

AN EXAMPLE OF MANAGEMENT PROCEDURE  
TO MAINTAIN PART I OF THE INVENTORY OF HAZARD MATERIALS (IHM)

Paragraph 5.2.2 of IMO Resolution MEPC.379(80) “2023 GUIDELINES FOR THE DEVELOPMENT OF THE INVENTORY OF HAZARDOUS MATERIALS” following “HONG KONG INTERNATIONAL CONVENTION FOR THE SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS, 2009” requires that a system be established to maintain the part I of IHM. Following this requirement, here is shown an example of procedure of such system, assuming to designate on shore a person responsible for it. This, however, is not more than an example and another style of system procedure may be established as far as it meets the Convention and the Resolution as mentioned above.

< EXAMPLE >

MANAGEMENT PROCEDURE  
TO MAINTAIN PART I OF THE INVENTORY OF HAZARD MATERIALS (IHM)

(Assuming a designated person to maintain the part I of IHM is on shore)

(Revision 0.0)

Revision History of procedure

Rev. No.	Date of Revision	Section No.	Outline of Revision

Definition/ Abbreviation

HM	:	Hazardous Material
IHM	:	Inventory of HM, including the part I, II, III of it.
the Convention	:	Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009
the Guidelines	:	IMO Resolution MEPC.379(80), 2023 Guidelines for the Development of the Inventory of Hazardous Materials
the Inventory	:	Referred to the part I of IHM, unless otherwise specified.
DP	:	A designated person as responsible for maintaining and updating the Inventory to meet Par. 5.2.1 of the Guidelines
MD/SDoC	:	Material declaration/ Supplier's Declaration of Conformity
Table A/B	:	Tables A and B of Appendix 1 of the Guidelines
objects for the Inventory :		Items requiring to collect information of containing of HM shown in the table A/B by using MD/SDoC, and which are the objects for the part I of IHM.

## 1 Purpose

This “management procedure to maintain the part I of IHM” is established for the purpose of meeting Regulation 5.3 of the Convention and Par. 5.2.2 of the Guidelines by means of properly maintaining, during the ship’s operational stage, the part I of IHM developed according to the Convention and the Guidelines<sup>2</sup>.

## 2 Policy of Management to Maintain the Inventory

### 2.1 Designation of a Person Responsible for Maintaining the Inventory

Ship owner designates a person shown in [Supplement 1] as responsible for maintaining and updating the Inventory for the ship and entrust the duty to him on shore. (G/Par. 5.2.1)<sup>4</sup>

### 2.2 Establishment of Management System to Maintain the Inventory

The DP establishes and supervises a system shown in the section 3 in order to ensure that the Inventory on board is properly updated and maintained. (G/Par. 5.2.2)

## 3 Management System to maintain the Inventory

### 3.1 Request of Hazardous Material Information

A person who places an order of structure material, machinery and/or equipment to be installed on board the ship should identify the objects for the Inventory out of the orders following the section 4.1, and request a repair yard or suppliers, etc. of those objects for MD/SDoC showing information of HM which are contained in the objects. (G/Par. 4.2.2)

### 3.2 Review of Collected Information of HM

A person who receives the deliveries to be on board the ship should ensure that the information of HM is properly collected following the section 4 for the delivered objects.

### 3.3 Development of Revision of the Inventory

The DP or a person assigned by the DP should develop a revision of the Inventory following the section 5 based on the information collected following the sections 3.1 and 3.2, where an object reviewed contains HM.

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<sup>2</sup> The regulations/paragraphs relevant to the maintenance of IHM are shown in [Supplement 3].

<sup>4</sup> This shows the relevant regulation/paragraph of the Convention or Guidelines, abbreviating “Convention” to “C” and “Guidelines” to “G”.

### 3.4 Review of Revision and Instruction of Updating Inventory

The DP should confirm that the revision of the Inventory is properly developed, should write his signature and others on it following the section 5.8, and should instruct the shipmaster to update the IHM on board with this revision.

### 3.5 Update of the Inventory on Board

The shipmaster should ensure the update of the Inventory on board following the section 6, recognizing that the Inventory is an essential part of the certificate on IHM. (C/App. 3/Note)

### 3.6 Ascertaining the Conformity of the Inventory

The DP should follow the section 7 in order to maintain conformity of the Inventory.

## 4 Collection of Information of HM

### 4.1 Items Requiring to Collect MD/SDoC

4.1.1 The items requiring to collect information of containing of HM shown in the table A/B are structure material, machinery and equipment which are fixed (i.e., securely fitted with the ship, such as by welding or with bolts, riveted or cemented, and used at their position, including electric cables, gaskets), and applied coating. (G/Par. 2.2, 3.1, 3.2.2, 4.2.2, 4,3,2)

4.1.2 For the application of the section 4.1.1, reference should be made to the followings.

①The items which are not fixed, such as portable fire extinguishers, distress flares, lifebuoys, etc., are not required to be listed in the part I of IHM. (G/Par. 2.4, 3.2.3)

②The batteries containing lead acid or other hazardous materials that are fixed in place should be listed in the part I of IHM, but those not fixed, such as consumer batteries and batteries in store are not required to be listed in the part I. (G/Par. 3.2.4)

③The items, potentially hazardous to the environment and human health at ship recycle facilities, which are shown in Table C of Appendix of the Guidelines, are not required to be listed in the part I of IHM during ship operation, while they are going to be listed in the part II or III when recycling. (G/Par. 3.2.1.3, 3.2.2, App. 1/Table C)

④Regular consumable goods, potentially containing hazardous materials, which are not integral to a ship and are unlikely to be dismantled or treated at a ship recycling facility, and which are shown in Table D of Appendix of the Guidelines, are not required to be listed in the part I of IHM, while they are going to be listed in the part III when recycling. (G/Par. 3.2.1.4, 3.2.2, App. 1/Table D)

⑤Materials listed in Table B that are inherent in solid metals or metal alloys, such as steels, aluminium, brasses, bronzes, plating and solders, provided they are used in general construction, such as hull, superstructure, pipes or housings for equipment and machinery, are not required to be listed in the Inventory. (G/Par. 3.3.1)

⑥Although electrical and electronic equipment is required to be listed in the Inventory, the amount of hazardous materials potentially contained in printed wiring boards (printed circuit boards) installed in the equipment does not need to be reported in the Inventory. (G/Par. 3.3.2)

⑦Even though the Guidelines does not require the spare parts of the objects for the Inventory to be listed in the part I, they should obtain MD/SDoC in advance, expecting that they are going to be fixed when it is in use. Further, when delivering a spare part containing HM on board, the information should be given to the shipmaster, or a copy of MD should be attached to the spare part, in order for the shipmaster to take a proper action following the section 6.4.(G/Par. 4.1.2, 4.1.3)

4.2 Collected MD/SDoC should contain information required by the Par. 6 and 7 of the Guidelines. Examples of them are referred to in Appendix 6 and 7 of the Guidelines.

4.3 Location on board and approximate quantity of HM needs to be shown in the Inventory, and, therefore, in case where a product consists of plural components located in different places, its MD should be divided correspondingly to the locations of components containing HM.(C/Reg.5.1.1)

4.4 A delivery which contains HM exceeding the threshold value shown in table A should not be installed on board. (C/Reg. 4.1) <sup>6</sup>

Where it is subject to the followings, it may be on board and should be listed in the Inventory.

①Threshold value 1.0% for Asbestos may be applied instead of 0.1% not later than 5 years after the entry into force of the Convention, and, in that case, should be recorded in the Inventory and, if available, the MD. 0.1% need not be retroactively applied. (G /App. 1/Table A)

②A delivery which contains Hydrochlorofluorocarbons(HCFCs) and be installed on board before 1st January 2020 may be permitted. (G /App. 3/Par. 3.2.1)

4.5 Revised threshold values of Tables A/B should be used for a revision of the Inventory to be developed after the adoption of revised values, but need not be retroactively applied. (G/Par. 3.5)

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<sup>6</sup> Where Asbestos is present on board and is listed in the initial version of the Inventory, it is recommended to follow MSC/Circ.1045 "GUIDELINES FOR MAINTENANCE AND MONITORING OF ON-BOARD MATERIALS CONTAINING ASBESTOS" for the treatment of it. Where, further, Asbestos which is prohibited to install on board after 2002/7/1 or 2011/1/1 is by mistake installed on board, it should be removed out of ship following MSC.1/Circ.1374/Rev.1 "INFORMATION ON PROHIBITION OF THE USE OF ASBESTOS ON BOARD SHIPS".

## 5 Development of Revision of the Inventory<sup>9,10</sup>

- 5.1 If, among the objects for the Inventory reviewed following the section 4, there is an object containing HM of Tables A/B, a revision of the Inventory should be developed. Especially where new installation, modification, repair, exchange, removal, or alteration of location etc. of structure, machinery and/or equipment, renewal of coating, change of flag, owner or operator is undertaken, attention should be paid so that a proper revision of the Inventory may be made. (C/Reg. 5.3, 10.1.3, G/Par. 4.3)
- 5.2 Where machinery, equipment, coating, etc. is exchanged/ renewed with an identical part or coating, update of their inventory is not required. (G/Par. 4.3.2)
- 5.3 The item removed out of board should be clearly specified in such manner that a cross line is put on the removed item, or that the item is deleted out of the Inventory providing a separate list of removed items. (G/Par. 5.2.3, App. 2)
- 5.4 A revision of the Inventory should be developed following examples in Appendix 2 and 3 of the Guidelines based on the MD showing the information of HM of Tables A/B regardless of development method (G/Par. 4.1 or 4.2) of the initial version of the Inventory. (G/Par. 3.4, 4.1.2~4.1.4, 4.2.2)
- 5.5 In order to show location of HM, names of location which are indicated in General Arrangement, etc. should be used, and in case there is a list of location when initially developed the IHM, this location list should be utilized. (G/Par. 4.6)
- 5.6 Standard unit to show the approximate quantity of hazardous materials should be kg, unless other units (e.g. m<sup>3</sup> for materials of liquid or gases, m<sup>2</sup> for materials used in floors or walls) are considered more appropriate. An approximate quantity should be rounded up to at least two significant figures. (G/Par. 4.7)
- 5.7 Same items to be installed may be listed together in the Inventory with general location, but, their location should be as small as they can be identified. (G/Par. 3.2.5/App. 3)
- 5.8 Revision of the Inventory should include date of revision, summary of change/ deletion of items, and signature of DP. (G/Par. 5.2.3)
- 5.9 A copy of the Inventory should be kept on shore.

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<sup>9</sup> IHM can be developed utilizing the application in URL referring to "PrimeShip-GREEN/SRM".  
<https://www.psgreensrm.com/PrimeShip-GREENSRM/InitAction.do?lang=en>

<sup>10</sup> It is recommended to obtain HM information and make a record referring to [Supplement 2] when doing kinds of works at repair yards.

## **6 Update of the Inventory on Board**

- 6.1 Shipmaster should confirm with DP that, for all the items to be delivered on board, revision of the Inventory is properly developed based on the investigation following the section 4.1.
- 6.2 Shipmaster should recognize that the Inventory on board is an essential supplement of the Conventional Certificate on IHM and should replace the Inventory with its revision immediately after receiving the revision from DP, and maintain IHM up-to-date at all times. (C/Reg. 5.3)
- 6.3 Shipmaster should undergo a renewal survey and update the supplement of the Certificate and should report it to DP. (C/Reg. 10.1.2, G/Par. 4.3.2, Par. 5.2.4)
- 6.4 Where, based on the information given or MD collected following the section 4.1.2 ⑦, a spare part containing HM is fixed on board, the shipmaster should request DP to revise the Inventory and take a necessary action.

## **7 Continuity of Conformity of the Inventory**

- 7.1 In case where alteration, exchange or significant repair is made on the structure, equipment, system, fitting, location or material of ship, DP should instruct the shipmaster to undergo an additional survey if necessary and renew the supplement of Certificate in order to maintain the compliance with the Convention. (C/Reg10.1.3, G/Par. 4.3.2, 5.2.4)
- 7.2 In case where alteration of ship leads to complicated revision of the Inventory, it is recommended to undergo a review of the revision of the Inventory and its supplementary information prior to the additional survey.
- 7.3 DP should confirm on the occasion of internal audit of the ship that the Inventory on board is properly updated with revisions and is consistent with the current condition of HM on board, further should confirm that the Inventory on board coincides with its copy kept on shore and should make a record of the audit. (G/Par.5.2)
- 7.4 Where DP is going to be changed in association with a change of flag/shipowner or a sale/recycle of ship, etc., DP should transfer to a new ship owner/ DP the latest version of the Inventory and its supplementary information (MD/SDoC, etc.). And, further, he should maintain them so that they may be shown to an inspector on the occasion of survey of flag or port state. (G/Par. 4.3.3, 5.2.4)



[Supplement 1] Designation of person responsible for maintaining and updating the Inventory

The owner of the ship mentioned below designates a person shown below as DP (person responsible for maintaining and updating the part I of IHM of the ship) <sup>12</sup> .		
DP	Name of Company and department DP belongs to	
	Name of DP	
	Contact	
Ship concerned	Name of ship	
	IMO Number	
	Name of shipowner	

[Supplement 2] Example of information list<sup>14</sup> to develop a revision of the Inventory relating to the works done at repair yard

No.	Work Name	Contractor	Delivery / Dismantlement	No.	Supplier
1					
2					

<sup>12</sup> It is recommended to attach a statement of shipowner with his signature/ company stamp stating that he designated the DP.

<sup>13</sup> Purchase List and Collected MD List are automatically generated when inputting data in the application, PrimeShip-GREEN/SRM.

2-1 List of delivery and dismantlement relating to the works

No.	Work name	Contractor of work	Delivery/ Dismantlement	No.	Supplier of delivery
1	BWMS installation	BWMS manufacturer	Filter	1	Filter manufacturer
2			Disinfection appliance	1	BWMS manufacturer
3			Control panel	2	BWMS manufacturer
4		Repair yard	a set of Piping		Gasket manufacturer
5			Electric cables		E/cable manufacturer
6			Compound for cable penetration		Compound manufacturer
7	Maintenance of piping	Repair yard	Dismantled gasket		Gasket manufacturer
8			Installed gasket		Gasket manufacturer

2-2 Collected MD List

No.	Supplier	Product	Amount	HM(Yes/No)	IHM No.	MD No.	Remarks

\* Regarding a modification work such as ballast water treatment system or a scrubber etc, in addition to MD/SDoC for the equipment itself, the following may be necessary to be collected and reflected to the IHM

1. Electric wire
2. Putty of penetration
3. Expansion piping flange packing

**[Supplement 3]**

**Requirements relevant to management to maintain IHM  
in the Ship Recycle Convention and its relevant Resolution**

(See the other requirements in the full text of the Convention and Resolution for the details)

# HONG KONG INTERNATIONAL CONVENTION FOR THE SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS, 2009

## REGULATIONS FOR SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS

### CHAPTER 2 – REQUIREMENTS FOR SHIPS

#### Part A – Design, construction, operation and maintenance of ships

##### Regulation 1 – Definitions

5 “New installation” means the installation of systems, equipment, insulation, or other material on a ship after the date on which this Convention enters into force.

##### Regulation 4 – Controls of ships’ Hazardous Materials

In accordance with the requirements specified in Appendix 1 to this Convention each Party:

- .1 shall prohibit and/or restrict the installation or use of Hazardous Materials listed in Appendix 1 on ships entitled to fly its flag or operating under its authority; and ....

##### Regulation 5 – Inventory of Hazardous Materials

1 Each new ship shall have on board an Inventory of Hazardous Materials. The Inventory shall be verified either by the Administration or by any person or organization authorized by it taking into account guidelines, including any threshold values and exemptions contained in those guidelines, developed by the Organization. The Inventory of Hazardous Materials shall be specific to each ship and shall at least:

- .1 identify as Part I, Hazardous Materials listed in Appendices 1 and 2 to this Convention and contained in ship’s structure or equipment, their location and approximate quantities; and
- .2 clarify that the ship complies with regulation 4.

3 Part I of the Inventory of Hazardous Materials shall be properly maintained and updated throughout the operational life of the ship, reflecting new installations containing Hazardous Materials listed in Appendix 2 and relevant changes in ship structure and equipment, taking into account the guidelines developed by the Organization.

#### Part C – Surveys and certification

##### Regulation 10 – Surveys

- 1 Ships to which this Convention applies shall be subject to the surveys specified below:
  - .2 a renewal survey at intervals specified by the Administration, but not exceeding five years. This survey shall verify that Part I of the Inventory of Hazardous Materials

required by regulation 5 complies with the requirements of this Convention;

- .3 an additional survey, either general or partial, according to the circumstances, may be made at the request of the shipowner after a change, replacement, or significant repair of the structure, equipment, systems, fittings, arrangements and material. The survey shall be such as to ensure that any such change, replacement, or significant repair has been made in the way that the ship continues to comply with the requirements of this Convention, and that Part I of the Inventory is amended as necessary;

#### **Appendix 1**

##### **CONTROLS OF HAZARDOUS MATERIALS**

...new installations containing hydrochlorofluorocarbons (HCFCs) are permitted until 1 January 2020.

#### **Appendix 3**

##### **FORM OF THE INTERNATIONAL CERTIFICATE ON INVENTORY OF HAZARDOUS MATERIALS**

Note: Part I of the Inventory of Hazardous Materials, as required by regulation 5 of the Annex to the Convention, is an essential part of the International Certificate on Inventory of Hazardous Materials and must always accompany the International Certificate on Inventory of Hazardous Materials. Part I of the Inventory of Hazardous Materials should be compiled on the basis of the standard format shown in the guidelines developed by the Organization.

**RESOLUTION MEPC.379(80) (adopted on 7 July 2023)**  
**2023 GUIDELINES FOR THE DEVELOPMENT OF THE INVENTORY OF**  
**HAZARDOUS MATERIALS**

**2 DEFINITIONS**

**2.2** *Fixed* means the conditions that equipment or materials are securely fitted with the ship, such as by welding or with bolts, riveted or cemented, and used at their position, including electrical cables and gaskets.

**2.4** *Loosely fitted equipment* means equipment or materials present on board the ship by the conditions other than "fixed", such as fire extinguishers, distress flares, and lifebuoys.

**3 REQUIREMENTS FOR THE INVENTORY**

**3.1 Scope of the Inventory**

The Inventory consists of:

- Part I: Materials contained in ship structure or equipment;
- Part II: Operationally generated wastes; and
- Part III: Stores.

**3.2 Materials to be listed in the Inventory**

**3.2.1** Appendix 1 of these guidelines (Items to be listed in the Inventory of Hazardous Materials), provides information on the hazardous materials that may be found on board a ship. Materials set out in appendix 1 should be listed in the Inventory. Each item in appendix 1 of these guidelines is classified under tables A, B, C or D, according to its properties:

- .1 table A comprises the materials listed in appendix 1 of the Convention;
- .2 table B comprises the materials listed in appendix 2 of the Convention;
- .3 table C (Potentially hazardous items) comprises items which are potentially hazardous to the environment and human health at ship recycling facilities; and
- .4 table D (Regular consumable goods potentially containing hazardous materials) comprises goods which are not integral to a ship and are unlikely to be dismantled or treated at a ship recycling facility.

**3.2.2** Tables A and B correspond to part I of the Inventory. Table C corresponds to parts II and III and table D corresponds to part III.

**3.2.3** For loosely fitted equipment, there is no need to list this in part I of the Inventory. Such equipment which remains on board when the ship is recycled should be listed in part III.

**3.2.4** Those batteries containing lead acid or other hazardous materials that are fixed in place should be listed in part I of the Inventory. Batteries that are loosely fitted, which includes consumer batteries and batteries in stores, should be listed in part III of the Inventory.

**3.2.5** Similar materials or items that contain hazardous materials that potentially exceed the threshold value can be listed together (not individually) on the IHM with their general location and approximate amount specified there (hereinafter referred to as "bulk listing"). An example of how to list those materials and items is shown in row 3 of table 1 of appendix 3.

### **3.3 Exemptions – Materials not required to be listed in the Inventory**

**3.3.1** Materials listed in Table B that are inherent in solid metals or metal alloys, such as steels, aluminium, brasses, bronzes, plating and solders, provided they are used in general construction, such as hull, superstructure, pipes or housings for equipment and machinery, are not required to be listed in the Inventory.

**3.3.2** Although electrical and electronic equipment is required to be listed in the Inventory, the amount of hazardous materials potentially contained in printed wiring boards (printed circuit boards) installed in the equipment does not need to be reported in the Inventory.

### **3.4 Standard format of the Inventory of Hazardous Materials**

The Inventory should be developed on the basis of the standard format set out in appendix 2 of these guidelines: Standard format of the Inventory of Hazardous Materials. Examples of how to complete the Inventory are provided for guidance purposes only.

### **3.5 Revision to threshold values**

Revised threshold values in tables A and B of appendix 1 should be used for IHMs developed or updated after the adoption of the revised values and need not be applied to existing IHMs and IHMs under development. However, when materials are added to the IHM, such as during maintenance, the revised threshold values should be applied and recorded in the IHM.

## **4 REQUIREMENTS FOR DEVELOPMENT OF THE INVENTORY**

### **4.1 Development of part I of the Inventory for new ships<sup>1</sup>**

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<sup>1</sup> In ascertaining whether a ship is a "new ship" or an "existing ship" according to the Convention, the term "a similar stage of construction" in regulation 1.4.2 of the annex to the Convention means the stage at which:

- .1 construction identifiable with a specific ship begins: and
- .2 assembly of that ship has commenced comprising at least 50 tonnes or 1% of the estimated mass of all structural material, whichever is less.

#### **4.1.2 *Checking of materials listed in table A***

During the development of the Inventory (part I), the presence of materials listed in table A of appendix 1 should be checked and confirmed; the quantity and location of table A materials should be listed in part I of the Inventory. If such materials are used in compliance with the Convention, they should be listed in part I of the Inventory. Any spare parts containing materials listed in table A are required to be listed in part III of the Inventory.

#### **4.1.3 *Checking of materials listed in table B***

If materials listed in table B of appendix 1 are present in products above the threshold values provided in table B, the quantity and location of the products and the contents of the materials present in them should be listed in part I of the Inventory. Any spare parts containing materials listed in table B are required to be listed in part III of the Inventory.

#### **4.1.4 *Process for checking of materials***

The checking of materials as provided in paragraphs 4.1.2 and 4.1.3 above should be based on the Material Declaration furnished by the suppliers in the shipbuilding supply chain (e.g. equipment suppliers, parts suppliers, material suppliers).

### **4.2 *Development of part I of the Inventory for existing ships***

**4.2.2** The determination of hazardous materials present on board existing ships should, as far as practicable, be conducted as prescribed for new ships, including the procedures described in sections 6 and 7 of these guidelines. Alternatively, the procedures described in this section may be applied for existing ships, but these procedures should not be used for any new installation resulting from the conversion or repair of existing ships after the initial preparation of the Inventory.

### **4.3 *Maintaining and updating part I of the Inventory during operations***

**4.3.1** Part I of the Inventory should be appropriately maintained and updated, especially after any repair or conversion or sale of a ship.

#### **4.3.2 *Updating of part I of the Inventory in the event of new installation***

If any machinery or equipment is added to, removed or replaced or the hull coating is renewed, part I of the Inventory should be updated according to the requirements for new ships as stipulated in paragraphs 4.1.2 to 4.1.4. Updating is not required if identical parts or coatings are installed or applied.

#### **4.3.3 *Continuity of part I of the Inventory***

Part I of the Inventory should belong to the ship and the continuity and conformity of the information it contains should be confirmed, especially if the flag, owner or operator of the ship changes.

### **4.6 *Description of location of hazardous materials on board***



The locations of hazardous materials on board should be described and identified using the name of location (e.g. second floor of engine-room, bridge DK, APT, No.1 cargo tank, frame number) given in the plans (e.g. general arrangement, fire and safety plan, machinery arrangement or tank arrangement).

#### **4.7 Description of approximate quantity of hazardous materials**

In order to identify the approximate quantity of hazardous materials, the standard unit used for hazardous materials should be kg, unless other units (e.g. m<sup>3</sup> for materials of liquid or gases, m<sup>2</sup> for materials used in floors or walls) are considered more appropriate. An approximate quantity should be rounded up to at least two significant figures.

## **5 REQUIREMENTS FOR ASCERTAINING THE CONFORMITY OF THE INVENTORY**

### **5.2 Operational stage**

Shipowners should implement the following measures in order to ensure the conformity of part I of the Inventory:

- .1 to designate a person as responsible for maintaining and updating the Inventory (the designated person may be employed ashore or on board);
- .2 the designated person, in order to implement paragraph 4.3.2, should establish and supervise a system to ensure the necessary updating of the Inventory in the event of new installation;
- .3 to maintain the Inventory including dates of changes or new deleted entries and the signature of the designated person; and
- .4 to provide related documents as required for the survey or sale of the ship.

## **6 MATERIAL DECLARATION**

### **6.1 General**

Suppliers to the shipbuilding industry should identify and declare whether or not the materials listed in table A or table B are present above the threshold value specified in appendix 1 of these guidelines. However, this provision does not apply to chemicals which do not constitute a part of the finished product.

### **6.2 Information required in the declaration**

**6.2.1** At a minimum the following information is required in the Material Declaration:

- .1 date of declaration;
- .2 Material Declaration identification number;
- .3 supplier's name;
- .4 product name (common product name or name used by manufacturer);

- .5 product number (for identification by manufacturer);
- .6 declaration of whether or not the materials listed in table A and table B of appendix 1 of these guidelines are present in the product above the threshold value stipulated in appendix 1 of these guidelines; and
- .7 mass of each constituent material listed in table A and/or table B of appendix 1 of these guidelines if present above threshold value.

**6.2.2** An example of the Material Declaration is shown in appendix 6.

## **7 SUPPLIER'S DECLARATION OF CONFORMITY**

### **7.1 Purpose and scope**

**7.1.1** The purpose of the Supplier's Declaration of Conformity is to provide assurance that the related Material Declaration conforms to section 6.2, and to identify the responsible entity.

**7.1.2** The Supplier's Declaration of Conformity remains valid as long as the products are present on board.

**7.1.3** The supplier compiling the Supplier's Declaration of Conformity should establish a company policy. The company policy on the management of the chemical substances in products which the supplier manufactures or sells should cover:

- .1 Compliance with law:  
The regulations and requirements governing the management of chemical substances in products should be clearly described in documents which should be kept and maintained; and
- .2 Obtaining of information on chemical substance content:  
In procuring raw materials for components and products, suppliers should be selected following an evaluation, and the information on the chemical substances they supply should be obtained.

### **7.2 Contents and format**

**7.2.1** The Supplier's Declaration of Conformity should contain the following:

- .1 unique identification number;
- .2 name and contact address of the issuer;
- .3 identification of the subject of the Declaration of Conformity (e.g. name, type, model number, and/or other relevant supplementary information);
- .4 statement of conformity;
- .5 date and place of issue; and
- .6 signature (or equivalent sign of validation), name and function of the authorized person(s) acting on behalf of the issuer.

7.2.2 An example of the Supplier's Declaration of Conformity is shown in appendix 7.

APPENDIX 1 (of the RESOLUTION)

**ITEMS TO BE LISTED IN THE INVENTORY OF HAZARDOUS MATERIALS**

**Table A – Materials listed in appendix 1 of the Annex to the Convention**

(See the Table A in the FORM OF MATERIAL DECLARATION of APPENDIX 6.)

**Table B – Materials listed in appendix 2 of the Annex to the Convention**

(See the Table B in the FORM OF MATERIAL DECLARATION of APPENDIX 6.)

**Table C – Potentially hazardous items**

No.	Properties		Goods	Inventory		
				Part I	Part II	Part III
C-1	Liquid	Oiliness	Kerosene			x
C-2			White spirit			x
C-3			Lubricating oil			x
C-4			Hydraulic oil			x
C-5			Anti-seize compounds			x
C-6			Fuel additive			x
C-7			Engine coolant additives			x
C-8			Antifreeze fluids			x
C-9			Boiler and feed water treatment and test re-agents			x
C-10			De-ioniser regenerating chemicals			x
C-11			Evaporator dosing and descaling acids			x
C-12			Paint stabilizers/rust stabilizers			x
C-13			Solvents/thinners			x
C-14			Paints			x
C-15			Chemical refrigerants			x
C-16			Battery electrolyte			x
C-17			Alcohol, methylated spirits			x
C-18	Gas	Explosives/ inflammables	Acetylene			x
C-19			Propane			x
C-20			Butane			x
C-21			Oxygen			x
C-22		Green House Gases	CO <sub>2</sub>			x
C-23			Perfluorocarbons (PFCs)			x
C-24			Methane			x
C-25			Hydrofluorocarbon (HFCs)			x

C-27			Nitrous oxide (N <sub>2</sub> O)			x	
C-28			Sulfur hexafluoride (SF <sub>6</sub> )			x	
C-29	Liquid	Oiliness	Bunkers: fuel oil			x	
C-30			Grease			x	
C-31			Waste oil (sludge)		x		
C-32			Bilge and/or waste water generated by the after-treatment systems fitted on machineries		x		
C-33			Oily liquid cargo tank residues		x		
C-34			Ballast water		x		
C-35		Raw sewage		x			
C-36		Treated sewage		x			
C-37		Non-oily liquid cargo residues		x			
C-38		Gas	Explosibility/ inflammability	Fuel gas			x
C-39		Solid		Dry cargo residues		x	
C-40	Medical waste/infectious waste				x		
C-41	Incinerator ash <sup>2</sup>				x		
C-42	Garbage				x		
C-43	Fuel tank residues				x		
C-44	Oily solid cargo tank residues				x		
C-45	Oily or chemical contaminated rags				x		
C-46	Batteries (incl. lead acid batteries)					x	
C-47	Pesticides/insecticide sprays					x	
C-48	Extinguishers					x	
C-49	Chemical cleaner (incl. electrical equipment cleaner, carbon remover)					x	
C-50	Detergent/bleacher (could be a liquid)					x	
C-51	Miscellaneous medicines					x	
C-52	Fire fighting clothing and Personal protective equipment					x	
C-53	Dry tank residues				x		
C-54	Cargo residues				x		
C-55	Spare parts which contain materials listed in Table A or Table B						x

<sup>2</sup> Definition of garbage is identical to that in MARPOL Annex V. However, incinerator ash is classified separately because it may include hazardous substances or heavy metals.

**Table D – Regular consumable goods potentially containing hazardous materials<sup>3</sup>**

No.	Properties	Example	Inventory		
			Part I	Part II	Part III
D-1	Electrical and electronic equipment	Computers, refrigerators, printers, scanners, television sets, radio sets, video cameras, video recorders, telephones, consumer batteries, fluorescent lamps, filament bulbs, lamps			x
D-2	Lighting equipment	Fluorescent lamps, filament bulbs, lamps			x
D-3	Non ship-specific furniture, interior and similar equipment	Chairs, sofas, tables, beds, curtains, carpets, garbage bins, bed-linen, pillows, towels, mattresses, storage racks, decoration, bathroom installations, toys, not structurally relevant or integrated artwork			x

---

<sup>3</sup> This table does not include ship-specific equipment integral to ship operations, which has to be listed in part I of the inventory.

**APPENDIX 2**

**STANDARD FORMAT OF THE INVENTORY OF HAZARDOUS MATERIALS<sup>4</sup>**

**Part I**

**Hazardous materials contained in the ship's structure and equipment**

**I-1 – Paints and coating systems containing materials listed in table A and table B of appendix 1 of these guidelines**

No.	Application of paint	Name of paint	Location	Materials (classification in appendix 1)	Approximate quantity	Remarks
1	Anti-drumming compound	Primer, xx Co., xx primer #300	Hull part	Lead	35.00 kg	
2	Anti-fouling	xx Co., xx coat #100	Underwat er parts	TBT	120.00 kg	

<sup>4</sup> Examples of how to complete the Inventory are provided for guidance purposes only in accordance with paragraph 3.4 of the guidelines.

**I-2 – Equipment and machinery containing materials listed in table A and table B of appendix 1 of these guidelines**

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approximate quantity		Remarks
1	Switch board	Engine control room	Cadmium	Housing coating	0.02	kg	less than 0.01kg
			Mercury	Heat gauge	<0.01	kg	
2	Diesel engine, xx Co., xx #150	Engine room	Lead-Cadmium	Bearing Starter for blower	0.02	kg	
3	Diesel engine, xx Co., xx #200	Engine-room	Lead	Starter for blower	0.01	kg	Revised by XXX on Oct. XX, 2008 (revoking No.2)
4	Diesel generator (x 3)	Engine-room	Lead	Ingredient of copper compounds	0.01	kg	
5	Radioactive level gauge	No. 1 Cargo tank	Radioactive substances	Gauge	5 (1.8E+11)	Ci (Bq)	Radionuclides: <sup>60</sup> Co

**I-3 - Structure and hull containing materials listed in table A and table B of appendix 1 of these guidelines**

No.	Name of structural element	Location	Materials (classification in appendix 1)	Parts where used	Approximate quantity		Remarks
1	Wall panel	Accommodation	Asbestos	Insulation	2,500.00	kg	
2	Wall insulation	Engine control room	Lead	Perforated plate	0.01	kg	cover for insulation material
			Asbestos	Insulation	25.00	kg	under perforated plates
3							

## APPENDIX 3

### EXAMPLE OF THE DEVELOPMENT PROCESS FOR PART I OF THE INVENTORY FOR NEW SHIPS

#### 1 OBJECTIVE OF THE TYPICAL EXAMPLE

This example has been developed to give guidance and to facilitate understanding of the development process for part I of the Inventory of Hazardous Materials for new ships.

#### 2 DEVELOPMENT FLOW FOR PART I OF THE INVENTORY

Part I of the Inventory should be developed using the following three steps. However, the order of these steps is flexible and can be changed depending on the schedule of shipbuilding:

- .1 collection of hazardous materials information;
- .2 utilization of hazardous materials information; and
- .3 preparation of the Inventory (by filling out standard format).

#### 3 COLLECTION OF HAZARDOUS MATERIALS INFORMATION

##### 3.1 Data collection process for hazardous materials

Materials Declaration (MD) and Supplier's Declaration of Conformity (SDoC) for products from suppliers (tier 1 suppliers) should be requested and collected by the shipbuilding yard. Tier 1 suppliers may request from their suppliers (tier 2 suppliers) the relevant information if they cannot develop the MD based on the information available. Thus the collection of data on hazardous materials may involve the entire shipbuilding supply chain (Figure 1).

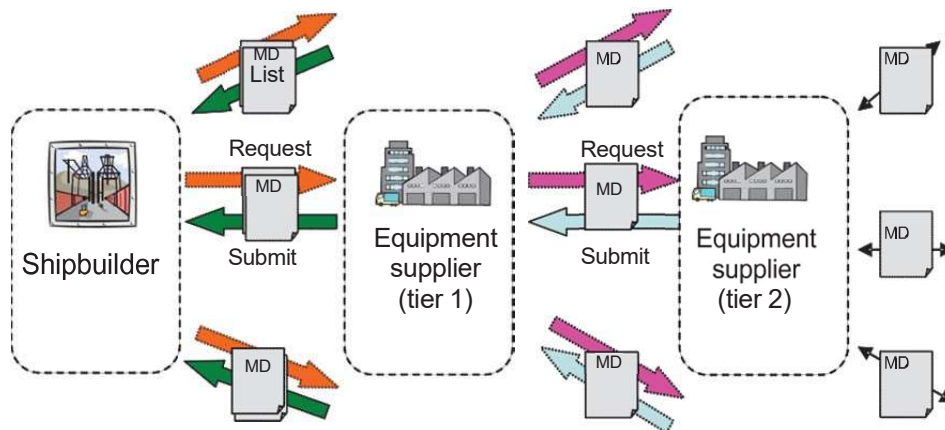


Figure 1 – Process of MD (and SDoC) collection showing involvement of supply chain



### 3.2 Declaration of hazardous materials

Suppliers should declare whether or not the hazardous materials listed in table A and table B in the MD are present in concentrations above the threshold values specified for each homogeneous material in a product.

#### 3.2.1 Materials listed in table A

If one or more materials listed in table A are found to be present in concentrations above the specified threshold value according to the MD, the products which contain these materials shall not be installed on a ship. However, if the materials are used in a product in accordance with an exemption specified by the Convention (e.g. new installations containing hydrochlorofluorocarbons (HCFCs) before 1 January 2020), the product should be listed in the Inventory.

#### 3.2.2 Materials listed in table B

If one or more materials listed in table B are found to be present in concentrations above the specified threshold value according to the MD, the products should be listed in the Inventory.

### 3.3 Example of homogeneous materials

Figure 2 shows an example of four homogeneous materials which constitute a cable. In this case, sheath, intervention, insulator and conductor are all individual homogeneous materials.

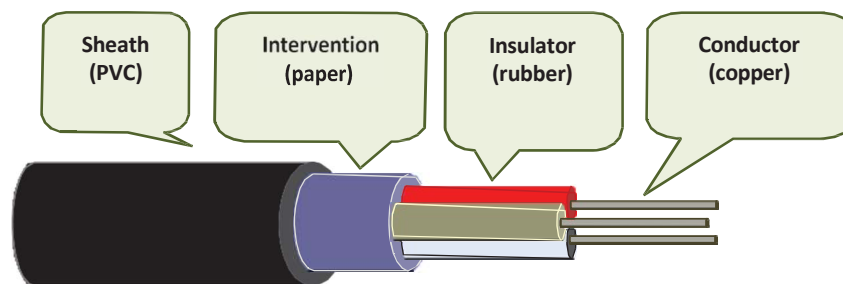


Figure 2 – Example of homogeneous materials (cable)

## 4 UTILIZATION OF HAZARDOUS MATERIALS INFORMATION

Products which contain hazardous materials in concentrations above the specified threshold values should be clearly identified in the MD. The approximate quantity of the hazardous materials should be calculated if the mass data for hazardous materials are declared in the MD using a unit which cannot be directly utilized in the Inventory.

## 5 PREPARATION OF INVENTORY (BY FILLING OUT STANDARD FORMAT)

The information received for the Inventory, as contained in table A and table B of appendix 1 of these guidelines, ought to be structured and utilized according to the following categorization for part I of the Inventory:

- Part I-1** Paints and coating systems;
- Part I-2** Equipment and machinery; and
- Part I-3** Structure and hull.

## 5.1 "Name of equipment and machinery" column

### 5.1.1 Equipment and machinery

5.1.1.1 The name of each item of equipment or machinery should be entered in this column. If more than one hazardous material is present in the equipment or machinery, the row relating to that equipment or machinery should be appropriately divided such that all of the hazardous materials contained in the piece of equipment or machinery are entered. If more than one item of equipment or machinery is situated in one location, both name and quantity of the equipment or machinery should be entered in the column. Examples are shown in rows 1 and 2 of table 1

5.1.1.2 For identical or common items, such as but not limited to bolts, nuts and valves, there is no need to list each item individually (see Bulk Listing in paragraph 3.2 of the guidelines). An example is shown in row 3 of table 1.

**Table 1 – Example showing more than one item of equipment or machinery situated in one location**

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approximate quantity	Remarks
1	Main engine	Engine-room	Lead	Piston pin bush	0.75 kg	
			Mercury	Thermometer charge air temperature	0.01 kg	
2	Diesel generator (x 3)	Engine-room	Mercury	Thermometer	0.03 kg	
3	FC valve (x 100)	Throughout the ship	Lead and lead compounds		20.5 kg	

### 5.1.2 Pipes and cables

The names of pipes and of systems, including electric cables, which are often situated in more than one compartment of a ship, should be described using the name of the system concerned. A reference to the compartments where these systems are located is not necessary as long as the system is clearly identified and properly named.

## 5.2 "Approximate quantity" column

The standard unit for approximate quantity of solid hazardous materials should be kg. If the hazardous materials are liquids or gases, the standard unit should be either m<sup>3</sup> or kg. An approximate quantity should be rounded up to at least two significant figures. If the hazardous material is less than 10 g, the description of the quantity should read "<0.01 kg".

**Table 2 – Example of a switchboard**

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approximate quantity	Remarks
	Switchboard	Engine control room	Cadmium	Housing coating	0.02 kg	
Mercury			Heat gauge	<0.01 kg	less than 0.01 kg	

**5.3 "Location" column**

**5.3.1** Example of a location list

It is recommended to prepare a location list which covers all compartments of a ship based on the ship's plans (e.g. general arrangement, engine-room arrangement, accommodation and tank plan) and on other documentation on board, including certificates or spare parts' lists. The description of the location should be based on a location such as a deck or room to enable easy identification. The name of the location should correspond to the ship's plans so as to ensure consistency between the Inventory and the ship's plans. Examples of names of locations are shown in table 3. For bulk listings, the locations of the items or materials may be generalized. For example, the location may only include the primary classification such as "Throughout the ship" as shown in the table 3 below.

**Table 3 – Examples of location names**

(A) Primary classification	(B) Secondary classification	(C) Name of location
Throughout the ship		
Hull part	Fore part	Bosun store
		...
	Cargo part	No.1 cargo hold/tank
		No.1 garage deck
		...
	Tank part	Fore peak tank
		No.1 WBT
		No.1 FOT
		...
		Aft Peak Tank
	Aft part	Steering gear room
		Emergency fire pump space
		...
	Superstructure	Accommodation
		Compass deck
		Nav. bridge deck
		...
Wheel house		
Engine control room		
	Cargo control room	
	...	
Deck house	Deck house	
	...	
(A) Primary classification	(B) Secondary classification	(C) Name of location
Machinery part	Engine-room	Engine-room
		Main floor
		2nd floor
		...
		Generator space/room
		Purifier space/room
		Shaft space/room
		Engine casing
		Funnel
		Engine control room
	...	
	Pump-room	
	...	
Exterior part	Superstructure	Superstructure
	Upper deck	Upper deck
	Hull shell	Hull shell
		bottom
		under waterline
	...	

### 5.3.2 Description of location of pipes and electrical systems

5.3.2.1 Locations of pipes and systems, including electrical systems and cables situated in more than one compartment of a ship, should be described for each system concerned. If they are situated in a number of compartments, the most practical of the following two options should be used:

- .1 listing of all components in the column; or
- .2 description of the location of the system using an expression such as those shown under "primary classification" and "secondary classification" in Table 3.

5.3.2.2 A typical description of a pipe system is shown in table 4.

**Table 4 – Example of description of a pipe system**

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approximate quantity	Remarks
	Ballast water system	Engine-room, Hold parts				

APPENDIX 6

FORM OF MATERIAL DECLARATION

<Date of declaration>

Date	
------	--

<MD ID number>

MD- ID-No.	
------------	--

<Supplier (respondent) information>

Company name	
Division name	
Address	
Contact person	
Telephone number	
Fax number	
Email address	
SDoC ID no.	

<Other information>

Remark 1	
Remark 2	
Remark 3	

<Product information>

Product name	Product number	Delivered unit		Product information
		Amount	Unit	

<Materials information>

This materials information shows the amount of hazardous materials contained in 

1	Unit
---	------

 (unit: piece, kg, m, m<sup>2</sup>, m<sup>3</sup>, etc.) of the product.

Table	Material name	Threshold value	Present above threshold value	If yes, material mass		If yes, information on where it is used	
			Yes / No	Mass	Unit(g)		
Table A (materials listed in appendix 1 of the Convention)	Asbestos	0.1% <sup>5</sup>					
	Polychlorinated biphenyls (PCBs)	50 mg/kg					
	Ozone depleting substances	Chlorofluorocarbons (CFCs)	no threshold value				
		Halons					
		Other fully halogenated CFCs					
		Carbon tetrachloride					
		1,1,1-Trichloroethane (Methyl chloroform)					
		Hydrochlorofluorocarbons <sup>5</sup>					
		Hydrobromofluorocarbons					
	Methyl bromide						
Bromochloromethane							
Anti-fouling systems containing organotin compounds as a biocide	2,500 mg total tin/kg						
Anti-fouling systems containing cybutryne	1,000 mg/kg <sup>7</sup>						

Table	Material name	Threshold value	Present above threshold value	If yes, material mass		If yes, information on where it is used
			Yes / No	Mass	Unit(g)	
Table B (materials listed in appendix 2 of the Convention)	Cadmium and cadmium compounds	100 mg/kg				
	Hexavalent chromium and hexavalent chromium compounds	1,000 mg/kg				
	Lead and lead compounds	1,000 mg/kg				
	Mercury and mercury compounds	1,000 mg/kg				
	Polybrominated biphenyl (PBBs)	50 mg/kg				
	Polybrominated diphenyl ethers (PBDEs)	1,000 mg/kg				
	Polychlorinated naphthalenes (more than 3 chlorine atoms)	50 mg/kg				
	Radioactive substances	no threshold value				
Certain shortchain chlorinated paraffins (Alkanes, C10-C13, chloro)	1%					

<sup>5</sup> If 1% is applied, this threshold value should be recorded in the Inventory and, if available, the Material Declaration and can be applied not later than five years after the entry into force of the Convention. The threshold value of 0.1% need not be retroactively applied to those Inventories and Material Declarations.

- <sup>6</sup> New installations which contain ozone-depleting substances shall be prohibited on all ships, except that new installations containing hydrochlorofluorocarbons (HCFCs) are permitted until 1 January 2020.
- <sup>7</sup> When samples are directly taken from the hull, average values of cybutryne should not be present above 1,000 mg of cybutryne per kilogram of dry paint.

APPENDIX 7

FORM OF SUPPLIER'S DECLARATION OF CONFORMITY

**SUPPLIER'S DECLARATION OF CONFORMITY FOR MATERIAL DECLARATION MANAGEMENT**

1 SDoC ID number: \_\_\_\_\_

2 Issuer's name: \_\_\_\_\_

Issuer's address: \_\_\_\_\_

3 Object(s) of the declaration: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4 The object(s) of the declaration described above is in conformity with the following documents:

Document no.:	Title:	Edition/date of issue:
5 _____	_____	_____
_____	_____	_____
_____	_____	_____

6 Additional information \_\_\_\_\_  
\_\_\_\_\_

Signed for and on behalf of \_\_\_\_\_  
\_\_\_\_\_

(Place and date of issue)

7 \_\_\_\_\_ (name, function)                      \_\_\_\_\_ (signature)