

GDM QUICK REFERENCE GUIDE: GENERATING COMPLIANCE REPORTS FOR INVENTORY OF HAZARDOUS MATERIALS (IHM)

General

This document describes and presents step-by-step instructions for generating the data required to complete an Inventory of Hazardous Materials (IHM) declaration form for one BOM or multiple BOMs per the requirements as listed below using GreenData Manager (GDM) software:

- Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 SR/CONF/45 (HKC) and International Maritime Organization (IMO) MEPC.269(68), 2015.
- The EU Regulation on Ship Recycling (EU) No. 1257/2013 (EU SRR), which is in force since 31 December 2020.
- Guidance Document per European Maritime Safety Agency (EMSA)

Inventory of Hazardous Materials (IHM) Rule in GDM

In order to generate the compliance reports per IHM requirements, GreenSoft has developed a custom rule of “Inventory_of_Hazardous_Materials_for_EMSEA_IMO_Material_declaration” in GDM. Please make sure you have this custom rule added to your browser-based GDM software before trying to generate the IHM report. If you do not have such in your GDM software, you may need to contact GreenSoft to purchase such custom rule first.

Please review the screenshot below of the Material Declaration form for IHM to document and disclose the presence of hazardous materials for use in your electronic products onboard the ships.

<Material information>

This materials information shows the amount of hazardous materials contained in

	Unit
1	▼

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** (materials listed in appendix 1 of the Convention)	Asbestos	0.1%*	No ▼		▼		
	Polychlorinated biphenyls (PCBs)	50 mg/kg	No ▼		▼		
	Ozon 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** (materials listed in appendix 2 of the Convention)	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 diphenyl 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*** (Additional materials)	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 (SR/CONF/45).

***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.

Generating Compliance Report for IHM Rule in GDM

1. To generate the compliance report for an individual BOM, filter the BOM by the **BOM ID** and click on the **BOM ID**.

BOM List
Select the BOM(s) of interest to view details. Switch

Action Panel - Search: (use '_' and '%' as wildcards to assist with your search)

BOM ID: BOM Name:
 Project Name:
 Location:
 Manage Search:

Total Number of BOMs: 1 [Download Excel](#)

Now displaying page 1 of 1. BOMs per page: [Previous] [Next] Page #:

#	BOM ID	BOM Name	Project Name
1	AT100 <input type="button" value="Click"/>	Wireless Router	Advantage

2. GDM will redirect you to the BOM Details page; click on **View Reports** in the Action Panel.

BOM Details

BOM ID: AT100 Project Name: Advantage Location: Hawaii
 BOM Name: Wireless Router Revision: Imported Date: 07/04/2023 02:25:30 PM
 External BOM ID: Advantage Plus 100 Exemptions: R2-6c, R2-7a, R2-7c1
 Rule 2 for Charts:

Note: Parts maintained in GDM are having the unique combination of IPN + MFG + MPN. [Return](#) [Switch to Extended Minerals View](#) [Switch to Conflict Minerals View](#)

Number of Unique Parts:	30 [100.0 %]	Action Panel: <input checked="" type="checkbox"/> Include 2nd Source <input type="button" value="Delete this BOM"/> Action List: Click here to download the source file of this BOM Click here to view the RoHS Exemption List for all parts in this BOM Click here to view all Subassemblies of this BOM Download Compliance Statement: EU RoHS REACH SVHC <input type="button" value="View Reports"/> <input type="button" value="View Extended Fields"/>
Number of Unique Manufacturers:	21	
Number of Parts that match with Item Master:	30 [100.0 %]	
Number of Parts not matching with Item Master:	0 [0.0 %]	
Number of Parts with Part Mass specified:	28 [93.3 %]	

3. Click **Queue new report** on the BOM Reports Details page.

BOM Report Details

BOM ID: AT100 Project Name: Advantage
 BOM Name: Wireless Router Revision:
 Select an existing report to view or click appropriate links to queue a new report.
 Total Number of Reports: 44

4. To Queue the report, select **Compliance Report** for the Report Type, select the Rule Name by clicking on the drop-down arrow, select a Rule Name from the list, and click **Queue Report**.

Note: You can run the compliance report and schedule it for a later date or run a recurring report by selecting the options on the Recurrence Type. You have the option to include the 2nd source as well.

Queue BOM Report

BOM ID: AT100 **Project Name:** Advantage
BOM Name: Wireless Router **Revision:**
External BOM ID: Advantage Plus 100

Select a report type and the necessary parameters to schedule a new report or a new task. [Return](#)

Schedule Type: Now At a later date
Recurrence Type: None Daily Weekly Monthly

Report Type: Compliance Report

Run for: All BOMs

Report Name:

Rule Name: Inventory_of_Hazardous_Materials_for_EMSA_IMO_Material_declaration

Exclude Incomplete:
Include 2nd Source:

Queue Report

- If you need to generate the IHM report for multiple BOMs on each BOM individually, you can search for multiple BOMs by their BOM IDs, or BOM names, or Project names, and click on **Schedule Bulk reports**.

BOM List

Select the BOM(s) of interest to view details. [Switch to Extended Minerals View](#)

Action Panel - Search: (use '_' and '%' as wildcards to assist with your search)

BOM ID: BOM Name:
 AT100
 C16
 C15-1

Project Name:
 Location:

Manage Search: [Select Search](#) [Save Search](#)

Action Panel - List:
[View Compliance Summary](#)
[View Customer Compliance Summary](#)
[View Product Mass Analysis](#)
[View BOM REACH Reportable SVHC](#)
Schedule Bulk reports

Total Number of BOMs: 3 [Download Excel](#)

Now displaying page 1 of 1. BOMs per page: [Previous] [Next] Page #: [Go](#)

#	BOM ID	BOM Name	Project Name	Location	Revision
1	AT100	Wireless Router	Advantage	Hawaii	
2	C15-1	Control Board M590, DIV-15-1 v2		Pasadena	
3	C16	Control Board M609 V2, DIV-16-1		Finland	

If you want to generate the reports for BOMs with common starting characters, you can search the BOMs by the first character, and GDM will filter all BOMs beginning with the character. Then click on **Schedule Bulk reports** to generate the IHM report for the BOMs with the same first character individually.

BOM List
Select the BOM(s) of interest to view details. Switch to Extended Minerals View

Action Panel - Search: (use '_' and '%' as wildcards to assist with your search)

BOM ID: BOM Name: Search
 Project Name: Reset
 Location:

Action Panel - List:
[View Compliance Summary](#)
[View Customer Compliance Summary](#)
[View Product Mass Analysis](#)
[View BOM REACH Reportable SVHC](#)

Total Number of BOMs: 3 [Download Excel](#)

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#	BOM ID	BOM Name	Project Name	Location	Revisit
1	AT100	Wireless Router	Advantage	Hawaii	
2	AT1015	Wireless Router	Advantage	Hawaii	
3	AT1500	Wireless Router	Advantage	Hawaii	

- Once you click on **Schedule Bulk reports**, you will be redirected to the Queue BOM Report page, where you can Queue Report for multiple BOMs. Select **Compliance Report** for Report Type, select the Rule Name from the list, and click on **Queue Report** to generate the report.

Note: You can choose to run the compliance report for All BOMs based on a Rule, which can be done by selecting the check box for **All BOMs**. All other options are the same as mentioned above for the individual BOMs.

Queue BOM Report

Filter Conditions: BOMID [multiple BOM IDs].

BOM IDs:

Select a report type and the necessary parameters to schedule a new report or a new task.

Schedule Type: Now At a later date

Recurrence Type: None Daily Weekly Monthly

Report Type:

Run for: All BOMs

Report Name:

Rule Name:

Exclude Incomplete:

Include 2nd Source:

- To view your generated reports, go to the Reports tab and select the Report Type from the list (for IHM report, please use **Compliance Report** as the Report Type) by clicking on the Report Count number. After clicking the Report Count number, you will be redirected to the Report Details page, where you can view or download the reports.

Report Statistics

Note - report count is computed by filtering the most recent only and suppressing duplicates.

Display: Report Name: [Generate Custom Report](#)

#	Item/BOM	Report Type	Report Count
1	Item Master related [114]	Conflict Minerals Report - Company	8
2		Extended Minerals Report - Company	1
3		Grand Report	37
4		Substance Analysis Report	43
5		Substance Inquiry Report	14
6		Substance Matrix Report	11
7	BOM related [458]	BOM Compliance Summary	34
8		BOM Second Source Processing	2
9		China RoHS Report	18
10		Compliance Report	87
11		Conflict Minerals Report - Product	10
12		Conflict Minerals Report - List of Products	1

[Click Here](#)

Report Details

Total Number of Reports: 90 Report Name:

Now displaying page 1 of 2. Reports per page: [Previous] [Next] Date: Report Type: Page #:

#	Scheduled Date/Time	Report Name	Type	BOM ID	Options	Status	Request Start/End Date	Results	Download	Error
1	12/12/2023 11:54:56 AM	Compliance Report	Compliance Report	C16	Rule Name: Inventory_of_Hazardous_Materials_for_EMSA_IMO_Material_declaration Exclude Incomplete: No Include 2nd Source: No	Completed Rerun Delete	Start: 12/12/2023 11:55:31 AM End: 12/12/2023 11:55:33 AM	View	Excel	
2	12/12/2023 11:54:56 AM	Compliance Report	Compliance Report	C15-1	Rule Name: Inventory_of_Hazardous_Materials_for_EMSA_IMO_Material_declaration Exclude Incomplete: No Include 2nd Source: No	Completed Rerun Delete	Start: 12/12/2023 11:55:16 AM End: 12/12/2023 11:55:18 AM	View	Excel	
3	12/12/2023 11:54:56 AM	Compliance Report	Compliance Report	AT100	Rule Name: Inventory_of_Hazardous_Materials_for_EMSA_IMO_Material_declaration Exclude Incomplete: No Include 2nd Source: No	Completed Rerun Delete	Start: 12/12/2023 11:55:01 AM End: 12/12/2023 11:55:03 AM	View	Excel	

- Download the Excel report to perform the compliance analysis. In the BOM Compliance Report tab, you can view the compliance status for each substance or substance group, which is in the exact sequential order as listed in the IHM form. You can then simply copy-and-paste the compliance data from the Excel report to fill the table listed in the IHM form.

Item No	Type	Substance Name	CAS Number	Threshold	Units	Compliance Status	MCV (ppm) Homogeneous Level	Weight (mg)	Notes
1	Group	Asbestos		1000	ppm	Passed	0.000	0.000000000000	Table A
2	Group	Polychlorinated Biphenyls (PCBs)		50	ppm	Passed	0.000	0.000000000000	Table A
3	Group	IMO Chlorofluorocarbons(CFCs)		0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
4	Group	IMO Halons		0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
5	Group	IMO Other fully halogenated CF		0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
6	Substance	Carbon tetrachloride (CTC)	56-23-5	0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
7	Substance	1,1,1-trichloroethane (TCA)	71-55-6	0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
8	Group	IMO Hydrochlorofluorocarbons(HCFCs)		0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
9	Group	IMO Hydrobromofluorocarbons (HBFCs)		0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
10	Substance	Bromomethane	74-83-9	0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
11	Substance	Bromochloromethane (BCM Halo)	74-97-5	0	ppm	Passed	0.000	0.000000000000	Table A - Ozone depleting substances
12	Group	IMO Anti-fouling systems contain		2500	ppm	Passed	0.000	0.000000000000	Table A
13	Group	Cadmium/Cadmium Compounds		100	ppm	Passed	9.000	198.909000000000	Table B
14	Group	Hexavalent Chromium/Hexavalent		1000	ppm	Passed	0.000	0.000000000000	Table B
15	Group	Lead/Lead Compounds		1000	ppm	Failed	999000.000	407.842457504000	Table B
16	Group	Mercury/mercury compounds		1000	ppm	Passed	0.000	0.000000000000	Table B
17	Group	Polybrominated Biphenyls (PBBs)		50	ppm	Passed	0.000	0.000000000000	Table B
18	Group	Polybrominated Diphenylethers (PBDEs)		1000	ppm	Passed	0.000	0.000000000000	Table B
19	Group	Polychlorinated Naphthalenes (PCNs)		50	ppm	Passed	0.000	0.000000000000	Table B
20	Group	Radioactive Substances		0	ppm	Passed	0.000	0.000000000000	Table B
21	Group	Short Chain Chlorinated Paraffin		10000	ppm	Passed	0.000	0.000000000000	Table B
22	Group	Perfluorooctane sulfonates(PFOA)		1000	ppm	Passed	0.000	0.000000000000	Annex I - In substances or in preparation
23	Group	Hexabromocyclododecane (HBCDD)		100	ppm	Passed	0.000	0.000000000000	Annex II

- Please review the Failure Analysis tab in the Excel report to review the details on the failing substance or substance group. The weight and concentration details at a homogenous level are available, along with additional info. You can see the Table Name in the Notes section, which you must complete on the Material Declaration form for the failed Items.

Rule Substance Name	Type	Threshold	Units	Notes	Internal PN	Manufac	Manuf	Type	Substance	CAS Number	Applicable Weight (mg)	Homogeneous (ppm)
Lead/Lead Compounds	Group	1000	ppm	Table B	0022-10036-54	ON SEMIC	1N4935	ibstan	Lead	7439-92-1	7.381500000000	925000.000
					0030-00150-001	ROHM	MCR011	ibstan	Lead bisilicate	65997-18-4	0.000228096805	62905.903
								ibstan	Lead oxide(PbO) ir		0.000107684865	29697.977
								ibstan	Lead bisilicate	65997-18-4	0.000476710254	32508.883
								ibstan	Lead oxide(PbO) ir		0.000047344208	3228.601
								ibstan	Lead bisilicate	65997-18-4	0.001146518333	166403.241
								ibstan	Lead oxide(PbO) ir		0.002311511322	335487.855
								ibstan	Lead bisilicate	65997-18-4	0.001737880421	180128.568
								ibstan	Lead oxide(PbO) ir		0.005347110528	554219.582
					0030-00150-001	VENKEL	CR0402	ibstan	Lead in Glass		0.001000000000	166666.667
					0030-00150-001	YAGEO	RC0402	ibstan	Lead bisilicate	65997-18-4	0.000663773772	107755.483
					0030-00152-05	ROHM	MCR038	ibstan	Lead bisilicate	65997-18-4	0.000362661852	62787.717
								ibstan	Lead oxide(PbO) ir		0.000171738793	29733.171
								ibstan	Lead bisilicate	65997-18-4	0.000754288377	28588.856
								ibstan	Lead oxide(PbO) ir		0.000148530848	5629.580
								ibstan	Lead bisilicate	65997-18-4	0.002721472464	166247.555
								ibstan	Lead oxide(PbO) ir		0.005486358198	335147.111
								ibstan	Lead bisilicate	65997-18-4	0.004875720069	180548.790
					0030-00152-05	VENKEL	CR0603	ibstan	Lead oxide(PbO) ir		0.014945916580	553449.976
					0030-00152-05	VISHAY	CRCW0	ibstan	Lead(2+) silicate	10099-76-0	0.002506458060	155680.625
											0.001242174400	730690.823

- Please review the screenshot below, which shows the Table B section of the Material Declaration filled out for the failed item above.

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	
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	Yes	0.250820000000	(g)	Die Attach Solder, Electrode-1, Electrode-2, and Under Coat
	Mercury and mercury compounds	1,000 mg/kg				
	Polybrominated biphenyl (PBBs)	50 mg/kg				
	Polybrominated dephenyl ethers (PBDEs)	1,000 mg/kg				
	Polychloronaphthalenes (Cl >= 3)	50 mg/kg				
	Radioactive substances	no threshold value				
Certain shortchain chlorinated paraffins	1%					

Conclusion:

For companies selling electronic products to boats or ships, submitting declarations via the IHM form has become a crucial requirement. GreenSoft Technology, Inc. has developed a workflow to simplify this process for you, as described above. Additionally, we provide you with analytical tools for deeper insights and analysis.

For any questions, please contact support@greensofttech.com for assistance.