

(e) Scuppers shall not be led to machinery or other spaces where sources of ignition may be present.

**94. Cargo Spaces, other than Ro-ro Cargo Spaces, Intended for the Carriage of Motor Vehicles with Fuel in their Tanks for their Own Propulsion**—(1) Spaces intended for the carriage of motor vehicles with fuel in their tanks for their own propulsion shall comply with the requirements of clause 93 of this Code.

**95. Special Requirements for Ships Carrying Dangerous Goods**—(1) In addition to complying with the requirements of clause 93 of this Code for cargo ships and with the requirements of clause 83 of this Code for passenger ships as appropriate, ship types and cargo spaces, referred to in sub-clause (2) of this clause intended for the carriage of dangerous goods shall comply with the requirements of this clause, as appropriate, except when carrying dangerous goods in limited quantities unless such requirements have already been met by compliance with the requirements elsewhere in this part. The types of ships and modes of carriage of dangerous goods are referred to in sub-clause (2) of this clause and in table 95.1 where the letters appearing in sub-clause (2) of this clause are referred to in the top line.

(2) The following ship types and cargo spaces shall govern the application of tables 95.1 and 95.2 of this Code.

(a) Ships and cargo spaces not specifically designed for the carriage of freight containers but intended for the carriage of dangerous goods in packaged form including goods in freight containers and portable tanks.

(b) Purpose built container ships and cargo spaces intended for the carriage of dangerous goods in freight containers and portable tanks.

(c) Ro-ro ships and ro-ro cargo spaces intended for the carriage of dangerous goods.

(d) Ships and cargo spaces intended for the carriage of solid dangerous goods in bulk.

(e) Ships and cargo spaces intended for carriage of dangerous goods other than liquids and gases in bulk in shipborne barges.

(3) Unless otherwise specified the following requirements shall govern the application of tables 95.1, 95.2 and 95.3 to both "on-deck" and "under-deck" stowage of dangerous goods where the letters of the following paragraphs are indicated in the first column.

(a) Electrical equipment and wiring shall not be fitted in enclosed cargo spaces, closed vehicle deck spaces, or open vehicle deck spaces unless it is essential for operational purposes in the opinion of the Chief Surveyor. However, if electrical equipment is fitted in such spaces, it shall be of a certified safe type for use in the dangerous environments to which it may be exposed unless it is possible to completely isolate the electrical system (by removal of links in the system, other than fuses). Cable penetrations of the decks and bulkheads shall be sealed against the passage of gas or vapour. Through runs of cables and cables within the cargo spaces shall be protected against damage from impact. Any other equipment which may constitute a source of ignition of flammable vapour shall not be permitted.

(b) Adequate power ventilation shall be provided in enclosed cargo spaces. The arrangement shall be such as to provide for at least six air changes per hour in the cargo space based on an empty cargo space and for removal of vapours from the upper or lower parts of the cargo space, as appropriate.

(c) The fans shall be such as to avoid the possibility of ignition of flammable gas air mixtures. Suitable wire mesh guards shall be fitted over inlet and outlet ventilation openings.

(d) Where it is intended to carry flammable or toxic liquids in enclosed cargo spaces the bilge pumping system shall be designed to ensure against inadvertent pumping of such liquids through machinery space piping or pumps. Where large

quantities of such liquids are carried, consideration shall be given to the provision of additional means of draining those cargo spaces. These means shall be to the satisfaction of the Chief Surveyor.

(e) Bulkheads forming boundaries between cargo spaces and machinery spaces of category A shall be insulated to "A-60" standard, unless the dangerous goods are stowed at least 3m horizontally away from such bulkheads. Other boundaries between such spaces shall be insulated to "A-60" standard.

(4) Where water is used for cooling designated under-deck cargo spaces or a water spray system in a ro-ro cargo space in accordance with the Shipping (Fire Appliances) Regulations 1989 drainage and pumping arrangements shall be provided such as to prevent the build up of free surfaces. If this is not possible the adverse effect upon stability of the added weight and free surface of water shall be taken into account to the extent deemed necessary by the Chief Surveyor in his approval of the stability information.

(5) Each ship complying with the requirements of this clause and the appropriate requirements of the Shipping (Fire Appliance) Regulations 1989 shall be provided with an appropriate document as evidence of such compliance.

**Table 95.1 Application of the Requirements to Different Modes of Carriage of Dangerous Goods in Ships and Cargo Spaces**

Wherever 'X' appears in Table 95.1, it means that this requirement is applicable to all classes of dangerous goods as given in the appropriate line of Table 95.3 except as indicated by the notes.

Clause 95(3)	Clause 95(2)						
	(a)	(b)	(c)			(d)	(e)
			Closed ro-ro cargo spaces	Open ro-ro cargo spaces	weather decks		
(a)	X	X	X	X	-	X <sup>c</sup>	
(b)	X	X <sup>a</sup>	X	-	-	X <sup>c</sup>	
(c)	X	X <sup>a</sup>	X	-	-	X <sup>c</sup>	
(d)	X	X	X	-	-	See Table 95.2	
(e)	X	X <sup>a</sup>	X	X	X	-	

Notes:

<sup>a</sup> For classes 4 and 5.1 not applicable to closed freight containers.

For classes 2, 3, 6.1 and 8 when carried in closed freight containers the ventilation rate may be reduced to not less than two air changes. For the purpose of this requirement a portable tank is a closed freight container.

<sup>b</sup> Applicable to decks only.

<sup>c</sup> In the special case where the barges are capable of containing flammable vapours or alternatively if they are capable of discharging flammable vapours to a safe space outside the barge carrier compartment by means of ventilation ducts connected to the barges, these requirements may be reduced or waived to the satisfaction of the Chief Surveyor.

**Table 95.2—Application of the Requirements to Different Classes of Dangerous Goods for Ships and Cargo Spaces Carrying Solid Dangerous Goods in Bulk**

Clause 95(3)	Class of Dangerous Goods						
	4.1	4.2	4.3 <sup>d</sup>	5.1	6.1	8	9
(a)	X	X <sup>a</sup>	X	X <sup>a</sup>	-	-	X <sup>a</sup>
(b) <sup>f</sup>	X <sup>a</sup>	X <sup>a</sup>	X	X <sup>a</sup>	-	-	X <sup>a</sup>
(c) <sup>f</sup>	X	X <sup>a</sup>	X	X <sup>a</sup>	-	-	X <sup>a</sup>
(e)	X	X	X	X <sup>a</sup>	-	X <sup>a</sup>	X

Notes: The classification of dangerous goods is according to Regulation 2 of Chapter VII of the Solas Convention 1974, and subsequent amendments.

<sup>d</sup> The hazards of substances in this class which may be carried in bulk are such that special consideration must be given by the Chief Surveyor to the construction of the ships involved