Documents/information to be submitted 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     | Н | Drawings of fire protection construction Type and manufacture of the material   |
| f   |                  | "NO SMOKING" signs   | L | Number and locations of the signs   |
|     |                  | Natural ventilation.   |   |   |
|     | 2.4.3<br>(3.4.3) | Natural or mechanical ventilation.   | Н | Drawings of the system  |
| G   |                  | Mechanical ventilation   |   |   |
| g   | 2.4.1            | Mechanical ventilation (total ventilation at least six air                       | Н | Drawings of the system  |
|     | (3.4.1)          | changes per hour)  |   | Calculations of the air changes   |
|     | 2.4.2            | Non-sparking fans  | L | Specifications  |
|     | (3.4.2)          | 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                                       | L | Type, manufacturer and specifications   |
| j   |                  | Stop valves and blank flanges on the bilge lines on machinery space side         | Н | Drawing of bilge lines  |
| k   | 2.2<br>(3.2)     | Electrical equipment to be of safe type.   | Н | Arrangement and wiring diagram of electrical equipment fitted in the space including grade of each equipment, such as HAT4. |
| 1   | -                | 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                                    | Н | Fire main piping diagram with arrangement of hydrant and pump capacity.   |

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   | 7 | uments/information to be submitted 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.  Methane Oxygen Carbon monoxide pH value Temperature( 0 - 100°C)  | 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 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.

### Appendix 1.1 - Form of certificate

# Certificate of Compliance with the International Maritime Solid Bulk Cargoes (IMSBC) Code

| No. ( certificate ni                           | umber )  |                  |                                  |
|--|--|------------------|----------------------------------|
|  | Name of ship   | :                |                                  |
|  | Distinctive number or letters  | :                |                                  |
|  | Port of registry   | :                |                                  |
|  | Gross tonnage  | :                |                                  |
|  | Class number   | :                |                                  |
|  | IMO number   | : IMO            |                                  |
| in the cargo holds sta<br>Cargoes Code provide | the ship is suitable for the carria<br>ted in accordance with the provi<br>ed that:                              | sions of the Int | ternational Maritime Solid Bulk  |
|  | e loaded and distributed in pursu<br>ne stability information booklet p  |                  |                                  |
| 3. the nominal specification loading manual;   | ic gravity of any cargo should n   | ot exceed the a  | allowable value indicated in the |
| 4. the remaining open<br>Note on Attachment 2  | rational requirements stipulated b, should be ensured.   | in the Code, in  | cluding those stated in General  |
| Completion date of the Issued at ( place       | d until ( date of five years after e survey on which this certificate ) on ( date ) ne of the flag government)*. | •                | sue ).<br>survey date )          |
|  |  | ;                | NIPPON KAIJI KYOKAI              |
|  |  |                  | ( name )<br>Surveyor             |

\* Delete if not appropriate.

Attachment to the certificate No. ( certificate number )

List of cargoes permitted to be carried.

| MATERIALS                          |              | IMO CLASS          | UN No. | NOTE (See Attachment 2.) |
|------------------------------------|--------------|--------------------|--------|--------------------------|
| All materials of Group A and Group | C            |                    |        | 1, 2*, 4                 |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        | <u> </u>                 |
|                                    |              | cargoes to be list |        |                          |
|                                    | according to | Instruction from   | EQD    |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
| _                                  |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |
|                                    |              |                    |        |                          |

<sup>\*</sup> Delete if not appropriate.

#### **General Note**

- When it has been required by the Code, 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.
- When carrying a solid bulk cargo which is liable to emit a toxic or flammable gas, and/or cause oxygen depletion in the cargo space, the appropriate instrument(s) for measuring the concentration of gas and oxygen in the cargo space shall be provided. The instrument(s) shall be of certified safe type for use in explosive atmosphere if required.

#### Note

| 1.  | Except AMMONIUM NITRATE BASED FERTILIZER (non-hazardous), COAL                                 |  |  |  |  |
|-----|--|--|--|--|--|
| 1.  | SLURRY*, SCRAP METAL* and SULPHUR (formed, solid)*.  |  |  |  |  |
| 2.  | CHOPPED RUBBER AND PLASTIC INSULATION, COARRSE CHOPPED TYRES and                               |  |  |  |  |
|     | GRANULATE TYPE RUBBER are not permitted to be loaded when the planned interval                 |  |  |  |  |
|     | between the commencement of loading and the completion of discharge of the cargoes             |  |  |  |  |
|     | exceeds 5 days.  |  |  |  |  |
| 3.  | AMMONIUM NITRATE BASED FERTILIZER (non-hazardous) is to be stowed out of                       |  |  |  |  |
|     | direct contact with a metal engine room boundary.  |  |  |  |  |
| 4.  | PEANUTS (in shell) and Industrial sand coated with resin are to be stowed at least 3m          |  |  |  |  |
|     | horizontally away from engine room boundaries.   |  |  |  |  |
| 5.  | To be stowed at least 3m horizontally away from engine room boundaries.                        |  |  |  |  |
| 6.  | CASTER MEAL, CASTER POMACE and CASTER FLAKE shall not be carried in bulk.                      |  |  |  |  |
| 7.  | Consideration shall be given to providing the vessel 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.                 |  |  |  |  |
| 8.  | Except Seedcake containing solvent extractions.  |  |  |  |  |
| 9.  | Fine grained sulphur (flowers of sulphur) shall not be transported in bulk.                    |  |  |  |  |
| 10. | With moisture content of 15% or more.  |  |  |  |  |

<sup>\*</sup> Delete if not appropriate.

#### 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 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; and
  - .2 the following cargoes categorized into Group B in the IMSBC Code:

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

CALCINED PYRITES (Pyritic ash)

DIRECT REDUCED IRON (A) Briquettes, hot moulded

FERROPHOSPHORUS (including briquettes)

FERROSILICON, with more than 30% but less than 90% silicon, UN 1408

FERROSILICON, with 25% to 30% silicon, or 90% or more silicon

FLUORSPAR (calcium fluoride)

LIME (UNSLAKED)

LOGS

MAGNESIA (UNSLAKED)

PEAT MOSS

PETROLEUM COKE\*

PITCH PRILL

**PULP WOOD** 

RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY MATERIAL (LSA-1),

UN 2912 (non fissile or fissile – excepted)

RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECT(S) (SCO-I

or SCO-II), UN 2913 (non fissile or fissile – excepted)

ROUNDWOOD

**SAW LOGS** 

SILICOMANGANESE

SULPHUR, UN 1350

**TIMBER** 

**VANADIUM ORE** 

WOODCHIPS, with moisture content of 15% or more

ZINC ASHES, UN 1435

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<sup>\*</sup> When loaded and transported under the provisions of the IMSBC Code.

- 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
  - 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.