

Chapter 1.3

Training

1.3.0 Introductory note

The successful application of regulations concerning the transport of dangerous goods and the achievement of their objectives are greatly dependent on the appreciation by all persons concerned of the risks involved and on a detailed understanding of the regulations. This can only be achieved by properly planned and maintained initial and retraining programmes for all persons concerned with the transport of dangerous goods. The provisions of paragraphs 1.3.1.4 to 1.3.1.7 remain recommendatory (see 1.1.1.5).

1.3.1 Training of shore-side personnel

1.3.1.1 Shore-based personnel* engaged in the transport of dangerous goods intended to be transported by sea shall be trained in the contents of dangerous goods provisions commensurate with their responsibilities. Employees shall be trained in accordance with the provisions of 1.3.1 before assuming responsibilities and shall only perform functions, for which required training has not yet been provided, under the direct supervision of a trained person. Training requirements specific to security of dangerous goods in chapter 1.4 shall also be addressed.

Entities engaging shore-based personnel in such activities shall determine which staff will be trained, what levels of training they require and the training methods used to enable them to comply with the provisions of the IMDG Code. This training shall be provided or verified upon employment in a position involving dangerous goods transport. For personnel who have not yet received the required training, the entities shall ensure that those personnel may only perform functions under the direct supervision of a trained person. The training shall be periodically supplemented with refresher training to take account of changes in regulations and practice. The competent authority, or its authorized body, may audit the entity to verify the effectiveness of the system in place, in providing training of staff commensurate with their role and responsibilities in the transport chain.

1.3.1.2 Shore-based personnel such as those who:

- classify dangerous goods and identify proper shipping names of dangerous goods;
 - pack dangerous goods;
 - mark, label or placard dangerous goods;
 - load/unload cargo transport units;
 - prepare transport documents for dangerous goods;
 - offer dangerous goods for transport;
 - accept dangerous goods for transport;
 - handle dangerous goods in transport;
 - prepare dangerous goods loading/stowage plans;
 - load/unload dangerous goods into/from ships;
 - carry dangerous goods in transport;
 - enforce or survey or inspect for compliance with applicable rules and regulations; or
 - are otherwise involved in the transport of dangerous goods as determined by the competent authority
- shall be trained in the following:

1.3.1.2.1 *General awareness/familiarization training:*

- .1 each person shall be trained in order to be familiar with the general provisions of dangerous goods transport provisions;

* For the training of officers and ratings responsible for cargo handling on ships carrying dangerous and hazardous substances in solid form in bulk, or in packaged form, see the STCW Code, as amended.

- .2 such training shall include a description of the classes of dangerous goods; labelling, marking, placarding, packing, stowage, segregation and compatibility provisions; a description of the purpose and content of the dangerous goods transport documents (such as the Multimodal Dangerous Goods Form and the Container/Vehicle Packing Certificate); and a description of available emergency response documents.

1.3.1.2.2 *Function-specific training:* Each person shall be trained in specific dangerous goods transport provisions which are applicable to the function that person performs. An indicative list, for guidance purposes only, of some of the functions typically found in dangerous goods transport operations by sea and training requirements is given in paragraph 1.3.1.6.

1.3.1.3 Records of training received according to this chapter shall be kept by the employer and made available to the employee or competent authority, upon request. Records shall be kept by the employer for a period of time established by the competent authority.

1.3.1.4 *Safety training:* Commensurate with the risk of exposure in the event of a release and the functions performed, each person should be trained in:

- .1 methods and procedures for accident avoidance, such as proper use of package-handling equipment and appropriate methods of stowage of dangerous goods;
- .2 available emergency response information and how to use it;
- .3 general dangers presented by the various classes of dangerous goods and how to prevent exposure to those hazards, including, if appropriate, the use of personal protective clothing and equipment; and
- .4 immediate procedures to be followed in the event of an unintentional release of dangerous goods, including any emergency response procedures for which the person is responsible and personal protection procedures to be followed.

1.3.1.5 Recommended training needs for shore-side personnel involved in the transport of dangerous goods under the IMDG Code

The following indicative table is for information purposes only as every entity is arranged differently and may have varied roles and responsibilities within that entity.

Function	Specific training requirements	Numbers in this column refer to the list of related codes and publications in 1.3.1.7
1 Classify dangerous goods and identify proper shipping name	Classification requirements, in particular <ul style="list-style-type: none"> – the structure of the description of substances – the classes of dangerous goods and the principles of their classification – the nature of the dangerous substances and articles transported (their physical, chemical and toxicological properties) – the procedure for classifying solutions and mixtures – identification by proper shipping name – use of Dangerous Goods List 	.1, .4, .5 and .12
2 Pack dangerous goods	Classes Packaging requirements <ul style="list-style-type: none"> – type of packages (IBC, large packaging, tank container and bulk container) – UN marking for approved packagings – segregation requirements – limited quantities and excepted quantities Marking and labelling First aid measures Emergency response procedures Safe handling procedures	.1 and .4
3 Mark, label or placard dangerous goods	Classes Marking, labelling and placarding requirements <ul style="list-style-type: none"> – primary and subsidiary hazard labels – marine pollutants – limited quantities and excepted quantities 	.1

Function	Specific training requirements	Numbers in this column refer to the list of related codes and publications in 1.3.1.7
4 Load/unload cargo transport units	Documentation Classes Marking, labelling and placarding Stowage requirements, where applicable Segregation requirements Cargo securing requirements (as contained in the CTU Code) Emergency response procedures First aid measures CSC requirements Safe handling procedures	.1, .6, .7 and .8
5 Prepare transport documents for dangerous goods	Documentation requirements <ul style="list-style-type: none"> – transport document – container/vehicle packing certificate – competent authorities' approval – waste transport documentation – special documentation, where appropriate 	.1
6 Offer dangerous goods for transport	Thorough knowledge of the IMDG Code Local requirements at loading and discharge ports <ul style="list-style-type: none"> – port byelaws – national transport regulations 	.1 to .10 and .12
7 Accept dangerous goods for transport	Thorough knowledge of the IMDG Code Local requirements at loading, transiting and discharge ports <ul style="list-style-type: none"> – port byelaws, in particular quantity limitations – national transport regulations 	.1 to .12
8 Handle dangerous goods in transport	Classes and their hazards Marking, labelling and placarding Emergency response procedures First aid measures Safe handling procedures such as <ul style="list-style-type: none"> – use of equipment – appropriate tools – safe working loads CSC requirements, local requirements at loading, transit and discharge ports Port byelaws, in particular, quantity limitation National transport regulations	.1, .2, .3, .6, .7, .8 and .10
9 Prepare dangerous goods loading/stowage plans	Documentation Classes Stowage requirements Segregation requirements Document of compliance Relevant IMDG Code parts, local requirements at loading, transit and discharge ports Port byelaws, in particular, quantity limitations	.1, .10, .11 and .12
10 Load/unload dangerous goods into/from ships	Classes and their hazards Marking, labelling and placarding Emergency response procedures First aid measures Safe handling procedures such as <ul style="list-style-type: none"> – use of equipment – appropriate tools – safe working loads Cargo securing requirements CSC requirements, local requirements at loading, transit and discharge ports Port byelaws, in particular, quantity limitation National transport regulations	.1, .2, .3, .7, .9, .10 and .12

Function	Specific training requirements	Numbers in this column refer to the list of related codes and publications in 1.3.1.7
11 Carry dangerous goods	Documentation Classes Marking, labelling and placarding Stowage requirements, where applicable Segregation requirements Local requirements at loading, transit and discharge ports – port byelaws, in particular, quantity limitations – national transport regulations Cargo securing requirements (as contained in the CTU Code) Emergency response procedures First aid measures CSC requirements Safe handling procedures	.1, .2, .3, .6, .7, .10, .11 and .12
12 Enforce or survey or inspect for compliance with applicable rules and regulations	Knowledge of IMDG Code and relevant guidelines and safety procedures	.1 to .13
13 Are otherwise involved in the transport of dangerous goods, as determined by the competent authority	As required by the competent authority commensurate with the task assigned	-

1.3.1.6 Indicative table describing sections of the IMDG Code or other relevant instruments that may be appropriate to be considered in any training for the transport of dangerous goods

Function	IMDG Code part/section																			SOLAS chapter II-2/19	Port byelaws	National transport regulations	CSC	CTU Code	Emergency response procedures	First aid measures	Safe handling procedures												
	1	2	2.0	3	4	5	6	6*	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9																						
	1 Classify	X	X		X		X												X																				
2 Pack	X		X	X	X	X	X			X	X								X																X	X	X		
3 Mark, label, placard			X	X		X																																	
4 Load/unload cargo transport units	X		X	X	X	X		X		X	X													X	X												X	X	
5 Prepare transport documents	X		X	X		X																															X	X	
6 Offer for transport	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
7 Accept for transport	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
8 Handle in transport	X		X	X		X		X			X													X	X	X												X	
9 Prepare loading/stowage plans	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X		X															X	
10 Load/unload from ships	X	X		X		X					X				X								X		X	X	X	X	X	X	X	X	X	X	X	X	X		
11 Carry	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

* Only sections 6.1.2, 6.1.3, 6.5.2, 6.6.3, 6.7.2.20, 6.7.3.16 and 6.7.4.15 apply.

1.3.1.7 Related Codes and publications which may be appropriate for function-specific training

- .1 *International Maritime Dangerous Goods Code (IMDG Code)*, as amended
- .2 *The EmS Guide: Revised Emergency Response Procedures for Ships Carrying Dangerous Goods (EmS)*
- .3 *Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG)*, as amended
- .4 *United Nations Recommendations on the Transport of Dangerous Goods – Model Regulations*, as amended
- .5 *United Nations Recommendations on the Transport of Dangerous Goods – Manual of Tests and Criteria*, as amended
- .6 *IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units (CTU Code)*
- .7 *Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas*
- .8 *International Convention for Safe Containers, 1972 (CSC Convention)*, as amended
- .9 *Code of Safe Practice for Cargo Stowage and Securing (CSS Code)*, as amended
- △ .10 *Revised Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo transport units (MSC.1/Circ.1361)*
- .11 *International Convention for the Safety of Life at Sea, 1974 (SOLAS)*, as amended
- .12 *International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (MARPOL)*, as amended.
- △ .13 *Inspection programmes for cargo transport units carrying dangerous goods (MSC.1/Circ.1442, as amended by MSC.1/Circ.1521)*.

