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# **Guidelines on Reporting Hazmat in SafeSeaNet**

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## 1. Introduction

The objective of these Guidelines is to improve the quality and accuracy of dangerous and polluting goods (HAZMAT) reporting in SafeSeaNet (SSN) through harmonisation. It is a 'living' document which can be updated or upgraded whenever so considered necessary by the SSN group.

### 1.1. Background

The document has been drawn up following the 'HAZMAT reporting in SafeSeaNet' survey conducted by EMSA in cooperation with Member States. During the survey a number of problems were identified, among them:

- Low quality of reporting,
- Incorrect reporting,
- Misinterpretations,
- 'Mis-declarations'.

High Level Steering Group (HLSG) 9 agreed on setting up a HAZMAT Working Group in order to address these deficiencies. One of the measures identified by the HLSG to improve the data quality in SafeSeaNet was the drafting of Guidelines on Reporting HAZMAT Information in SSN.

### 1.2. Purpose

In order to overcome the problems identified above, the purpose of this document is to:

- Identify what has to be reported in accordance with the legal requirements
- Enhance awareness among stakeholders of why it is important to have accurate reporting
- Understand better how information should be reported
- Guide the reporting parties and the authorities in finding the correct information
- Support authorities by providing options for validating information received
- Provide a guide to the available training on HAZMAT
- Share the best practices in the area of reporting HAZMAT

### 1.3. Audience

The main stakeholders in reporting HAZMAT carried on board ships and therefore the intended audience of this document are:

- a) Industry stakeholders (manufacturers, shippers, freight forwarders, logistics companies) responsible for providing the HAZMAT information, including Material Safety Data Sheets and other legally required dangerous goods transport documents or dangerous goods manifests to the ship reporting parties,
- b) Ship reporting parties (masters, ship agents, and ship operators) responsible to ensure that the HAZMAT information received from the industry stakeholders is transmitted correctly and accurately to the NSW,
- c) Relevant MS authorities (SSN NCAs, single window, port, maritime, and security authorities) responsible for receiving and processing HAZMAT information transmitted by the reporting parties,

- d) Emergency services of the MS responsible for providing effective response to maritime incidents to minimise loss of life and damage to property and to prevent pollution, and
- e) EMSA services responsible for validating the quality of the data exchanged between MS through SSN.

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## 2. Legal background

### 2.1. International Maritime Organisation

The international Maritime Organisation (IMO) has developed various legal instruments related to dangerous and polluting goods differentiating between how the goods are carried (packaged and bulk) and by type of cargo (solid, liquid and liquefied gasses). The latter category is divided into oil, noxious liquid substances and liquefied gases. Regulations covering the carriage of dangerous cargoes and the ships that carry these cargoes are found in the International Convention for the Safety of Life at Sea (SOLAS, 1974), as amended, and the International Convention on Maritime Pollution (MARPOL 73/78), as amended. These conventions are supplemented by the following codes:

#### **International Maritime Dangerous Goods Code (IMDG Code)**

Compliance with the IMDG Code is mandatory for the carriage of packaged dangerous goods by sea by virtue of regulation VII/3 of SOLAS. In addition MARPOL Annex III Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form contains general requirements for the issuing of detailed standards on packing, marking, labelling, documentation, stowage, quantity limitations, exceptions and notifications. For the purpose of this Annex, “harmful substances” are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code) or which meet the criteria in the Appendix of Annex III.

#### **The International Maritime Solid Bulk Cargoes Code (IMSBC Code);**

Hazards associated with the shipment of solid bulk materials generally come under the following main categories:

- Structural damage due to improper distribution of the cargo, during and after loading;
- Loss or reduction of stability during the voyage, either due to a shift of cargo or to the cargo liquefying under the combined factors of vibration and motion of the vessel; and
- Chemical reaction such as spontaneous combustion, emission of toxic or explosive gases, corrosion or oxygen depletion.

The Code's three cargo groups are:

- a) Group A - cargoes which may liquefy
- b) Group B - cargoes with chemical hazards
- c) Group C - cargoes which are neither liable to liquefy nor possess chemical hazards. However, cargoes in this group can still be hazardous.

It should be noted that some bulk materials may fall into both Group A and Group B. Bulk materials of group B may be deemed to be hazardous by virtue of the fact they have been classified as a dangerous good under the IMDG Code or it has been determined that they may be Materials Hazardous in Bulk (MHB). It should not be assumed that materials deemed to be MHB pose less of a risk than those with a UN number.

## **The International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)**

Carriage of chemicals in bulk is covered by regulations in SOLAS Chapter VII - Carriage of dangerous goods and MARPOL Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk. Both Conventions require chemical tankers built after 1 July 1986 to comply with the International Bulk Chemical Code (IBC Code), which gives international standards for the safe transport by sea in bulk of liquid dangerous chemicals, by prescribing the design and construction standards of ships involved in such transport and the equipment they should carry so as to minimize the risks to the ship, its crew and to the environment, having regard to the nature of the products carried.

The IBC Code lists chemicals and their hazards and gives both the ship type required to carry that product as well as the environmental hazard rating. The products may have one or more hazard properties which include flammability, toxicity, corrosiveness and reactivity.

MARPOL Annex II details the discharge criteria and measures for the control of pollution by noxious liquid substances carried in bulk. It includes the following four-category categorization system in respect of hazards to marine resources and human health if noxious and liquid substances are discharged into the marine environment following tank cleaning or de-ballasting operations:

- a) Category X: Noxious Liquid Substances which are deemed to present a major hazard and are therefore prohibited from being discharged into the marine environment;
- b) Category Y: Noxious Liquid Substances which are deemed to present a hazard and therefore there is a limitation on the quality and quantity of the discharge into the marine environment;
- c) Category Z: Noxious Liquid Substances which are deemed to present a minor hazard and therefore there are less stringent restrictions on the quality and quantity of the discharge into the marine environment; and
- d) Other Substances (OS): substances which have been evaluated and found to fall outside Category X, Y or Z because they are considered to present no hazards when discharged into the sea.

## **The International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code)**

The purposes of the code is to provide an international standard for the safe transport by sea in bulk of liquefied gases and certain other substances, by prescribing the design and construction standards of ships involved in such transport and the operational procedures and equipment they should carry so as to minimize the risk to the ship, its crew and to the environment, having regard to the nature of the products involved.

### **MARPOL Annex I**

This Annex regulates the prevention of pollution by oil from operational measures as well as from accidental discharges. The oils covered by this Annex include all types of oils ranging from crude oil to oil refuse and refined products (other than petrochemicals which are subject to the provisions of MARPOL Annex II). Appendix I to the Annex includes a non-comprehensive list of oils.

## 2.2. EU Legal Acts

The main Union legal act which regulates the reporting of dangerous and polluting goods (HAZMAT) carried on board ships is Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC, as amended (VTMIS Directive).

Directive 2010/65/EU of the European Parliament and of the Council of 20 October 2010 on reporting formalities for ships arriving in and/or departing from ports of the Member States and repealing Directive 2002/6/EC (RFD) regulates the electronic transmission of reporting formalities covered by the Annex to the Directive. Two of these formalities concern the notification of dangerous or polluting goods carried on board ships: the notification required by Article 13 of the VTMIS Directive and FAL form 7 - Dangerous Goods Manifest – which forms part of the IMO Convention on the Facilitation of Maritime Traffic 1965 (FAL).

The relevant provisions within these legal acts are explained hereunder:

### What to report

- a) Art. 3 defines dangerous and polluting goods by including references to the relevant IMO legal instruments: MARPOL Annex I, II, III and Codes BC (replaced by the IMSBC), IMDG, IBC, IGC and INF. This article also clarifies that these international instruments refer to 'their up-to-date version'. Therefore, even if the references in the definitions of dangerous and polluting goods are incorrect the amended version of the legal instruments has to be used for preparing HAZMAT notifications.
- b) Art. 12 specifies the information that has to be delivered to the master or operator of a ship before dangerous or polluting goods are taken on board.
- c) Annex I(3) identifies the information that has to be included in a HAZMAT notification and which is referred to in Annex 2 of these Guidelines.
- d) RFD Annex: Two formalities covered by the Directive concern the notification of dangerous or polluting goods carried on board ships: the notification required by Article 13 of the VTMIS Directive and FAL form 7 - Dangerous Goods Manifest. The first notification is mandatory because it is covered by a legal act of the Union. However, FAL Form 7 is only required if it forms part of the national legislation of the Member State. Therefore, the reporting of data elements which are required by FAL Form 7 but which do not form part of the VTMIS Directive is optional, as indicated in Annex 2 of these Guidelines.

### When to report

In terms of VTMIS Directive – Article 13 the operator, agent or master of a ship, irrespective of its size, carrying dangerous or polluting goods and:

- leaving a port of a Member State shall, at the latest at the moment of departure, notify the information indicated in Annex I(3).
- coming from a port located outside the Community and bound for a port of a Member State or an anchorage located in a Member State's territorial waters shall, at the latest upon departure



from the loading port or as soon as the port of destination or the location of the anchorage is known, if this information is unavailable at the moment of departure, notify the information indicated in Annex I(3).

### **Who should report**

VTMIS Directive – Article 13 establishes that all ships carrying dangerous or polluting goods, irrespective of their size, are obliged to comply with the notification requirements. It is the responsibility of the operator, agent or master of a ship to submit HAZMAT notifications to the competent authorities designated by Member States. The RFD also adds that the HAZMAT notification can be transmitted by ‘any other person duly authorised by the operator of the ship’.

The national SafeSeaNet competent authorities (SSN NCA) are then responsible to make the relevant information available to other Member States through the SafeSeaNet system.

This notwithstanding, Article 15 of the VTMIS Directive allows Member States to exempt individual vessels providing scheduled services, with voyages of a scheduled duration of up to 12 hours, from transmitting HAZMAT information for every voyage. Exemptions are allowed where the ship companies concerned have, to the satisfaction of the Member States, introduced internal procedures to ensure that HAZMAT information can be sent electronically to the competent authority upon request 24 hours a day and without delay. Member States have to ensure that any deviations from the estimated time of arrival at the port of destination or pilot station of three hours or more are notified to the port of arrival or to the competent authority. Member States are obliged to periodically check that the conditions for granting the exemption are being met. Where at least one of these conditions is no longer being met, Member States shall immediately withdraw the benefit of the exemption from the company concerned.

When an international scheduled service is operated between two or more States, of which at least one is a Member State, any of the Member States involved may request the other Member States to grant an exemption for that service. All Member States involved, including the coastal States concerned, shall collaborate in granting an exemption to the service concerned in accordance with the conditions set out in Article 15.

### **Where to report**

As stated above, VTMIS Directive – Article 13(1 and 2) provides that the ship data providers have to submit the notification to the competent authorities designated by Member States. Article 13 (3) allows Member States to authorise the operator, agent or master of a ship to notify the HAZMAT information to the port authority of the port of departure or destination, as appropriate.

Article 2 and 5 of the RFD establish that HAZMAT information required in accordance with the VTMIS Directive and FAL Form 7 should be reported to a National Single Window (NSW) and made available to various competent authorities.

In addition to the above, Articles 5 and 6 of the RFD require Member States to make this information available in their national SSN system to allow for its exchange with other Member States. Initially, the NCA will transmit only limited information to the central SSN system but which allows the central SSN system to identify which ships are carrying HAZMAT and which Member States holds the

detailed information. The HAZMAT details are stored at national level, and is only reported by the Member State holding the information if requested by another Member State. Moreover, in accordance with Article 6.2 Member States shall ensure that the information received through the SafeSeaNet system is accessible, upon request, to the relevant national authorities.

### **How to report**

VTMIS Directive – Article 13 specifies that to streamline and accelerate the transmission and utilisation of HAZMAT information, whenever practicable, it should be transmitted electronically to the competent authority or port authority concerned. Likewise, exchanges of information between the competent authorities of the Member States should take place electronically.

RFD Article 5 states that Member States shall accept the fulfilment of reporting formalities, which also include HAZMAT notifications, in electronic format and their transmission via a single window. The RFD defines 'electronic transmission of data' as 'the process of transmitting information that has been encoded digitally, using a revisable structured format which can be used directly for storage and processing by computers'. Therefore, following the implementation date of the single window, on 1<sup>st</sup> June 2015, the transmission of paper or pdf HAZMAT notifications will not be possible.

### **Data Storage and Availability**

The Interface and Functionalities Control Document (IFCD), which is drawn-up in accordance with the VTMIS Directive, establishes that HAZMAT data shall:

- a) be directly available in the SafeSeaNet system for a minimum of 2 months from the departure of the ship, and
- b) be archived for at least 5 years.

Moreover, the availability of the SafeSeaNet systems shall be maintained at a minimum of 99% over a period of one year, with the maximum permissible period of interruption being 12 hours..

### 3. Benefits of accurate Hazmat reporting

The need for accurate reporting and sharing of information on dangerous and polluting goods carried on-board ships has been recognised for long number of years. In its communication of 24 February 1993 on a common policy on safe seas, the Commission indicated that one way of enhancing safety at sea was by introducing a mandatory information system to give Member States rapid access to all important information relating to the movements of ships carrying dangerous or polluting materials and to the precise nature of their cargo.

Subsequently, Council Directive 93/75/EEC of 13 September 1993 concerning minimum requirements for vessels bound for or leaving Community ports and carrying dangerous or polluting goods was adopted to introduce a system whereby the competent authorities receive information regarding ships bound for or leaving a Community port and carrying dangerous or polluting goods. In response to the continuous increase in the volume of dangerous and polluting goods carried by ships and major maritime casualties involving such ships, the provisions of Directive 93/75/EC were significantly reinforced and extended through Directive 2002/59/EC on the establishment of a Community vessel traffic monitoring and information system which should help to prevent accidents and pollution at sea and to minimise their impact on the marine and coastal environment, the economy and the health of local communities.

In recent years transportation of HAZMAT goods has continued to grow. Furthermore, recent occurrence of maritime casualties has raised questions regarding the reliability of the HAZMAT information being provided on board ships involved in such casualties. It has become ever more important that all stakeholders understand the need for accurately reporting HAZMAT information.

Accurate knowledge of dangerous or polluting goods being carried on board ships is essential to the preparation and effectiveness of operations to tackle pollution or the risk of pollution at sea. Therefore, how to ascertain that HAZMAT information is available and accurate is a major concern. The need for accurate reporting is vital to minimise safety hazards and allow for quick and effective response to maritime incidents – it saves lives and property, and prevents pollution.

In summary the correct and accurate reporting of HAZMAT information facilitates the:

- i. identification of cargoes and their characteristics,
- ii. appropriate handling, segregation and carriage,
- iii. response to accidents if location of Hazmat is easily identified,
- iv. accommodation of ships in need of assistance at places of refuge,
- v. risk assessments in ports and waters under the jurisdiction of a Member State,
- vi. collection of reliable statistics on accidents involving ships carrying dangerous and polluting goods.

## 4. Content of Hazmat Notifications to SafeSeaNet

### 4.1. Definition of dangerous and polluting goods

According to Directive 2002/59/EC, as amended **Dangerous Goods** means:

- goods classified in the IMDG Code,
- dangerous liquid substances listed in Chapter 17 of the IBC Code,
- liquefied gases listed in Chapter 19 of the IGC Code,
- solids referred to in IMSBC Code Appendix 4 – materials with Group (B) or (A+B)
- Also included are goods for the carriage of which appropriate preconditions have been laid down in accordance with paragraph 1.1.6 of the IBC Code or paragraph 1.1.6 of the IGC Code;

while **Polluting goods** means:

- oils as defined in Annex I to the MARPOL Convention,
- noxious liquid substances as defined in Annex II to the MARPOL Convention, and
- harmful substances as defined in Annex III to the MARPOL Convention.

### 4.2. HAZMAT data elements

The data elements which form part of HAZMAT notifications are those identified in Article 13 and Annex I (3) of the VTMS Directive and FAL Form 7 in accordance with the RFD. These data elements are listed in Annex 2 of these Guidelines.

### 4.3. Relevant IMO Codes or Conventions

It is important that reporting parties know exactly how HAZMAT cargo is carried on-board ships and from where to obtain the correct information. The HAZMAT survey carried out by EMSA revealed that in some cases reporting parties are mainly conversant with the IMDG Code but not with the other legal instruments. In view of this certain bulk cargoes are reported using references from the IMDG code. On the other hand, bulk liquids may be carried in special bulk containers. This is considered to be packaged cargo and therefore the IMDG is applicable. Figure 1 provides guidance on which code or convention to use by starting from the mode of carriage, that is, how cargo is being carried (bulk or packaged) and by type of cargo (liquid, gas or solid). This explanation should lead to the use of the correct code or convention.

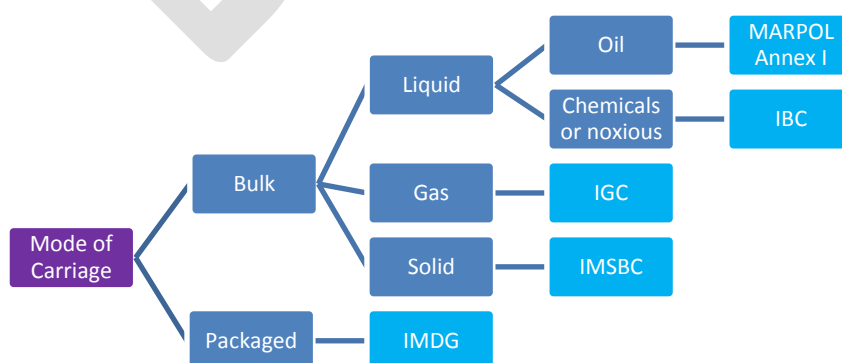


Figure 1 – HAZMAT Decision Tree

#### 4.4. Data elements applicable for reporting in SafeSeaNet

Annex 2 clarifies which data elements are applicable for SafeSeaNet reporting (information exchange). The table compares the data elements required in the technical implementation of SafeSeaNet (XML Reference Guide) with the Directive requirements and data elements of IMO FAL form 7, which is the commonest form used by the shipping industry. The table below indicates why the data elements are required and where to find further guidance.

What and Why to report?	Where to find the relevant guidance
DG Classification – <b>Provides information to which IMO Code(s) or Convention the HAZMAT product relates to and identifies the nature of the cargo on board.</b>	<b>Annex 1 and Figure 1</b>
Textual reference – <b>Provides the name of the product as found in one of the legal instruments, but may also be different when the product is not yet listed in one of the legal instruments.. It may also be supplemented with the hazardous materials description.</b>	<b>Annex 3</b>
UN Number - <b>allows the identification of the cargo.</b>	<b>Annex 3</b>
IMO Hazard Classes - <b>essential for the proper identification of the characteristics and properties of the substances, materials and articles.</b>	<b>Annex 3</b>
Quantity – <b>essential for the proper assessment of the risk posed by certain goods.</b>	<b>paragraphs 5.1</b>
Location on board – <b>essential to identify the location of dangerous and polluting goods which are onboard a ship. This information is vital for providing the necessary assistance during rescue or salvage operations.</b>	<b>paragraph 5.2</b>
Identification of the transport units - <b>allows a quick identification of a Unit containing dangerous or polluting goods</b>	<b>paragraph 5.3</b>
The class of the ship as defined by the INF Code.	<b>n.a.</b>

**Table 1 - Data Elements and references in these guidelines**

#### **4.5. Identifying the applicable IMO Code or Convention**

Some of the data elements which have to be reported by the VTMS Directive and FAL Form 7 may be obtained from the relevant code or convention. Annex 3 provides guidance from where the applicable data elements may be obtained by referring to the applicable Code or Convention. This part shall be read and understood in combination with the previous sections.

However, it is important to note that in some cases the information provided in the legal instruments is only indicative. It is the obligation of the industry stakeholders to assess and define the correct characteristics of a product and indicate these in the dangerous goods transport documents. Therefore, the content of this Annex is to be used only as a reference and reporting parties should always accurately report what is stated in the transport documents. For example, Annex 3 indicates that a product in packaged form is considered as a marine pollutant when the column “MP” in the IMDG dangerous goods list shows the letter “P”. The IMDG Code identifies a substance, material or article as a Marine Pollutant with the criteria developed by the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), as amended. This criteria is listed in the Appendix to Annex III of MARPOL. Therefore, the attribute “P” has to be assigned whenever the “aquatic pollutant” criteria of GHS is met and this is evaluated by the shipper and is declared in the dangerous goods transport document.

## 5. Guidance on reporting specific data elements

To the contrary to the data elements identified in paragraph 4.4, HAZMAT notifications include data which is variable and should reflect the actual condition and specifications of HAZMAT. This chapter provides harmonised guidance on how these data elements should be reported by the ship data providers.

### 5.1. Quantity

This is either the Gross weight of the dangerous goods including respectively their packing, but without the equipment used by the carrier for their transport or Net weight of the dangerous goods excluding respectively their packing, and without the equipment used by the carrier for their transport. The quantity unit is expressed as a decimal figure and is an indication of the unit of measurement in which the weight (mass) or volume is expressed by using one of the following possible values:

- KGM (kilogram)
- TNE (Metric tonne)
- M<sup>3</sup> (Cubic meter)

### 5.2. Location on board

The XML Reference Guide includes recommendations for identifying the stowage position, but it was found that they do not allow for proper identification of the cargo onboard ships. The Guidelines recall these recommendations and introduces new proposals for reporting the location on board specific ships, for example, in the case of RO/RO ships. The following formats for the location on board are recommended depending on the type of a vessel.

Type of the ship	Location on board reporting
Container vessels	As per ISO standard 9711-1: Bay/Row/Tier in format: BBBRRTT. If Bay number is less than 3 characters it must be filled with leading zeros, e.g. "0340210".
Feeder vessels <sup>1</sup>	As per ISO standard: Hatch/Tier/Row in format: HHHTTRR. If hatch number is less than 3 characters it must be filled with leading zeroes.
Ro-Ro vessels <sup>2</sup>	DD/LL/DDD/LL - DECK/LANE/DISTANCE/LEVEL <ul style="list-style-type: none"><li>• all 4 parameters should be numerical</li><li>• DECK number: counted from bottom to top</li></ul>

<sup>1</sup> DE: A feeder vessel is one of the other types of vessels and therefore there is no need to be considered separately.

<sup>2</sup> BE: On Ro-Ro vessels the surface taken by cargo units, mainly the length occupied in the lanes, varies. Some Ro-Ro vessels number the frames on the sides of the cargo spaces and the position on board is indicated by Deck/Row/from frame X1 to Nr of frame X2. On the longitudinal axis, position from frame X1 to frame X2, is unmistakable.

DE: For ro-ro ships it might be appropriate to require 3 parameters only: deck – lane – position from forward. The proposed 4th parameter (level in the deck) would render the notification scheme rather complex; it should be considered whether this is really needed.

Type of the ship	Location on board reporting
	<ul style="list-style-type: none"> <li>• LANE number: counted from port to starboard</li> <li>• DISTANCE- in meters: counted from fore to aft distance in meters from the bow to the centre of gravity of dangerous cargo(unit)</li> <li>• LEVEL number: counted from bottom to top (on a single deck it's possible to stow in multiple levels)</li> </ul> <p>See Examples in Annex 4</p>
General cargo vessels <sup>1</sup>  <Guidance is required by the HWG weather the reference should be made to the cell or hold number>	<p>3 to 9 characters, format:</p> <ul style="list-style-type: none"> <li>▪ firstly 3 characters (mandatory) for the hold number (01, 02, etc. with a further indication: S (starboard), P (Portside) or C (Centre));</li> <li>▪ secondly 3 characters (optional) for the indication of the deck level: <ul style="list-style-type: none"> <li>○ WED = weather deck</li> <li>○ TD9 = tween deck 9</li> <li>○ ...</li> <li>○ TD1 = tween deck 1</li> <li>○ LOH = lower hold</li> </ul> </li> <li>▪ thirdly 3 characters (optional) for a further indication within a hold, e.g. hatch covers.</li> </ul>
Tanker vessel	<p>3 characters (mandatory) for the tank number (01, 02, etc. with a further indication: S (starboard), P (Portside) or C (Centre)).Statements: 'all cargo tanks' or 'all tanks' should be avoided.</p>
Bulk Carriers <sup>1</sup>	<p>2 characters to report the hold number (01, 02, etc)..</p>

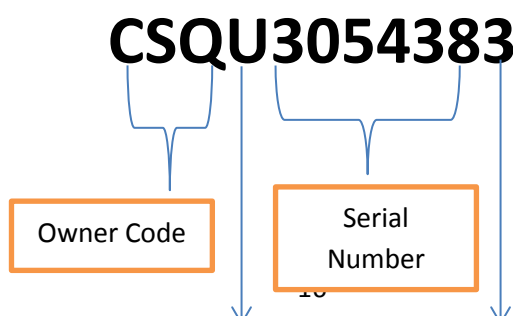
Table 2 – Location on board reporting per type of ship

Note 1: The amendments to this table reflect proposed changes to the XML Reference Guide v3.0

## 5.3. Identification of cargo transport units containing HAZMAT

### 5.3.1 Identification of Containers

The identification number of containers shall be the identification code as defined in **ISO 6346** (limited to goods under IMDG code). This international standard is maintained by the BIC (International Container Bureau) and covers the serial number, owner, country code, and size of any given shipping container.





Category  
identifier

Check digit

When reporting containers on trailers or chassis, only the container number should be provided.

### **5.3.2 Identification of vehicles carrying HAZMAT goods**

For the Identification number of cargo transport units in case of road vehicles (except when they carry containers) their registration/plate numbers shall be used.

## **6. Specific operational matters on reporting HAZMAT**

### **6.1. Reporting HAZMAT not listed in a Code or a Convention**

According to the VTMS Directive requirements, HAZMAT cargoes which are not listed in an IMO Code or Convention shall also be reported.

In such cases the proper classification and textual reference (name) shall be used in the notification to SafeSeaNet. Additional relevant information should also be provided, for example, the quantity carried. The 'Additional Information' field shall be used to indicate that the particular product/cargo is not listed in a Code but is being carried on the basis of agreed conditions between the flag state of the ship and the port states where the cargo is loaded and discharged.

Regardless of the notification to SafeSeaNet Member States shall follow their obligations and notify IMO of such cases and the conditions of carriage. This shall ensure that the Code and Conventions are kept updated in due time.

#### **6.1.1. IMSBC - tripartite agreements**

Section 1.2.1 of the IMSBC Code recognises that the schedules in appendix 1 of the Code are not exhaustive and that the properties attributed to the cargoes are only given for guidance, hence the need for the shipper to provide valid information on the cargo. Where a cargo is not listed or presents properties that are not addressed by the available schedules then section 1.3.1 requires that Shippers provide the competent authority of the Port of Loading with the characteristics and properties of the cargo to enable the authority to assess the acceptability of the cargo for safe shipment, handling and carriage. In such cases:

- a) where the bulk cargo in question has been assessed to present hazards as defined by group A or B cargo (as defined by section 1.7 of the IMSBC Code) then section 1.3.1.1 requires the competent authority in the port of loading to seek further advice from the competent authorities at the port of unloading and of the Flag State of the ship. The three competent authorities will need to set the preliminary suitable conditions for carriage of this cargo through a tripartite agreement.
- b) Where the bulk cargo in question presents no specific hazards then section 1.3.1.2 requires the competent authority of the port of loading to authorise carriage of the cargo and to inform the two other competent authorities (i.e. Port of Unloading and the Flag State).

In either case, section 1.3.2 of the IMSBC Code requires the Competent Authority of the Port of Loading to provide the Master of the vessel with a certificate stating the characteristics and the required conditions for the carriage of the bulk cargo in question. The Master should not load the cargo if such a certificate is not provided.

#### **6.1.2. IBC - tripartite agreements**

Section 1.1.6 of the IBC Code requires that a product proposed for carriage in bulk but not listed in chapters 17 or 18 of the Code has to be evaluated by the involved authorities with regard to its hazard and assigned to a pollution category as appropriate. Reference is made to regulation 6.3 of MARPOL Annex II and to Chapter 21 of the IBC Code. The pollution classification and the assignment

of appropriate carriage requirements shall be provided to the master of the vessel before such product is loaded.

## **6.2. Reporting of 'empty unclean' or 'empty not gas free' tanks and tank containers**

Containers or tanks which contained HAZMAT products and have been emptied but still contain residues and are unclean, not gas free or inert shall be reported using the applicable data elements and with the quantity established as 1Kg.

## **6.3. Reporting of the N.O.S. (Not Otherwise Specified)**

The proper shipping name of a packaged product is given in column 2 of the dangerous goods list of IMDG Code. For all generic or "not otherwise specified" (N.O.S.) entries, the proper shipping name shall be supplemented with the recognized chemical name of the hazardous and/or marine pollutant constituents, as required by 3.1.2.8 and 3.1.2.9 of the IMDG Code. The recognized chemical name is declared by the shipper in the dangerous goods transport document.

## **6.4. Oils and Oil blends reporting**

Blends of petroleum oil and bio fuels should be notified as follows:

- a) Bio fuel blends containing 75% or more of petroleum oil should be reported as an oil product under MARPOL Annex I.
- b) Bio fuel blends containing less than 75% petroleum oil should be reported as a product under MARPOL Annex II and the IBC Code, taking into consideration the guidelines provided in MEPC.1/Circ. 761 with respect to the assignment of the pollution category.

## **6.5. Fumigated cargoes reporting**

Fumigated cargo transport units are covered by the IMDG Code and should be reported as UN 3359 FUMIGATED CARGO TRANSPORT UNIT, class 9.

The fumigation of cargo holds containing solid bulk cargoes is addressed in section 3.6 of the IMSBC Code with a reference to MSC.1/Circ. 1264. According to section 3.3.2.16 of this circular fumigation should be notified to the next port of call, identifying the fumigated cargo holds, the date when the fumigation took place and the name of the fumigant used.

The fumigation of a cargo hold does not have any effect on the grouping of the solid bulk cargo. Therefore, materials in groups A+B and B shall be reported. On the other hand, group A cargoes carried in a fumigated cargo hold remains a group A cargo and is not subject to the reporting requirements of the VTMIS directive<sup>3</sup>.

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<sup>3</sup> Clarification: the notification of fumigated group A cargoes are required in accordance with the notification requirements in MSC.1/Circ.1264 (which can be considered as a notification in accordance with national legislation - Part C of the RFD).

## 6.6. Bunkers reporting

*<to be based on clarification from the Commission >*

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## 7. Validation of HAZMAT notifications

Prevention of incidents and rapid and effective response is very often dependent on having high level of data quality between the Member States exchanging the information in the European SafeSeaNet.

### 7.1. Responsibility for correct reporting of HAZMAT

Preamble 18 of Directive 2002/59/EC recognises that “The effectiveness of this Directive depends greatly on the Member States enforcing its implementation strictly. To this end, Member States must regularly carry out appropriate inspections or any other action required to ensure that the communication links established to meet the requirements of this Directive are operating satisfactorily. A system of sanctions should also be introduced to ensure that the parties concerned comply with the reporting and equipment carrying requirements laid down by this Directive.”

While article 1 of the Directive states that: “Member States shall monitor and take all necessary and appropriate measures to ensure that the masters, operators or agents of ships, as well as shippers or owners of dangerous or polluting goods carried on board such ships, comply with the requirements under this Directive.”

Article 25.2 states that “Member States shall lay down a system of sanctions for the breach of national provisions adopted pursuant to this Directive and shall take all the measures necessary to ensure that those sanctions are applied. The sanctions thus provided shall be effective, proportionate and dissuasive.”

Additionally the Directive refers in Annex III of the SafeSeaNet Interface and Functionality Control Document (IFCD) where the data quality requirements are set (sections 4.6 and 5.2). In terms of these provisions Member States should ensure that the automatic data quality rules agreed by the SSN group are applied prior to notifications being sent to the central SSN system. The XML Reference Guide includes data quality procedures standards to:

- Prevent mistaken data to enter into SSN. Before sending the SSN data to the central SSN system, the Member State’s SSN national applications will perform a complete set of checks based on specific predefined rules ensuring the data cohesion.
- During the checking process, the national SSN application will verify that the message corresponds to the agreed format. If no conflict is detected the message will be sent to the central SSN system, otherwise it will be rejected by giving a relevant warning to the message originator about the nature of the mistake.
- Additional checks at EU level by the Maritime Support Service at EMSA will ensure harmonized implementation.

XML Reference Guide recognises that the actors involved in the data quality chain are:

- SSN data originators (agents, masters or operators and Authorities)
- NCA
- Local competent authorities
- EMSA

National SSN systems should comply with the agreed technical set of rules. Although EMSA may verify the information received it will not modify any notification of the Member States but it will bring any identified failures in data quality to the attention of the Member State concerned.

The industry stakeholders and the ship data providers are responsible for the correctness of the data. The use of electronic systems could help in avoiding manual inputting errors and in facilitating the validation of data. Information has to be validated by the data providers even when it concerns static data downloaded from a HAZMAT database. They have to verify that the information conforms with the actual state and characteristics of the HAZMAT being carried on board the ship.

The competent authorities are required to take ‘appropriate measures’ and as far as possible to ensure the validity of data. It is generally recommended that a mismatch when verifying HAZMAT notifications should not lead to the refusal of the notification. However, it may give rise for further investigation by the competent authority and the subsequent penalizing of the reporting party as per national legislation.

## **7.2. Data Validation Methods**

The main validation methods include the following:

- Manual checking of what is reported against the relevant legal instruments
- Electronic checking using reference databases
- Built-in validation rules, for example, by using the quantity and type of ship data elements. For example warnings can prompt the reporting party to check his information if the IMDG code is used for HAZMAT cargoes in bulk. Likewise, the system may warn the user if packaged goods are being reported for a gas carrier.
- Onboard and ashore inspections

The validation that is carried out by the central SafeSeaNet system takes place when a PortPlus message is received. The central SafeSeaNet system controls if the message complies with the structure, format and business rules. If one control fails, the whole message is rejected. Acceptance and rejection are indicated in the receipt message, as well as details of rejected elements. As regards the content of the HAZMAT information in the PortPlus message, the central SafeSeaNet system rejects a notification if the MS has reported that a ship is carrying dangerous goods but one of the mandatory fields (e.g. DG Classification) is not provided or the content of the field is not in compliance with the XML Reference Guide (e.g. in the case of the DG Classification the correct values are only one of the following: “IMDG”, “IGC”, “IBC”, “MARPOL\_ANNEX1”, “IMSBC”). The central SafeSeaNet system does not check, for example, whether there is a mismatch between the proper shipping name and a UN number.

## **7.3. Where does the validation take place?**

The validation of the information provided may take place at various levels:

- Reporting party
- National single window authority
- Authority responsible for monitoring HAZMAT information
- SSN National Competent Authority

- EMSA MSS

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## **8. Reporting information on HAZMAT incidents**

### **8.1. Failure of reporting parties to comply with notification requirements**

Article 16 of the VTMS Directive provides that ships which have failed to comply with the notification and reporting requirements imposed by this Directive shall be considered to be ships posing a potential hazard to shipping or a threat to maritime safety, the safety of individuals or the environment. Therefore, coastal stations holding relevant information on such ships shall communicate it to the coastal stations concerned in the other Member States located along the planned route of the ship.

The same article also obliges Member States to ensure that the information communicated to them is transmitted to the relevant port authorities and/or any other authority designated by the Member State. Within the limits of their available staff capacity, Member States shall carry out any appropriate inspection or verification in their ports either on their own initiative or at the request of another Member State, without prejudice to any port State control obligation. They shall inform all Member States concerned of the results of the action they take.

### **8.2. Incident and Accidents involving HAZMAT on board ships**

Other HAZMAT related incidents and accidents which are identified by the Directive as posing a risk to the maritime safety, the marine environment or the health of persons are the following:

- any incident or accident affecting the safety of the ship,
- Loss of containers with HAZMAT,
- the discharge or threat of discharge of polluting products into the sea, and
- Results of inspections – e.g. incorrect segregation, wrong labelling.

### **8.3. Incident Reporting Guidelines**

The Incident Reporting Guidelines (<http://emsa.europa.eu/documents/technical-documentation.html>) describe how incidents covered under section 8.1 and 8.2 should be reported and exchanged between Member States through the SafeSeaNet systems. For example, when the agent, Master or operator of a ship does not provide the HAZMAT notification to the designated port (departure or destination) an Incident Report should be distributed at least to the next port of call using the form in Appendix 3 of the Guidelines.



## 9. Building HAZMAT expertise

The successful implementation of legal instruments as regards the reporting of dangerous and polluting goods are greatly dependent on the appreciation by all persons concerned of the risks involved and on a detailed understanding of the legislation. This can only be achieved by properly planned training programmes for all persons concerned with reporting HAZMAT.

Personnel engaged in reporting or handling HAZMAT information should be trained in identifying the appropriate information to be reported as highlighted in these Guidelines and as commensurate with their responsibilities.

All stakeholders mentioned in section 1.3 should receive general awareness and familiarization training in order to be familiar with what needs to be reported and from where to obtain the necessary information. Such training may include a description of the relevant legal provisions, the purpose of reporting, definition of HAZMAT data elements and methodologies that may be employed for validating data. It is also important to include in such training awareness on the consequences for incorrect reporting. Incorrect data may lead to incidents – with loss of property and lives and marine pollution – if HAZMAT is not properly stowed and segregated or it is not accurately identified during emergency response operations.

This knowledge should be regularly refreshed to maintain the relevant level of expertise and in order to reflect the changes in the applicable legal background.

## 10. Use of HAZMAT Databases

Some of the data elements which have to be reported in accordance with the VTMS Directive and FAL Form 7 may be obtained from HAZMAT databases. These databases may also be used to automatically fill in data elements required in notifications. However, it is important to note that in some cases the information provided in the legal instruments – and which is used to populate a database - is only indicative. Therefore, it is the obligation of the ship reporting parties to verify the information with the dangerous goods transport documents which they receive from the industry stakeholders. Any mismatches that result from cross-checking the information in the relative code or database and the declaration of the industry stakeholders should be brought to the attention of the latter for verification. Whenever this is not possible the ship reporting parties should report what is stated in the dangerous goods transport documents. Some examples where this caution needs to be adopted are the following:

- a) The textual reference included in a database provides the proper shipping name according to column 2 of the IMDG Code dangerous goods list. For all generic or “not otherwise specified” entries, the proper shipping name shall be supplemented with the recognized chemical name of the hazardous and/or marine pollutant constituents, as required by 3.1.2.8 and 3.1.2.9 of the IMDG Code. The recognized chemical name is declared by the shipper in the dangerous goods transport document.
- b) For certain entries (UN numbers), a database does not provide a unique and unambiguous packing group. In such case the packing group as declared by the shipper has to be notified.
- c) Whenever a database provides a flashpoint, this is valid for the pure substance only. In case of mixtures and preparations, the exact flashpoint as declared by the shipper has to be used, even when different from the flashpoint provided by the database.
- d) The database provides “marine pollutant” information for pure substances which are listed by name in the IMDG Code. Any substance transported under a generic or “not otherwise specified” entry and which meets the classification criteria of 2.9.3 IMDG Code, is a marine pollutant and as has to be notified as such, even if this information is not provided by the data base.
- e) The database provides EmS table codes as shown in column 15 of the IMDG Code dangerous goods list. However, in 3.2.1 IMDG Code it is explained that for dangerous goods transported under n.o.s. entries or other generic entries, the most relevant emergency response procedures vary with the properties of the hazardous constituents. As a consequence, shippers may have to declare different EmS codes from those indicated, if to their knowledge such codes are more appropriate. In such cases, the EmS code declared by the shipper shall be used, even if different from the EmS code provided by the data base.

## Annex 1 - Up-to date versions of the codes and conventions

	Most-up –to date versions of the relevant codes and conventions referred to in the Directive							
Type of goods	Dangerous				Polluting			
Convention	SOLAS				MARPOL			
	Annex I				Annex II		Annex III	
Code	IMDG	IBC	IGC	IMSBC Code (replacing BC code)	-	-	-	
Description	Harmful substances in packaged form	Chemicals in bulk	Liquefied gases	Hazardous Solid Bulk Cargoes	Oils	Noxious liquid substances	Harmful substances in packaged form	
Details	Chapter 3.2	Chapter 17 Chapter 18 (cat.Z only)	Chapter 19	Appendix 4 – materials with Group (B) or (A+B)	Appendix 1	Categorization of the noxious liquid substances carried in bulk (IBC)	Categorization of the Harmful substances carried in packaged form (IMDG)	
Additional info (cargoes not listed in the codes)	Goods not listed by name have to be classified under an appropriate n.o.s. entry	Goods for the carriage of which appropriate preconditions have been laid down in accordance with paragraph 1.1.6 of the IBC Code	Goods for the carriage of which appropriate preconditions have been laid down in accordance with paragraph 1.1.6 of the IGC Code	Goods for the carriage of which appropriate preconditions have been laid down in accordance with paragraph 1.3.1.1 of the IMSBC Code				

## Annex 2 – Data elements applicable for reporting in SafeSeaNet

Data Elements SafeSeaNet XML Ref. Guide v3.00			Data Elements FAL form 7	Directive requirements Annex 1 3.b
Specific Elements	Definition	Application		
DG classification	Attribute contains the information in which IMO Code(s) DG must be declared. Values: "IMDG", "IGC", "IBC", "MARPOL_ANNEX1", "IMSBC"	<b>Mandatory</b>	No	Yes
Textual reference	This is the proper shipping name, completed with the technical name where appropriate, for goods under IMDG Code, or the product name for goods under IBC Code and IGC Code, or the bulk cargo shipping name for goods under IMSBC Code, or the name of oil for goods under Annex I to the MARPOL Convention.	<b>Mandatory</b>	Proper Shipping Name	<i>The correct technical names of the dangerous or polluting goods</i>
IMO hazard class	IMO Hazard class (IMDG-IBC-IGC-IMSBC codes) of DPG.	<b>Mandatory if IMDG and IGC<sup>4</sup></b>	Class	<i>the IMO hazard classes in accordance with the IMDG, IBC and IGC Codes</i>
UN number	UN number of DPG.	<b>Mandatory if IMDG and IGC<sup>5</sup></b>	UN Number	<i>the United Nations (UN) numbers where they exist</i>
Packing group	Code as appropriate and as defined in IMDG: "I", "II", "III" and "NONE"	<b>Optional</b>	Packing group	No
Subsidiary risks	Any risks in addition to the class to which dangerous goods are assigned; and which is determined by a requirement to have a subsidiary risk.	<b>Optional</b>	Subsidiary risks	No

<sup>4</sup> The hazard class is not provided in the IGC Code

<sup>5</sup> The UN Numbers are provided in IGC for information only

Data Elements SafeSeaNet XML Ref. Guide v3.00			Data Elements FAL form 7	Directive requirements Annex 1 3.b
Specific Elements	Definition	Application		
Flashpoint	The temperature in degrees Celsius at which a liquid will give off enough flammable vapour to be ignited. According IMDG Code DG Class 3	<b>Optional</b>	Flashpoint	<i>No</i>
MARPOL code	The possible values are those defined in MARPOL Annex II (X, Y, Z, OS) and MARPOL Annex III (P)	<b>Optional</b>	Marine Pollutant	<i>No</i>
EmS Number	Emergency response procedures for ships carrying dangerous goods number.	<b>Optional</b>	EmS	<i>No</i>
Package Type	This is a description of the outer package of the cargo item. Possible values: two-letter alphabetic code of annex VI of UNECE R21. EDIFACT codes (7065)	<b>Optional</b>	Number and kind of packages	<i>No</i>
Quantity	Gross weight of the dangerous goods including respectively their packing, but without the equipment used by the carrier for their transport or Net weight of the dangerous goods excluding respectively their packing, and without the equipment used by the carrier for their transport. Both expressed as a decimal figure.	<b>Mandatory</b> <b>e.g. GrossQuantity</b>	Mass (kg) Gross/Net	<i>the quantities of such goods [dangerous goods]</i>
Unit Of Measurement	Indication of the unit of measurement in which the weight (mass) or volume is expressed. Possible values are: KGM (kilogram), TNE (Metric tonne) or M <sup>3</sup> (Cubic meter)	<b>Mandatory</b> <b>e.g. Gross Quantity</b> <b>UnitOfMeasurementGross</b>	Mass (kg)	

Data Elements SafeSeaNet XML Ref. Guide v3.00			Data Elements FAL form 7	Directive requirements Annex 1 3.b
Specific Elements	Definition	Application		
Location		<b>Mandatory LocationOnBoard</b>	Stowage position on board	<i>location on board</i>
Identification No.	Identification number of cargo transport unit (if no tanks). For containers, this shall be the identification code as defined in ISO 6346 (limited to goods under IMDG code)	<b>Mandatory TransUnitId</b>	Marks & Numbers Container Id. No(s). Vehicle Reg. No(s).	<i>if they are being carried in cargo transport units other than tanks, the identification number thereof</i>
INF Ship Class	Code for the license of the vessel according to the INF Code (Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-level Radioactive Wastes in Flasks on board Ships). Possible values are: INF1 (Class INF 1), INF2 (Class INF 2), INF3 (Class INF3)	<b>Optional INFShipClass</b>	No	<i>the class of the ship as defined in the INF code</i>
Additional Information	Any additional information regarding dangerous and polluting goods on board.	<b>Optional</b>	Additional Information	<i>Goods for the carriage of which appropriate preconditions have been laid down in accordance paragraph 1.1.6 of the IGC and IBC Codes <u>and</u> <u>1.3.1.1 of the IMSBC Code</u></i>

### Annex 3 – Applicable elements per IMO Code or Convention

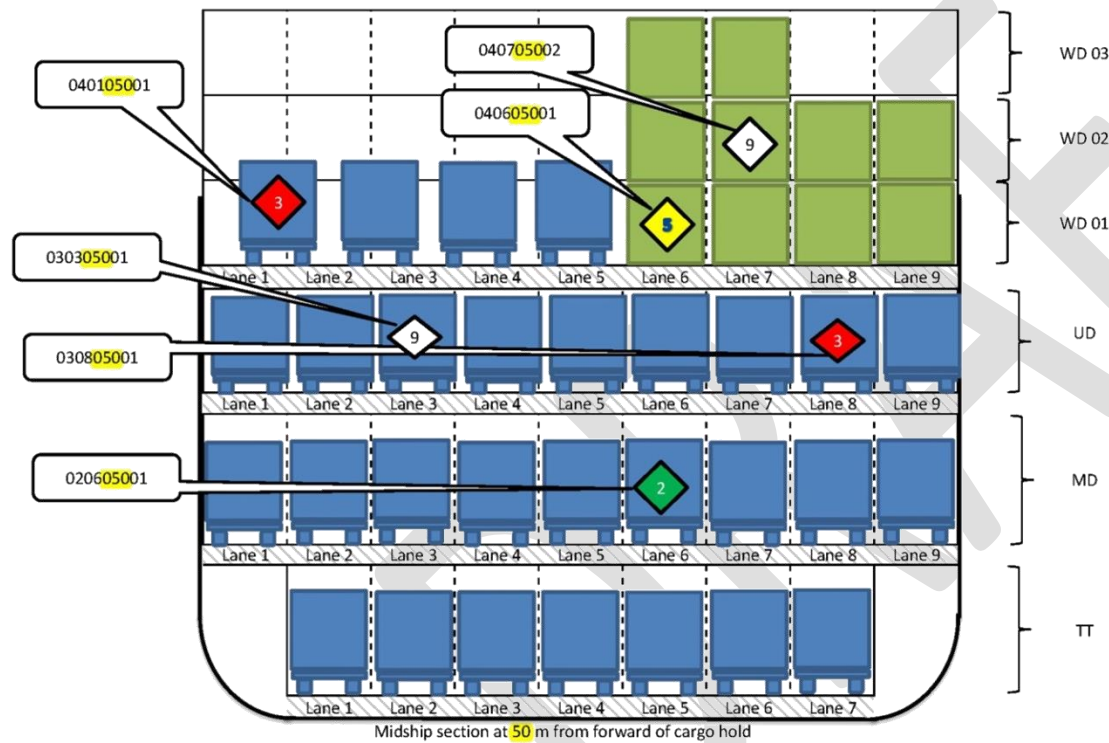
DG Classification, IMO Code, mode of carriage	Textual Reference  (Applicable Y/N)	UN number (Appl. Y/N)	IMO Hazard Class  (possible classes)	Packing group  (Applicable Y/N)	EmS  (Applicable Y/N)	Subsidiary risk (Applicable Y/N)	MARPOL Code (Marine Pollutant per IMDG or Pollution Category per IBC)  (Appl. Y/N)
IMDG, packaged goods	Y  ( Proper shipping name)	Y	(1), 1.1, 1.2, 1.3, 1.4, 1.5, 1.6  (2), 2.1, 2.2, 2.3, 3,  (4), 4.1, 4.2, 4.3,  (5), 5.1, 5.2,  (6), 6.1, 6.2,  (7),  (8),  (9)  <del>or UNKNOWN</del>	Y/N  Only applicable for IMO Hazard Class: 3, 4.1, 4.2, <u>4.3</u> , 5.1, 6.1, 8, 9.  Not every good of these classes has a packing group.  Possible values I, II, III (and NONE).	Y/N  Possible values spillage: S-A to S- Z; fire: F-A to F- <u>J</u> .	Y/N  Possible values refer to IMDG and IMO Hazard Class.  More than one value is possible.	Y/N  <b>Possible value P (based on the IMDG Code, Index, MP column)</b>

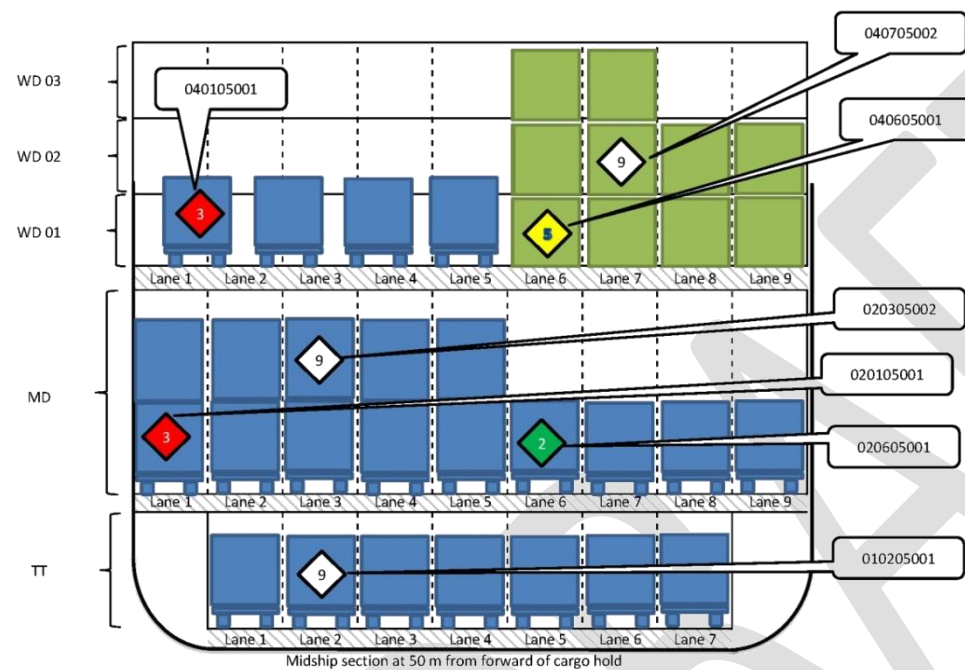
DG Classification, IMO Code, mode of carriage	Textual Reference (Applicable Y/N)	UN number (Appl. Y/N)	IMO Hazard Class (possible classes)	Packing group (Applicable Y/N)	EmS (Applicable Y/N)	Subsidiary risk (Applicable Y/N)	MARPOL Code (Marine Pollutant per IMDG or Pollution Category per IBC) (Appl. Y/N)
IBC	Y (Product name)	<del>Y</del> /N	Possible values: S, P, S/P or UNKNOWN	N	N	N	Y Possible values: X, Y, Z, OS UNKNOWN <sup>Error!</sup> Bookmark not defined.
IGC	Y (Product name)	Y	Possible values: <del>2.1, 2.2 or 2.3</del> <u>N</u>	N	<del>Y</del> /N	<del>Y</del> /N	N
IMSBC	Y (Bulk cargo shipping name)	Y/N	<del>4.1, 4.2, 4.3, 5.1, 6.1, 7, 8, 9</del> <u>Possible values</u> <u>"Group A+B" or "Group B"</u> MHB (material hazardous only in bulk)	N	<del>Y</del> /N	<del>Y</del> /N	N
MARPOL Annex 1	Y (Name of oil)	N	N	N	N	N	N



Note: the indicated changes in this table reflect the changes compared to Annex C of the XML Reference Guide v3.0

#### Annex 4 – Examples of RO/RO vessel coding (courtesy Port of Antwerp)







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