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# **Requirements for a SafeSeaNet common HAZMAT reference database**

## **CHRD**

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## 1. Objectives

The objectives of the common HAZMAT reference database (CHRD) are to:

- improve the data quality of HAZMAT notifications,
- minimise the administrative burden for the reporting parties, and
- support the MSs emergency services to provide effective response to maritime incidents.

## 2. Users

The intended users of the CHRD are:

- 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,
- Ship reporting parties (ship masters, agents and operators) responsible to ensure that the HAZMAT information received from the industry stakeholders is transmitted correctly and accurately to the national single windows (NSW),
- Member State authorities (SSN NCAs and single window, port, maritime and security authorities) responsible for receiving and processing HAZMAT information transmitted by the reporting parties,
- Emergency services responsible for providing effective response to maritime incidents, and
- EMSA services responsible for validating the quality of the information exchanged between MS through SSN.

## 3. Functional Uses

The objectives of the CHRD can be achieved if it is used as a reference and a verification tool during the HAZMAT reporting process, both at national and central level:

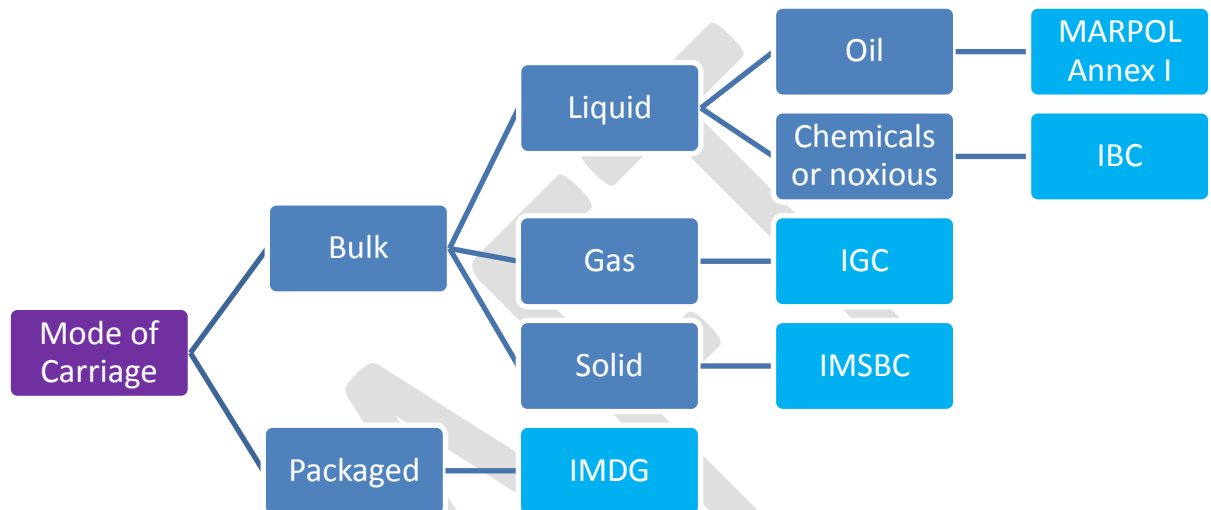
As a reference:

- The industry stakeholders and reporting parties can easily search for the correct HAZMAT details using specific identifiers – technical name, UN Number, IMO class – or by inputting the name, how the cargo is carried (mode of carriage: bulk or packaged) and the type of cargo (liquid, gas or solid) leading to the correct identification of the relevant code or convention, as shown in Figure 1.
- The administrative burden of the reporting party can be minimised when submitting HAZMAT information. If a copy of the CHRD is downloaded and integrated in the NSW, once the reporting party inputs an identifier (e.g. technical name or the UN number), the NSW would automatically fill in the static data elements which are available in the CHRD.

- Competent authorities and EMSA services can download from the database information which is necessary to effectively respond to a maritime casualty involving ships carrying HAZMAT cargo.

For verification:

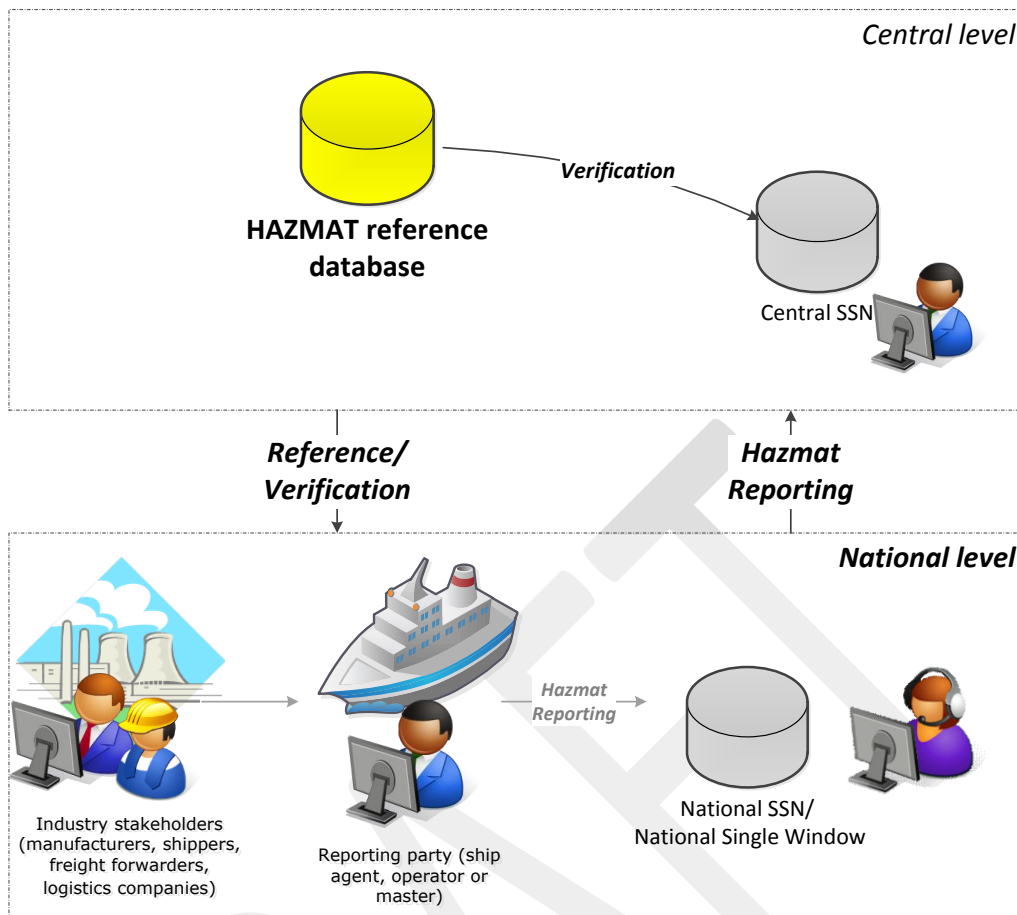
- Competent authorities and EMSA services can cross-check and validate the correctness of the HAZMAT data notified to SSN by the national SSN and NSW systems.



**Figure 1 – HAZMAT Decision Tree**

#### 4. Data Flows

Based on the information presented in Chapters 2 and 3, Figure 2 depicts the general information flow between the users of the CHRD.



**Figure 2 – Users and Data flows for the CHR**

## 5. Content

The database shall contain:

- A list of dangerous and polluting goods that have to be notified in accordance with Directive 2002/59/EC, as amended, and FAL Form 7, taking into consideration the data elements and the relevant parts of the IMO Codes and Conventions – as identified in the Guidelines on HAZMAT Reporting in SSN.
- A link to the relevant entries in the MAR-CIS database, which is being developed by EMSA and includes information on associated hazards and risks of HAZMAT products.
- Other dangerous and polluting goods or data elements which may be identified by Member States.

The minimum data set for CHRD is presented in the Table 1 below:

<b>Minimum Data Set</b>	
<b>0.</b>	Mode of transport (Bulk or Packaged)
<b>1.</b>	DG classification
<b>2.</b>	Textual reference
<b>3.</b>	IMO hazard class
<b>4.</b>	UN number
<b>5.</b>	Packing group
<b>6.</b>	Subsidiary risks
<b>7.</b>	Flashpoint
<b>8.</b>	MARPOL pollution code (Marine Pollutant as per IMDG or Pollution Category as per IBC)
<b>9.</b>	EmS

**Table 1 – Minimum data set for the CHRD**

Figure 1 and Table 1 shall be used as guidance for building the database structure and for populating the database with the relevant values per applicable IMO Codes and Convention.

The database will contain all entries in the English language.

## **6. Search and validation functions**

Within the basic functionalities of the CHRD shall include:

- searching for the details of HAZMAT products by using a specific identifier (UN Number or technical name), and
- filtering the resulting list of HAZMAT products by data elements mentioned in Table 1,
- exporting the resulting list and dataset to the following file formats: txt, xml, xls, xdoc, pdf.

To search for the details of a HAZMAT product the user has to identify it either directly by its UN Number or by using part of its name:

- When the user enters a four digit UN number the details of the product are displayed. If the UN Number is not recognised the user will be warned that the inputted UN number does not exist.
- The user may search by inputting three letters of a product. The system searches for the products including the letters and provides an alphabetic list of all substance names beginning with the inputted letters and the corresponding UN Number, if applicable, and the relevant code. The user may select one product from the list and all the details for that product are then displayed,
- The user may also search by combining the name of the product (or part of the name), the mode of carriage (bulk or packaged) and the nature of the product (liquid, gas or solid) as depicted in Figure 1.
- The search function may also include validation tools in order to correctly identify the relevant code for a particular product. For example, by including the possibility of including the quantity, the user can input the quantity of the product that will be carried and if the amount is greater than, for example, 50 tons then the system would direct the user to choose the bulk option. The ship type could also be used as a validation, for example, normally containers are not carried on gas carriers.

## 7. Hosting

The CHRD shall be hosted by EMSA and will be provided as a service of the Central SSN system. This will have the advantage that Member States, reporting parties and industry may have easy access to harmonised and updated HAZMAT information.

Member States may choose to develop a mechanism to download a copy of the CHRD and make it available to the national authorities and the shipping industry. The administrative burden of the shipping industry can be simplified if the CHRD is linked to the national single window to automatically fill in data elements from the CHRD. Likewise, the validation process by authorities can be facilitated if the CHRD can be used to cross-check the HAZMAT information electronically.

For this purpose a service shall be built to allow the Member States either to receive or to download the latest copy of the CHRD through the interfaces mentioned in Chapter 8.

## 8. Access to the CHRD - Interfaces

The CHRD shall have the following interfaces developed:

### a. EMSA web page

This would allow for unrestricted public access, although prior registration may be required to compile information on who is using the CHRD. The user may be able to use the search functions and the exported file will only allow pdf formats.

### b. SSN web interface

Access to the CHRD will be through a password protected system for pre-determined users (SSN community). The users will be able to benefit from all the functionalities of the CHRD and be able to download a copy of the CHRD for installation in a local network, for example, the national SSN system and the NSW.

### c. System-to-System

A system-to-system interface may also be developed if considered necessary by the Member States. In this case the development time-frame is longer than in the previous two interface options because it requires the elaboration of the appropriate technical messages. Therefore, it may be more feasible to build the CHRD over a two phase approach – first develop the web interface options and then the system-to-system interface. This has the advantage that the Member States and industry can benefit from an earlier implementation of the CHRD through web interfaces. The system-to-system can be based on the experience gained following the first phase and usage of the CHRD.

## 9. Updates and Maintenance

The CHRD would have to be updated as soon as there are changes to the relevant IMO Codes and Conventions and in the legal acts of the Union related to the carriage and reporting of HAZMAT information.

A CHRD version control system shall be created in order to track all the updates made to the initial CHRD. The version control/tracking system shall include an easy and user-friendly presentation of the changes made per product as well as a summary of all changes made during a specific period of time.

Updates will be notified to member states and reporting parties depending on the agreed systems and interfaces.

## 10. Operational standards

The CHRD performance and security standards shall be in accordance with the SafeSeaNet Interface and Functionalities Document (SSN IFCD), including that it will be available:

- twenty-four hours a day, seven days a week.
- at a minimum of 99% over a period of one year, with the maximum permissible period of interruption being 12 hours.