

Chapter 5.5

Special provisions

5.5.1 [Reserved]

5.5.2 Special provisions applicable to fumigated cargo transport units (UN 3359)*

5.5.2.1 General

5.5.2.1.1 Fumigated cargo transport units (UN 3359) containing no other dangerous goods are not subject to any provisions of this Code other than those of this section.

5.5.2.1.2 When the fumigated cargo transport unit is loaded with dangerous goods in addition to the fumigant, any provision of this Code relevant to these goods (including placarding, marking and documentation) applies in addition to the provisions of this section.

5.5.2.1.3 Only cargo transport units that can be closed in such a way that the escape of gas is reduced to a minimum shall be used for the transport of cargo under fumigation.

5.5.2.1.4 The provisions of 3.2 and 5.4.3 apply to all fumigated cargo transport units (UN 3359).

5.5.2.2 Training

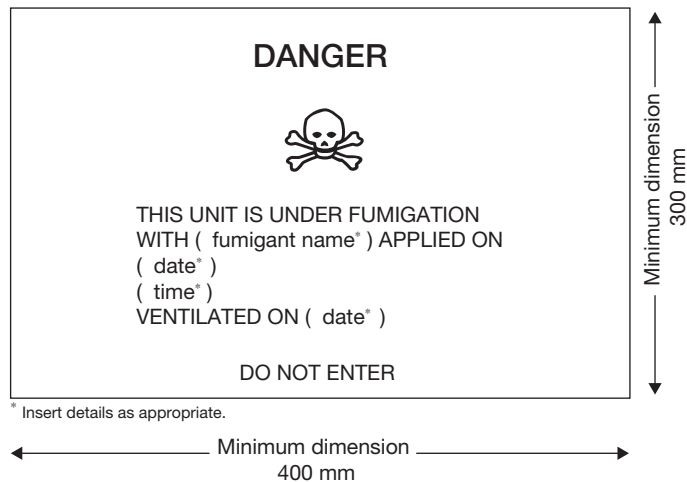
Persons engaged in the handling of fumigated cargo transport units shall be trained commensurate with their responsibilities.

5.5.2.3 Marking and placarding

5.5.2.3.1 A fumigated cargo transport unit shall be marked with a warning mark, as specified in 5.5.2.3.2, affixed at each access point in a location where it will be easily seen by persons opening or entering the cargo transport unit. This mark shall remain on the cargo transport unit until the following provisions are met:

- .1 the fumigated cargo transport unit has been ventilated to remove harmful concentrations of fumigant gas; and
- .2 the fumigated goods or materials have been unloaded.

5.5.2.3.2 The fumigation warning mark shall be as shown in the figure below.



Fumigation warning mark

* Refer to the Revised Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo transport units (MSC.1/Circ.1361).

The mark shall be a rectangle. The minimum dimensions shall be 400 mm wide × 300 mm high and the minimum width of the outer line shall be 2 mm. The mark shall be in black print on a white background with lettering not less than 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

The method of marking shall be such that this information will still be identifiable on cargo transport units surviving at least three months' immersion in the sea. In considering suitable marking methods, account shall be taken of the ease with which the surface of the cargo transport unit can be marked.

- 5.5.2.3.3 If the fumigated cargo transport unit has been completely ventilated either by opening the doors of the unit or by mechanical ventilation after fumigation, the date of ventilation shall be marked on the fumigation warning mark.
- 5.5.2.3.4 When the fumigated cargo transport unit has been ventilated and unloaded, the fumigation warning mark shall be removed.
- 5.5.2.3.5 Class 9 placards (Model No. 9, see 5.2.2.2.2) shall not be affixed to a fumigated cargo transport unit except as required for other class 9 substances or articles packed therein.

5.5.2.4 Documentation

5.5.2.4.1 Documents associated with the transport of cargo transport units that have been fumigated and have not been completely ventilated before transport shall include the following information:

- .1 UN 3359, fumigated cargo transport unit, 9, or UN 3359, fumigated cargo transport unit, class 9;
- .2 The date and time of fumigation; and
- .3 The type and amount of the fumigant used.

5.5.2.4.2 The transport document may be in any form, provided it contains the information required in 5.5.2.4.1. This information shall be easy to identify, legible and durable.

5.5.2.4.3 Instructions for disposal of any residual fumigant including fumigation devices (if used) shall be provided.

5.5.2.4.4 A document is not required when the fumigated cargo transport unit has been completely ventilated and the date of ventilation has been marked on the warning mark (see 5.5.2.3.3 and 5.5.2.3.4).

5.5.2.5 Additional provisions

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- △ 5.5.2.5.1 Fumigants shall not be applied to the contents of a cargo transport unit once it has been loaded aboard the ship.
- △ 5.5.2.5.2 Cargo transport units shall be fumigated in accordance with the requirements determined by the competent authority, to ensure a sufficient period has elapsed to attain a reasonable uniform gas concentration throughout the cargo in it. Twenty-four hours is normally sufficient for this purpose.
- △ 5.5.2.5.3 The master shall be informed prior to the loading of a fumigated cargo transport unit.

△ 5.5.3 Special provisions applicable to packages and cargo transport units containing substances presenting a risk of asphyxiation when used for cooling or conditioning purposes (such as dry ice (UN 1845) or nitrogen, refrigerated liquid (UN 1977) or argon, refrigerated liquid (UN 1951) or nitrogen)

△ **Note 1:** See also 1.1.1.7.

■ **Note 2:** In the context of this section the term “conditioning” may be used in a broader scope and includes protection.

5.5.3.1 Scope

- 5.5.3.1.1 This section is not applicable to substances which may be used for cooling or conditioning purposes when transported as a consignment of dangerous goods. When they are transported as a consignment, these substances shall be transported under the relevant entry of the Dangerous Goods List in chapter 3.2 in accordance with the associated conditions of transport.
- 5.5.3.1.2 This section is not applicable to gases in cooling cycles.
- 5.5.3.1.3 Dangerous goods used for cooling or conditioning portable tanks or MEGCs during transport are not subject to this section.
- 5.5.3.1.4 Cargo transport units containing substances used for cooling or conditioning purposes include cargo transport units containing substances used for cooling or conditioning purposes inside packages as well as cargo transport units with unpackaged substances used for cooling or conditioning purposes.

5.5.3.2 General

5.5.3.2.1 Cargo transport units containing substances used for cooling or conditioning purposes (other than fumigation) during transport are not subject to any provisions of this Code other than those of this section.

5.5.3.2.2 When dangerous goods are loaded in cargo transport units containing substances used for cooling or conditioning purposes, any provisions of this Code relevant to these dangerous goods apply in addition to the provisions of this section. For dangerous goods for which temperature control is required see also 7.3.7.

5.5.3.2.3 [Reserved]

5.5.3.2.4 Persons engaged in the handling or transport of cargo transport units containing substances used for cooling or conditioning purposes shall be trained commensurate with their responsibilities.

5.5.3.3 Packages containing a coolant or conditioner

5.5.3.3.1 Packaged dangerous goods requiring cooling or conditioning assigned to packing instructions P203, P620, P650, P800, P901 or P904 of 4.1.4.1 shall meet the appropriate requirements of that packing instruction.

5.5.3.3.2 For packaged dangerous goods requiring cooling or conditioning assigned to other packing instructions, the packages shall be capable of withstanding very low temperatures and shall not be affected or significantly weakened by the coolant or conditioner. Packages shall be designed and constructed to permit the release of gas to prevent a build-up of pressure that could rupture the packaging. The dangerous goods shall be packed in such a way to prevent movement after the dissipation of any coolant or conditioner.

5.5.3.3.3 Packages containing a coolant or conditioner shall be transported in well-ventilated cargo transport units.

5.5.3.4 Marking of packages containing a coolant or conditioner

5.5.3.4.1 Packages containing dangerous goods used for cooling or conditioning shall be marked with the proper shipping name of these dangerous goods followed by the words “AS COOLANT” or “AS CONDITIONER” as appropriate.

5.5.3.4.2 The marks shall be durable, legible and placed in such a location and of such a size relative to the package as to be readily visible.

5.5.3.5 Cargo transport units containing unpackaged dry ice

5.5.3.5.1 If dry ice in unpackaged form is used, it shall not come into direct contact with the metal structure of a cargo transport unit to avoid embrittlement of the metal. Measures shall be taken to provide adequate insulation between the dry ice and the cargo transport unit by providing a minimum of 30 mm separation (e.g. by using suitable low heat conducting materials such as timber planks, pallets, etc.).

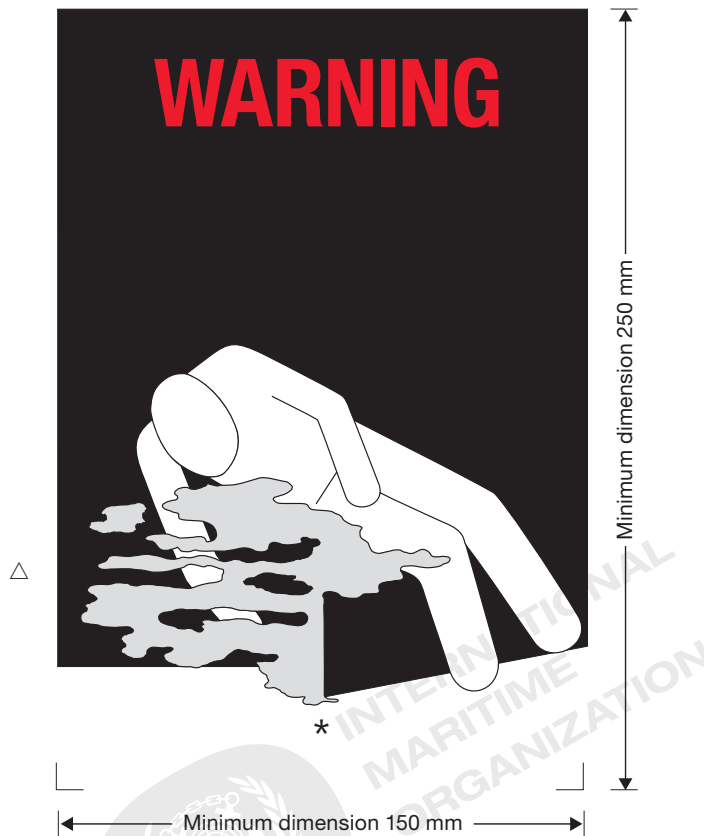
5.5.3.5.2 Where dry ice is placed around packages, measures shall be taken to ensure that packages remain in the original position during transport after the dry ice has dissipated.

5.5.3.6 Marking of cargo transport units

5.5.3.6.1 Cargo transport units containing dangerous goods used for cooling or conditioning purposes shall be marked with a warning mark, as specified in 5.5.3.6.2 affixed at each access point in a location where it will be easily seen by persons opening or entering the cargo transport unit. This mark shall remain on the cargo transport unit until the following provisions are met:

- .1 the cargo transport unit has been ventilated to remove harmful concentrations of coolant or conditioner; and
- .2 the cooled or conditioned goods have been unloaded.

5.5.3.6.2 The warning mark shall be as shown in the figure below.



△ **Asphyxiation warning mark for cargo transport units**

△ * Insert proper shipping name or the name of the asphyxiant gas used as the coolant/conditioner. The lettering shall be in capitals, all be on one line and shall be at least 25 mm high. If the length of the proper shipping name is too long to fit in the space provided, the lettering may be reduced to the maximum size possible to fit. For example: CARBON DIOXIDE, SOLID. Additional information such as “AS COOLANT” or “AS CONDITIONER” may be added.

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The mark shall be a rectangle. The minimum dimensions shall be 150 mm wide × 250 mm high. The word “WARNING” shall be in red or white and be at least 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

The method of marking shall be such that this information will still be identifiable on cargo transport units surviving at least three months’ immersion in the sea. In considering suitable marking methods, account shall be taken of the ease with which the surface of the cargo transport unit can be marked.

5.5.3.7 Documentation

5.5.3.7.1 Documents associated with the transport of cargo transport units containing or having contained substances used for cooling or conditioning purposes and have not been completely ventilated before transport shall include the following information:

- .1 the UN number preceded by the letters “UN”; and
- .2 the proper shipping name followed by the words “AS COOLANT” or “AS CONDITIONER”, as appropriate.

For example: UN 1845, CARBON DIOXIDE, SOLID, AS COOLANT.

5.5.3.7.2 The transport document may be in any form, provided it contains the information required in 5.5.3.7.1. This information shall be easy to identify, legible and durable.

■ **5.5.4 Dangerous goods in equipment in use or intended for use during transport**

- 5.5.4.1 Dangerous goods (e.g. lithium batteries, fuel cell cartridges) contained in equipment such as data loggers and cargo tracking devices, attached to or placed in packages, overpacks, containers or load compartments are not subject to any provisions of this Code other than 7.3.5 and the following:
- .1 the equipment shall be in use or intended for use during transport;
 - .2 the contained dangerous goods (e.g. lithium batteries, fuel cell cartridges) shall meet the applicable construction and test requirements specified in this Code; and
 - .3 the equipment shall be capable of withstanding the shocks and loadings normally encountered during transport and shall be safe for use in the dangerous environments to which it may be exposed.
- 5.5.4.2 When such equipment containing dangerous goods is transported as a consignment, the relevant entry of the Dangerous Goods List in chapter 3.2 shall be used and all applicable provisions of this Code shall apply.

