

SUGGESTED GUIDELINES TO SUPPLIERS

IHM MAINTENANCE PROCESS

The supplier undertakes to comply with all applicable laws, regulations and rules including, but not limited to, those relating to competition matters, applicable customs regulations and compliance and ethics mandates set forth below.

- (i). MSC.1/Circ.1379, SOLAS Reg. II-/3-5;
- (ii). SR/CONF/45, Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009;
- (iii). MEPC.269(68), Guidelines for the development of the inventory of hazardous materials;
- (iv). ISO 30005:2012, Ships and marine technology — Ship recycling management systems — Information control for hazardous materials in the manufacturing chain of shipbuilding and ship operations;
- (v). Regulation (EU) 1257/2013 of the European Parliament and the Council on ship recycling
- (vi). EMSA, GUIDANCE ON THE INVENTORY OF HAZARDOUS MATERIALS

a) HAZARDOUS MATERIALS

The Supplier hereby certifies that the use of hazardous materials referred to in Annex I on the supplied Produces & materials shall be prohibited or restricted as specified in Annex I, without prejudice to other requirements of relevant Union law which may require further measures.

b) SUPPLIER'S DECLARATION OF CONFORMITY AND MATERIAL DECLARATIONS

Suppliers should identify and declare the presence of a HM included in the Annex II of the SRR if it exceeds the threshold value specified in Annex B of this guidance. However, this provision does not apply to chemicals which do not constitute a part of the finished product. Suppliers should provide their customers with Supplier's Declarations of Conformity and Material Declarations in any case even when no HM are contained above the applicable threshold values.

SDoC and MD should be prepared and signed in accordance with the IMO guidelines and they should be drawn in the format provided in the IMO guidelines. However, due regard should be given to include in the IMO/MD form a supplement with a reference to the presence (or absence) of the two additional HM (PFOS¹ and HBCDD) included only in Annexes I and II of the SRR. An example of the Supplement to the IMO form of Material Declaration is shown in Annex D of this guidance.

The supplier compiling the SDoC should establish a company policy and use a suitable quality management system for the management of the chemical substances in products which the supplier manufactures or sells.

c) OBLIGATION OF SUPPLIER

Therefore, the supplier should establish the necessary procedures to manage the hazardous materials and within their company to manage their long-term environmental responsibilities.

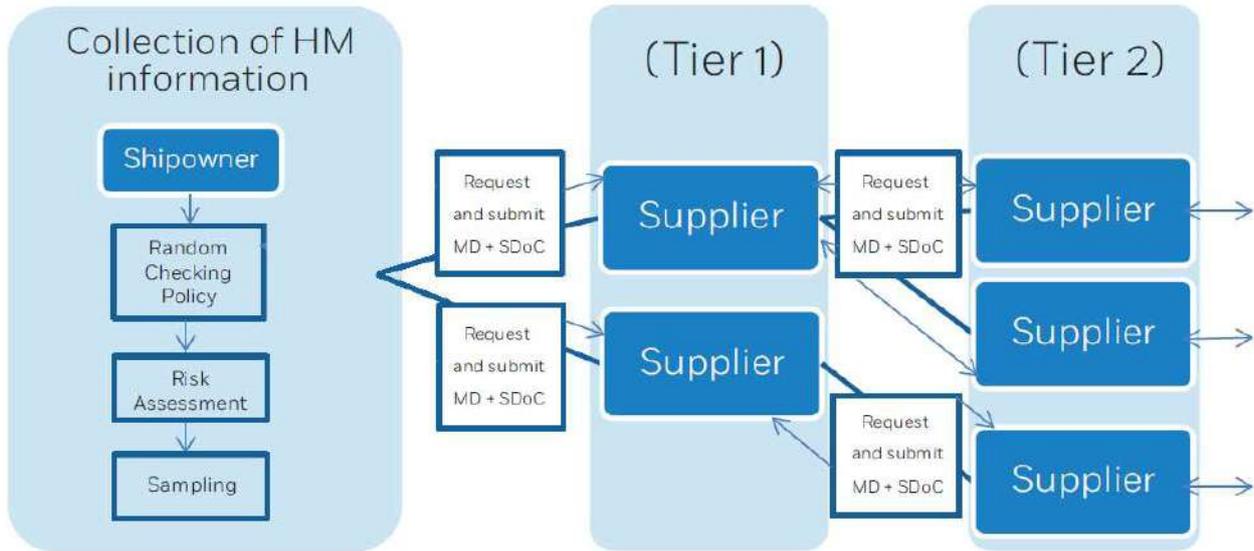
The supplier shall provide MD & SDoC (Annex III) which can be identified at least the hazardous materials referred to in Annex II for Each type of supplied Products & materials.

Should the checks perform reveal failure of the Supplier to comply with such commitment, the Buyer shall seek remedies and damages to the fullest extent permitted by law. In addition to the prohibition of asbestos, PCB, ODS, TBT, and PFOS referred to in Annex I in the Products, the Supplier warrants any Products onboard containing substances regulated by the Regulation (EU) 1257/2013 of the European Parliament and the Council on ship recycling, except when it is a one for one replacement, shall be notified to Buyer's representative in order to update and maintain the ships' inventory of hazardous materials.

¹ Not applicable for ships flying the flag of a third country

d) RIGHT TO AUDIT

However, in practice, there were cases where random sampling checking proved that MDs were not accurate. The Supplier acknowledges and agrees that the Buyer shall perform random checks on the Products and materials supplied throughout the duration of the Work to ensure commitment of the Supplier.



The checking of the materials may include visual checking and/or random samples which will be tested by indicative or field testing and/or random samples to be tested by specific testing

The Buyer reserves the right to audit the compliance of the Supplier's activities with the foregoing representations and warranties. This right is extended to the sending of self-assessment questionnaires or to perform on site audits. The purpose of this enquiry is to assess the level of compliance of the Supplier with the requirements set forth in this Contract.

Before performing the audit, the Buyer shall notify the Supplier and upon completion of the audit, the Buyer shall provide the Supplier with a copy of the report. The Buyer commits to keep the content of the audit report confidential.

The audit shall allow the Buyer to assign a score to the Supplier which shall impact the contractual relationships between the Parties.

Notwithstanding anything else in this Contract, in case of breach of any of the above representations and warranties, or that such a breach is substantially likely to occur, the Buyer may suspend or terminate the Contract, at any time, without notice or indemnity.

ANNEX I CONTROL OF HAZARDOUS MATERIALS

Hazardous Material	Definitions	Control measures
Asbestos	Materials containing asbestos	For all ships, new installation of materials which contain asbestos shall be prohibited.
Ozone-depleting substances	Controlled substances defined in Article 1(4) of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, listed in Annexes A,B,C or E to that Protocol in force at the time of application or interpretation of this Annex. Ozone-depleting substances that may be found on board ships include, but are not limited to: Halon 1211 Bromochlorodifluoromethane Halon 1301 Bromotrifluoromethane Halon 2402 1,2-Dibromo-1,1,2,2-tetrafluoroethane (also known as Halon 114B2) CFC-11 Trichlorofluoromethane CFC-12 Dichlorodifluoromethane CFC-113 1,1,2-Trichloro-1,2,2-trifluoroethane CFC-114 1,2-Dichloro-1,1,2,2-tetrafluoroethane CFC-115 Chloropentafluoroethane HCFC-22 Chlorodifluoromethane	
Polychlorinated biphenyls (PCB)	'Polychlorinated biphenyls' means aromatic compounds formed in such a manner that the hydrogen atoms on the biphenyl molecule (two benzene rings bonded together by a single carbon- carbon bond) may be replaced by up to ten chlorine atoms	For all ships, new installation of materials which contain Polychlorinated biphenyls shall be prohibited.
Perfluorooctane sulfonic acid (PFOS) ²	'perfluorooctane sulfonic acid' (PFOS) means perfluorooctane sulfonic acid and its derivatives	New installations which contain perfluoro- octane sulfonic acid (PFOS) and its derivatives shall be prohibited in accordance with Regulation (EC) No 850/2004 of the European Parliament and of the Council ³ .
Anti-fouling compounds and systems	Anti-fouling compounds and systems regulated under Annex I to the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001 (AFS Convention) in force at the time of application or interpretation of this Annex.	1. No ship may apply anti-fouling systems containing organotin compounds as a biocide or any other anti-fouling system whose application or use is prohibited by the AFS Convention. 2. No new ship or new installations on ships shall apply or employ anti-fouling compounds or systems in a manner inconsistent with the AFS Convention.

² Not applicable for ships flying the flag of a third country

³ Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC (OJ L 158, 30.4.2004, p. 7).

ANNEX II LIST OF ITEMS FOR THE INVENTORY OF HAZARDOUS MATERIALS

1. Any hazardous materials listed in Annex I
2. Cadmium and Cadmium Compounds
3. Hexavalent Chromium and Hexavalent Chromium Compounds
4. Lead and Lead Compounds
5. Mercury and Mercury Compounds
6. Polybrominated Biphenyl (PBBs)
7. Polybrominated Diphenyl Ethers (PBDEs)
8. Polychlorinated Naphthalenes (more than 3 chlorine atoms)
9. Radioactive Substances
10. Certain Shortchain Chlorinated Paraffins (Alkanes, C10-C13, chloro)
11. Brominated Flame Retardant (HBCDD)

ANNEX III TEMPLATE OF MD & SDOC

Material Declaration

<Date of declaration>

Date	
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<MD ID number>

MD-ID-No.	
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<Supplier (respondent) information>

Company name	
Division name	
Address	
Contact person	
Telephone number	
Fax number	
E-mail address	
SDoC ID-No.	

<Other information>

Remark 1	
Remark 2	
Remark 3	

<Product information>

Product name	Product number	Delivered unit		Product information
		Amount	Unit	

<Material information>

This materials information shows the amount of hazardous materials contained in

1	Unit
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Table	Material name	Threshold level	Present above threshold level	If yes, material mass		If yes, information on where it is used	
			Yes/No	Mass	Unit		
Table A** <small>(materials listed in appendix 1 of the Convention)</small>	Asbestos	0.1%*	No				
	Polychlorinated biphenyls (PCBs)	50 mg/kg	No				
	Ozone depleting substance	Chlorofluorocarbons (CFCs)	no threshold level	No			
		Halons		No			
		Other fully halogenated CFCs		No			
		Carbon tetrachloride		No			
		1,1,1-Trichloroethane		No			
		Hydrochlorofluorocarbons		No			
		Hydrobromofluorocarbons		No			
	Methyl bromide	No					
Bromochloromethane	No						
Anti-fouling systems containing organotin compounds as a biocide	2,500 mg total tin/kg	No					
Table B** <small>(materials listed in appendix 2 of the Convention)</small>	Cadmium and cadmium compounds	100 mg/kg	No				
	Hexavalent chromium and hexavalent chromium compounds	1,000 mg/kg	No				
	Lead and lead compounds	1,000 mg/kg	No				
	Mercury and mercury compounds	1,000 mg/kg	No				
	Polybrominated biphenyl (PBBs)	50 mg/kg	No				
	Polybrominated dephenyl ethers (PBDEs)	1,000 mg/kg	No				
	Polychloronaphthalenes (Cl >= 3)	50 mg/kg	No				
	Radioactive substances	no threshold level	No				
Certain shortchain chlorinated paraffins	1%	No					
Annex II*** <small>(Additional materials)</small>	Perfluorooctane sulfonic acid (PFOS)	10 mg/kg****	No				
	Brominated Flame Retardant (HBCDD)	100 mg/kg	No				

*Please refer to footnote 18 on the "Form of Material Declaration" in the IMO Guidelines Resolution MEPC.269(68).

**Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (SRACONF/95).

***Regulation EU No. 1257/2013 of the European Parliament and of the Council of 20 November 2013 on Ship Recycling and amending Regulation EC No. 1013/2006 and Directive 2009/16/EC.

****EMSA's Best Practice Guidance on the Inventory of Hazardous Materials, dated 2016-10-28.

*****Concentrations of PFOS above 10 mg/kg (0.001% by weight) when it occurs in substances or in preparations or concentrations of PFOS in semi-finished products or articles, or parts thereof equal to or above than 0.1% by weight calculated with reference to the mass of structurally or micro-structurally distinct parts that contain PFOS or for textiles or other coated materials, if the amount of PFOS is equal to or above than 1 µg/m² of the coated material.

Important Notice: The content and specifications of this form may not be changed or amended. Any changes or amendments by others than the author of this form constitute a breach of copyright law.

Supplier's Declaration of Conformity for Material Declaration Management

1) SDoC No.: _____

2) Issuer's name: _____

Issuer's address: _____

3) Object(s) of declaration: 1) _____
 2) _____
 3) _____
 4) _____

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

5) **Applicable Regulations or other stipulated requirements and documents**

Document No.	Title	Edition	Date of issue
ISO 9001	Quality management systems – Manual Rev. 2.1	2008	2008-09-25
(EU) 1257/2013	EU Ship Recycling Regulation	2013	2013-12-30
EMSA IHM Guidance	Guidance on the Inventory of Hazardous Materials	2017	
MSC.282(86)	Adoption of Amendments to the International Convention for the Safety of Life at Sea	2009	2009-06-05

6) **Additional Information:**

Signed for and on behalf of: _____

Place of issue

Date of issue

7) _____
 Name, function Signature

ANNEX IV INDICATIVE LIST FOR EACH HAZARDOUS MATERIALS

HAZARDOUS MATERIALS PROHIBITED FROM THE ANNEX 1 OF EU SHIP RECYCLING REGULATION AND APPENDICES 1 OF IMO HONG KONG CONVENTION

1.Asbestos

Indicative lists for asbestos developed on the basis of our research are shown below:

Structure and/or equipment	Component
Propeller shafting	Packing with low pressure hydraulic piping flange
	Packing with casing
	Clutch
	Brake lining
	Synthetic stern tubes
Diesel engine	Packing with piping flange
	Lagging material for fuel pipe
	Lagging material for exhaust pipe
	Lagging material turbocharger
Turbine engine	Lagging material for casing
	Packing with flange of piping and valve for steam line, exhaust line and drain line
	Lagging material for piping and valve of steam line, exhaust line and drain line
Boiler	Insulation in combustion chamber
	Packing for casing door
	Lagging material for exhaust pipe
	Gasket for manhole
	Gasket for hand hole
	Gas shield packing for soot blower and other hole
	Packing with flange of piping and valve for steam line, exhaust line, fuel line and drain line
	Lagging material for piping and valve of steam line, exhaust line, fuel line and drain line
Exhaust gas economizer	Packing for casing door
	Packing with manhole
	Packing with hand hole
	Gas shield packing for soot blower
	Packing with flange of piping and valve for steam line, exhaust line, fuel line and drain line
	Lagging material for piping and valve of steam line, exhaust line, fuel line and drain line
Incinerator	Packing for casing door
	Packing with manhole
	Packing with hand hole
	Lagging material for exhaust pipe
Auxiliary machinery (pump, compressor, oil purifier, crane)	Packing for casing door and valve
	Gland packing
	Brake lining
Heat exchanger	Packing with casing
	Gland packing for valve
	Lagging material and insulation
Valve	Gland packing with valve, sheet packing with piping flange
	Gasket with flange of high pressure and/or high temperature
Pipe, duct	Lagging material and insulation

Tank (fuel tank, hot water, tank, condenser), other equipment (fuel strainer, lubricant oil strainer)	Lagging material and insulation
Electric equipment	Insulation material
Airborne asbestos	Wall, ceiling
Ceiling, floor and wall in accommodation area	Ceiling, floor, wall
Fire door	Packing, construction and insulation of the fire door
Inert gas system	Packing for casing, etc.
Air-conditioning system	Sheet packing, lagging material for piping and flexible joint
Miscellaneous	Ropes
	Thermal insulating materials
	Fire shields/fire proofing
	Space/duct insulation
	Electrical cable materials
	Brake linings
	Floor tiles/deck underlay
	Steam/water/vent flange gaskets
	Adhesives/mastics/fillers
	Sound damping
	Moulded plastic products
	Sealing putty
	Shaft/valve packing
	Electrical bulkhead penetration packing
	Circuit breaker arc chutes
	Pipe hanger inserts
Weld shop protectors/burn covers	
Fire-fighting blankets/clothing/equipment	
Concrete ballast	

2. Polychlorinated biphenyl (PCBs)

Worldwide restriction of PCBs began on 17 May 2004 as a result of the implementation of the Stockholm Convention, which aims to eliminate or restrict the production and use of persistent organic pollutants. In Japan, domestic control began in 1973, with the prohibition of all activities relating to the production, use and import of PCBs. Japanese suppliers can provide accurate information concerning their products. The indicative list of PCBs has been developed as shown below:

Equipment	Component of equipment
Transformer	Insulating oil
Condenser	Insulating oil
Fuel heater	Heating medium
Electric cable	Covering, insulating tape
Lubricating oil	
Heat oil	Thermometers, sensors, indicators
Rubber/felt gaskets	
Rubber hose	
Plastic foam insulation	
Thermal insulating materials	
Voltage regulators	
Switches/reclosers/bushings	
Electromagnets	
Adhesives/tapes	
Surface contamination of machinery	
Oil-based paint	

Caulking	
Rubber isolation mounts	
Pipe hangers	
Light ballasts (component within fluorescent light fixtures)	
Plasticizers	
Felt under septum plates on top of hull	
bottom	

3. Ozone depleting substances

The indicative list for ozone depleting substances is shown below. Ozone depleting substances have been controlled according to the Montreal Protocol and MARPOL Convention. Although almost all substances have been banned since 1996, HCFC can still be used until 2020.

Materials	Component of equipment	Period for use of ODS in Japan
CFCs (R11, R12)	Refrigerant for refrigerators	Until 1996
CFCs	Urethane formed material	Until 1996
	Blowing agent for insulation of LNG carriers	Until 1996
Halons	Extinguishing agent	Until 1994
Other fully halogenated CFCs	The possibility of usage in ships is low	Until 1996
Carbon tetrachloride	The possibility of usage in ships is low	Until 1996
1,1,1-Trichloroethane (methyl chloroform)	The possibility of usage in ships is low	Until 1996
HCFC (R22, R141b)	Refrigerant for refrigerating machine	It is possible to use it until 2020
HBFC	The possibility of usage in ships is low	Until 1996
Methyl bromide	The possibility of usage in ships is low	Until 2005

4. Organotin compounds

Organotin compounds include tributyl tins (TBT), triphenyl tins (TPT) and tributyl tin oxide (TBTO). Organotin compounds have been used as anti-fouling paint on ships' bottoms and the International Convention on the Control of Harmful Anti-Fouling Systems on Ships (AFS Convention) stipulates that all ships shall not apply or re-apply organotin compounds after 1 January 2003, and that, after 1 January 2008, all ships shall either not bear such compounds on their hulls or shall bear a coating that forms a barrier preventing such compounds from leaching into the sea. The above-mentioned dates may have been extended by permission of the Administration bearing in mind that the AFS Convention entered into force on 17 September 2008.

5. PFOS

PFOS can be formed by degradation from a large group of related substances, referred to as PFOS related substances, and is a member of a larger family of perfluoroalkyl sulfonate (PFAS). In May 2009 PFOS was added to the Annex B of the Stockholm Convention and classified as a Persistent Organic Pollutant (POP).

PFOS is chronically toxic, injurious to reproduction, carcinogenic, toxic to aquatic organisms and widely distributed in the global environment. In the marine industry, it can be found in fire-fighting foams on vessels carrying inflammable fluids and those with helicopter decks, rubber and plastic materials (i.e.: cable sheaths, PVC flooring, gaskets and seals) and coatings (i.e.: paint).

An indicative list of materials and components that may contain PFOS is the following:

Materials	Component of equipment
PFOS	--AFFF (Aqueous film-forming foams): used for aviation, marine and shallow spill fires developed in the 1960s
	--FFFP (Film-forming Fluor-protein foams): used for aviation and shallow spill fires
	--AR-AFFF (Alcohol-resistant aqueous film-forming foams): multi-purpose foams
	--AR-FFFP (Alcohol-resistant film-forming flour-protein foams): multipurpose foams developed in the 1970s
	--Hydraulic fluids
	--Cable sheath
	--Coatings
	--Adhesives.

6. HAZARDOUS MATERIALS PROHIBITED FROM THE ANNEX 2 OF EU SHIP RECYCLING REGULATION AND APPENDICES 2 OF IMO HONG KONG CONVENTION

Materials	Component of equipment
Cadmium and cadmium compounds	Plating film, bearing
Hexavalent chromium compounds	Plating film
Mercury and mercury compounds	Fluorescent light, mercury lamp, mercury cell, liquid-level switch, gyro compass, thermometer, measuring tool, manganese cell, pressure sensors, light fittings, electrical switches, fire detectors
Lead and lead compounds	Corrosion resistant primer, solder (almost all electric appliances contain solder), paints, preservative coatings, cable insulation, lead ballast, generators
Polybrominated biphenyls (PBBs)	Non-flammable plastics
Polybrominated diphenyl ethers (PBDE)	Non-flammable plastics
Polychlorinated naphthalenes	Paint, lubricating oil
Radioactive substances	Refer to appendix 10
Certain shortchain chlorinated paraffins	Non-flammable plastics
HBCDD	--Switch plug cover
	--Electrical extension cover
	--Polymer material of switch board
	--Fire sensor/alarm cover
	--Light cover, cable sheath
	--Polymer made fire resistance insulation
	--Coatings
	--Flooring material.