



Shipping Information Notice – 110
Bulk Cargoes
Adoption of Amendment 06-21 of the International Maritime Solid Bulk Cargoes (IMSBC) Code
(To be read in conjunction with SIN 086)

To: Masters, Owners, Operators & Recognised Organisations

1. Introduction

- 1.1. The purpose of this Shipping Information Note (SIN) is to advise of an amendment (06-21) to the International Maritime Solid Bulk Cargoes (IMSBC) Code and its application date. This amendment makes a number of changes to the IMSBC Code, some of which are outlined below, and also adds new products which have not previously been included in Appendix 1 (Individual Schedules of Solid Bulk Cargoes) of the Code.
- 1.2. The IMSBC Code became mandatory on an international basis when it entered into force on 1 January 2011. The Code facilitates the safe loading, stowage and shipment of solid bulk cargoes by providing information on the dangers associated with the shipment of certain types of solid bulk cargoes and instructions on the procedures to be adopted when the shipment of a solid bulk cargo is considered.
- 1.3. This SIN is to advise of amendments to the IMSBC Code that have been adopted in the International Maritime Organization (IMO) by means of Resolution MSC.500 (105) specifying forthcoming amendments (06-21) to the IMSBC Code.
- 1.4. The amendments (06-21) to IMSBC Code became mandatory on an international basis from 1 December 2023. A summary of these amendments is set out below.

2. Summary of amendments

- 2.1. Amendment 06-21 to the IMSBC Code makes a number of changes to the Code. The following is a summary of some of the key changes.
 - 2.1.1. **Group A cargoes and dynamic separation** – The text of the IMSBC Code has been amended in several places to reflect the fact that Group A bulk cargoes are now considered to be not just cargoes which may liquefy during transit, but also cargoes which may undergo dynamic separation (see 2.2 below).
 - 2.1.2. **Ammonium Nitrate based fertilizer** - The existing individual schedule for “AMMONIUM NITRATE BASED FERTILIZER (non-hazardous)” has been deleted and two new schedules added in its place (see 2.3 below).

2.1.3. **Castor Beans** - The existing individual schedule for “CASTOR BEANS or CASTOR MEAL or CASTOR POMACE or CASTOR FLAKE UN 2969” has been modified so that the following sentence from the “Precautions” section is now more prominent and appears underneath the Bulk Cargo Shipping Name (BCSN): “Castor meal, castor pomace and castor flakes shall not be carried in bulk.”

2.1.4. **Superphosphate** – Following a submission to the IMO with updated cargo information, the existing individual schedule for “SUPERPHOSPHATE (triple, granular)” has been deleted and a new schedule added in its place with the same BCSN but now characterised as a Group B cargo due to a corrosion hazard.

2.1.5. **Section 9 Materials Possessing Chemical Hazards MHB (CR)** – The existing text in paragraph 9.2.3.7.3 has been amended to clarify the suitable test for determining whether a solid material possesses a corrosive hazard when carried as bulk cargo under the IMSBC Code (i.e. Hazard classification MHB (CR)).

2.1.6. The following new schedules have been added to Appendix 1 of the Code:

Cargo	Group
AMMONIUM NITRATE BASED FERTILIZER	C
AMMONIUM NITRATE BASED FERTILIZER MHB	B
CLAM SHELL	C
LEACH RESIDUE CONTAINING LEAD	A & B
SUPERPHOSPHATE (triple, granular)	B

2.2. **Dynamic Separation** – According to the new definition inserted into the IMSBC Code, dynamic separation means the phenomenon of forming a liquid slurry (water and fine solids) above the solid material, resulting in a free surface effect which may significantly affect the ship’s stability. In the case of either liquefaction or dynamic, the potential hazard is an adverse effect on vessel stability with potentially catastrophic consequences and so the IMSBC Code requirements for mandatory testing, re-verification and declaration of the relevant properties of any parcels of Group A cargoes intended for shipment in bulk by sea must always be followed.

2.3. As outlined above, amendment 06-21 incorporates amendments to the schedules for Ammonium Nitrate based Fertilizer cargoes. These changes have followed on from consideration of marine accident reports involving these cargoes. Prior to the 06-21 amendment of the IMSBC Code, there had been three schedules for Ammonium Nitrate based Fertilizer:

2.3.1. AMMONIUM NITRATE BASED FERTILIZER UN 2067

Ammonium nitrate-based fertilizers classified as UN 2067 are uniform mixtures containing ammonium nitrate as the main ingredient within the following composition limits:

- not less than 90% ammonium nitrate with not more than 0.2% total combustible/organic material calculated as carbon and with added matter, if any, which is inorganic and inert towards ammonium nitrate; or

- less than 90% but more than 70% ammonium nitrate with other inorganic materials or more than 80% but less than 90% ammonium nitrate mixed with calcium carbonate and/or dolomite and/or mineral calcium sulphate and not more than 0.4% total combustible/organic material calculated as carbon; or
- ammonium nitrate-based fertilizers containing mixtures of ammonium nitrate and ammonium sulphate with more than 45% but less than 70% ammonium nitrate and not more than 0.4% total combustible organic material calculated as carbon such that the sum of the percentage compositions of ammonium nitrate and ammonium sulphate exceeds 70%.

2.3.2. AMMONIUM NITRATE BASED FERTILIZER UN 2071

Ammonium nitrate-based fertilizers classified as UN 2071 are uniform ammonium nitrate-based fertilizer mixtures of nitrogen, phosphate or potash, containing not more than 70% ammonium nitrate and not more than 0.4% total combustible organic material calculated as carbon or with not more than 45% ammonium nitrate and unrestricted combustible material. Fertilizers within these composition limits are not subject to the provisions of this schedule when shown by a trough test (see UN Manual of Tests and Criteria, part III, section 39) that they are not liable to self-sustaining decomposition.

2.3.3. AMMONIUM NITRATE BASED FERTILIZER (non-hazardous)

Ammonium nitrate-based fertilizers transported in conditions mentioned in this schedule are uniform mixtures containing ammonium nitrate as the main ingredient within the following composition limits:

- not more than 70% ammonium nitrate with other inorganic materials;
- not more than 80% ammonium nitrate mixed with calcium carbonate and/or dolomite and/or mineral calcium sulphate and not more than 0.4% total combustible organic material calculated as carbon;
- nitrogen type ammonium nitrate-based fertilizers containing mixtures of ammonium nitrate and ammonium sulphate with not more than 45% ammonium nitrate and not more than 0.4% total combustible organic material calculated as carbon; and
- uniform ammonium nitrate-based fertilizer mixtures of nitrogen, phosphate or potash, containing not more than 70% ammonium nitrate and not more than 0.4% total combustible organic material calculated as carbon or with no more than 45% ammonium nitrate and unrestricted combustible material. Fertilizers within these composition limits are not subject to the provisions of this schedule when shown by a trough test (see UN Manual of Tests and Criteria, part III, section 39) that they are liable to self-sustaining decomposition or if they contain an excess of nitrate greater than 10% by mass.

- 2.4. Fertilizer could only fall under the 'AMMONIUM NITRATE BASED FERTILIZER (non-hazardous)' schedule, i.e. a Group C cargo, if its chemical or physical properties were such that when tested, it did not meet the established defining criteria of any class of dangerous goods in accordance with part 2 of the IMDG Code. Above and beyond this, the schedule explicitly stated that shipment in bulk of any materials exhibiting explosive properties of class 1 when tested in accordance with Test Series 1 and 2 of class 1 (see UN Manual of Tests and Criteria), or of any materials which were liable to self-heating sufficient to initiate decomposition, was prohibited.
- 2.5. In the 06-21 amendment of the IMSBC Code, the single 'AMMONIUM NITRATE BASED FERTILIZER (non-hazardous)' schedule has now been deleted and replaced by two schedules titled 'AMMONIUM NITRATE BASED FERTILIZER' and 'AMMONIUM NITRATE BASED FERTILIZER MHB'. One of these two new schedules is for non-hazardous Group C cargo, and the other new schedule is for Group B cargo with an 'MHB OH' hazard, namely its potential to undergo thermal decomposition when carried in large quantities in bulk and subjected to strong external heating.

2.5.1. AMMONIUM NITRATE BASED FERTILIZER MHB

Ammonium nitrate based fertilizers transported under conditions mentioned in this schedule are uniform mixtures of nitrogen with or without potash and/or phosphate within the following composition limits:

- not more than 70% ammonium nitrate and not more than 0.4% total combustible organic material calculated as carbon or not more than 45% ammonium nitrate and unrestricted combustible material; and
- both the ammonium nitrate content is equal to or greater than 20% and the chloride content is equal to or greater than 2%.

The shipper shall declare the ammonium nitrate content and the chloride content in accordance with 4.2 of the IMSBC Code.

Notwithstanding the above, fertilizers within these composition limits are not subject to the provisions of this schedule, if they are assigned class 9 due to the hazard of self-sustaining decomposition based on the results of the trough test (referred to in the UN Manual of Tests and Criteria, part III, section 39).

2.5.2. AMMONIUM NITRATE BASED FERTILIZER

This schedule shall only apply to ammonium nitrate-based fertilizers which do not meet any of the criteria on dangerous goods or materials hazardous only in bulk specified in 9.2.2 or 9.2.3 of this Code, respectively.

Ammonium nitrate-based fertilizers transported in conditions mentioned in this schedule are straight nitrogen fertilizers or compound fertilizers within the following composition limits:

Straight nitrogen fertilizers containing less than 2% chloride, and

- not more than 70% ammonium nitrate with other inorganic materials; or

- not more than 80% ammonium nitrate mixed with calcium carbonate and/or dolomite and/or mineral calcium sulphate and not more than 0.4% total combustible organic material calculated as carbon; or
- mixtures of ammonium nitrate and ammonium sulphate with not more than 45% ammonium nitrate and not more than 0.4% total combustible organic material calculated as carbon.

2.5.3. Compound NPK/NK/NP fertilizers

- mixtures of nitrogen with phosphate and/or potash containing not more than 70% ammonium nitrate and not more than 0.4% total combustible organic material calculated as carbon or not more than 45% ammonium nitrate and unrestricted combustible material; and
- either less than 20% of ammonium nitrate content or less than 2% of chloride

The shipper shall declare the ammonium nitrate content and the chloride content in accordance with 4.2 of the IMSBC Code.

Notwithstanding the above, fertilizers within these composition limits are not subject to the provisions of this schedule, if they are assigned class 9 due to the hazard of self-sustaining decomposition based on the results of the trough test (referred to in the UN Manual of Tests and Criteria, part III, section 39).

- 2.6. Therefore, in addition to having the necessary characteristics not to fall under either the schedule for 'AMMONIUM NITRATE BASED FERTILIZER UN 2067' or 'AMMONIUM NITRATE BASED FERTILIZER UN 2071', it should now also be confirmed that any ammonium nitrate based fertilizer being declared as a Group C cargo does not meet the MHB criteria as specified in sections 9.2.2 or 9.2.3 of the IMSBC Code.

3. Application Date

- 3.1. The 06-21 amendment to the IMSBC Code will enter into force on an international basis on 1 December 2023, having already been available for voluntary use since 1 January 2023.
- 3.2. From 1 December 2023, solid bulk cargoes shall be shipped only in accordance with the IMSBC Code incorporating the 06-21 amendment.
- 3.3. The IMSBC Code is available from the IMO, 1 Albert Embankment, London SE1 7SR. The Annex to IMO Resolution MSC.500(105) contains the textual amendments (06-21) to the Code.

Steve Gomez – Chief Surveyor (Ag)
 For and on behalf of the Maritime Administrator

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