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NAVIGATION AND VESSEL INSPECTION CIRCULAR No. 13-82
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Subj: Cross Reference List Between the IMO Chemical Code and 46 CFR Part 153

1. PURPOSE. This Circular publishes updated cross reference lists between the 1980 edition of the International Maritime Organization (IMO; formerly IMCO) Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IMO Chemical Code), Resolution A.212, and 46 CFR Part 153, Safety Rules for Self-Propelled Vessels Carrying Hazardous Liquids.
2. DIRECTIVES AFFECTED. Navigation and Vessel Inspection Circular No.3-78 is canceled.
3. DISCUSSION. Since the publication of NVC 3-78, the IMO Chemical Code and Part 153 have been extensively amended. Part 153 was developed primarily from the IMO Chemical Code and contains standards that are equivalent to specific sections in the IMO Chemical Code. Enclosures (1) and (2) are the updated cross reference lists of equivalent sections for 46 CFR Part 153, as amended, to the IMO Chemical Code, and from the Code to Part 153, respectively. Enclosures (1) and (2) are designed to aid Coast Guard field offices and members of industry when comparing the standards of Part 153 with those of the IMO Chemical Code.


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- Encl: (1) Cross Reference List of Equivalent Requirements from 46 CFR Part 153 to the IMO Chemical Code
(2) Cross Reference List of Equivalent Requirements from the IMO Chemical Code to 46 CFR Part 153

Non-Standard Distribution:

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List CG-12; ZTC-68

<u>Section in 46 CFR Part 153</u>	<u>Equivalent section in IMO Chemical Code, Resolution A.212</u>
153.1	Preamble of IMO Chemical Code, 1.1, 1.2.1, 1.2.2
153.2	1.4, 2.3, 2.14.1, 2.14.2, 3.9 (Equivalent or comparable definitions may not appear in both Part 153 and the IMO Chemical Code)
153.5	1.6.1, 1.8
153.7(a),(b)	1.7.1, 1.7.2, 1.7.3 (The definitions of existing vessels are given in these sections. An existing vessel under Part 153 may or may not meet the definition of an existing vessel under the Code.)
153.7(c)	1.7.3(c),(d),(e),(f)
153.8	No comparable requirement in IMO Chemical Code
153.9 and footnote	1.6.2, 3.13, 3.14, 3.15 (Sections 3.13, 3.14, 3.15 are satisfied if a vessel has a SOLAS Safety Equipment Certificate.)
153.10	1.5.1, 2.2.5
153.12	1.6.1
153.15	No comparable requirement in IMO Chemical Code
153.16	No comparable requirement in IMO Chemical Code
153.20	2.2.4(a)
153.21	2.2.4(b)
153.22	2.2.4(c)
153.30	2.2.2
153.31	No comparable requirement in IMO Chemical Code
153.32	2.2.2(a),(b),(c)
153.34	2.2.3
153.35	No comparable requirement in IMO Chemical Code
153.200	2.7.3
153.202	2.7.3

153.208	2.21
153.209	2.22
153.214	3.16.1, 3.16.4, 3.16.5, 3.16.6(a), 3.16.9, 3.16.11
153.215	3.16.2, 3.16.7 (Part 153 does not describe safety equipment lockers in relation to pumproom locations.)
153.216	3.18.12 (IMO does not prescribe an upper water temperature limit.)
153.217	2.9.1
153.219	2.9.1
153.230	2.1.3, 2.2.4(a)
153.231	2.1.3, 2.2.4(b)
153.232	2.1.3, 2.2.4(c)
153.233	2.6.1
153.234	2.6.3, 2.6.4, 2.7.1
153.235	2.10.3
153.236	2.13.5, 2.17, 4.8.8, 4.10.2, 4.12.1, 4.12.2, 4.12.3, 4.12.4, 4.12.5, 4.12.8, 4.12.9
153.238	2.13.5, 2.17, 4.8.8, 4.12.6, 4.12.7
153.239	2.17
153.240	No comparable requirement in IMO Chemical Code
153.250	Preamble of IMO Chemical Code
153.251	2.3.2
153.252	2.3.2, 2.5, 4.1.2, column e of Chapter VI
153.254	2.9.1, 2.9.3, 2.9.4
153.256	2.9.2, 4.1.2
153.266	2.17, 4.8.2
153.280	2.6.3, 2.10.1, 2.10.2, 2.10.7

153.281	4.1.2
153.282	4.1.3, 4.7.5
153.283	2.10.4, 2.10.6, 2.11.1
153.284	4.7.22
153.285	2.10.5, 2.10.6
153.292	1.4.13(a), 4.7.17
153.294	2.23
153.296	2.11.1(c), 2.11.3 (IMO does not require shutdown stations as envisioned under 153.296.)
153.297	4.7.21
153.310	3.1.1, 3.1.2(b)
153.312	2.7.2, 3.1.1, 3.1.2
153.314	2.10.6, 3.1.2, 3.2
153.316	4.13.1
153.330	2.8.1, 2.8.3, 2.8.4, 2.8.5
153.332	2.8.2, 2.9.3
153.333	2.8.7
153.334	2.8.6 (IMO does not require a bilge alarm.)
153.336	3.16.6(b), 4.6.2, 4.13.2
153.350	2.7.2, 2.13.1, 2.14.2, 4.9.1
153.351	2.7.2, 2.13.1, 2.14.2
153.352	2.13.1
153.353	2.14.2, 4.9.1(d)
153.354	No comparable requirement in IMO Chemical Code
153.355	2.14.2
153.358	2.3.2, 2.13.2

153.360	2.13.2, 2.14.1, 2.14.2
153.361	2.14.2
153.362	2.13.4, 2.14.2
153.364	No comparable requirement in IMO Chemical Code
153.365	2.13.1, 2.13.2, 4.14.1, 4.14.2
153.368	No comparable requirement in IMO Chemical Code
153.370	2.13.1, 4.7.13, 4.7.14, 4.11.1
153.371	4.7.13, 4.7.14, 4.11.1
153.372	4.11.2, 4.11.3
153.400	No comparable requirement in IMO Chemical Code
153.404	3.9(c),(d), 4.7.6, 4.9.2, 4.14.1
153.406	2.14.2, 2.14.3, 3.9(b)
153.407	2.14.3, 3.9(b)
153.408	2.13.1, 4.14.2
153.409	2.13.1, 4.14.1
153.430	2.15.1, 2.15.3
153.432	4.7.15(a), 4.11.1
153.434	2.15.4
153.436	2.15.2, 4.7.15(c), 4.15.2(b)
153.438	2.15.5, 4.7.15(a) (Part 153 requires that an alarm sound only with a temperature or pressure rise.)
153.440	2.15.5, 4.3.3, 4.7.15, 4.11.4
153.460	3.13, 3.14, 3.15
153.461	3.7
153.462	2.19.3(e)
153.463	2.14.2

153.465	3.11
153.466	3.1.2(f), 3.3, 3.4, 3.5, 3.6, 3.8, 4.1.6, 4.1.10, 4.2.1, 4.2.4, 4.2.5, 4.6.5
153.500	2.19.2(a),(b), 2.19.3(a),(b), 4.1.1, 4.2.7, 4.7.19, 4.10.4 (Part 153 requires gas not to be reactive with the cargo. No specific concentrations are mentioned.)
153.501	2.19.2(c), 2.19.3(f), 4.10.4
153.515	4.1.6, 4.2.1, 4.2.2, 4.2.6
153.520	4.1.5, 4.1.7, 4.1.9
153.525	2.15.6, 4.9.2, 4.9.3, 4.9.4, 5.6
153.526	3.11, column i of Chapter VI
153.527	3.16.10, 4.17
153.530	2.10.1, 4.7.2, 4.7.3, 4.7.4, 4.7.7, 4.7.8, 4.7.9, 4.7.10, 4.7.14, 4.7.15, 4.7.16, 4.7.17, 4.7.21, 4.7.22, 4.7.23 (153.530(j) requires a separate venting system for alkylene oxides while IMO section 4.7.7 requires an independent venting system for propylene oxide.)
153.545	2.19.2(d), 4.3.1, 4.3.2
153.554	4.8.4, 4.8.6, 4.8.7
153.555	4.8.1
153.556	4.8.2, 4.8.3
153.557	4.8.2, 4.8.3
153.558	4.8.2, 4.8.3
153.559	4.8.2, 4.8.3
153.802	4.15.2(a)
153.806	2.2.1
153.808	No comparable requirement in IMO Chemical Code
153.809	No comparable requirement in IMO Chemical Code
153.810	No comparable requirement in IMO Chemical Code

153.811	No comparable requirement in IMO Chemical Code
153.812	No comparable requirement in IMO Chemical Code
153.900	No comparable requirement in IMO Chemical Code
153.901	No comparable requirement in IMO Chemical Code
153.902	No comparable requirement in IMO Chemical Code
153.904	No comparable requirement in IMO Chemical Code
153.905	5.2.1
153.907	5.2.2, 5.2.3
153.908	5.2.2, 5.2.3
153.910	No comparable requirement in IMO Chemical Code
153.912	4.4, 4.10.1, 4.10.3, 5.2.2(f)
153.914	No comparable requirement in IMO Chemical Code
153.920	5.1.1, 5.1.2
153.921	No comparable requirement in IMO Chemical Code
153.923	2.19.3, 4.1.1, 4.2.7, 4.10.4
153.930	3.16.11
153.931	2.8.1
153.932	3.16.1
153.933	3.16.3
153.934	3.1.1, 5.4
153.935	2.14.3, 3.16.3, 5.5
153.935a	4.16
153.938	No comparable requirement in IMO Chemical Code
153.940	2.12
153.959	No comparable requirement in IMO Chemical Code

153.955	No comparable requirement in IMO Chemical Code
153.957	5.3.2
153.959	No comparable requirement in IMO Chemical Code
153.964	4.1.8, 4.2.3, 4.7.8
153.966	4.1.8
153.968	5.2.2(e) (IMO does not detail specific cargo transfer requirements.)
153.970	5.2.2(a) (IMO does not detail specific cargo transfer requirements.)
153.972	5.2.2(e) (IMO does not detail specific cargo transfer requirements.)
153.974	5.2.2(a) (IMO does not detail specific cargo transfer requirements.)
153.975	4.1.1, 4.2.7, 4.14.1, 4.14.2, 5.2.2(e) (IMO does not detail specific cargo transfer requirements.)
153.976	No comparable requirement in IMO Chemical Code
153.977	5.2.2(e) (IMO does not detail specific cargo transfer requirements.)
153.979	2.14.3
153.980	4.14.2(c)
153.981	3.17, 4.7.18
153.983	4.7.12, 5.2.2(e) (IMO does not detail specific cargo transfer requirements.)
153.1000	4.15.2(c),(d)
153.1002	2.15.2, 4.10.6, 4.18.1, 4.18.2, 4.18.3
153.1004(a)	4.4, 4.10.2
153.1004(b)	2.15.2, 4.10.6
153.1010(a),(d)	2.19.3(d), 4.7.17, 4.7.20
153.1010(b)	4.7.6, 4.7.7, 4.7.8, 4.7.9, 4.7.12, 4.7.21

153.1010(c)	2.19.3(d), 4.7.10, 4.7.20
153.1011	4.7.2(a),(b),(c),(d),(f), 4.7.9
153.1020	2.15.8(a), 4.9.3(b), 5.8
153.1025	4.8.1, 4.6.3, 4.8.4
153.1035	4.4
153.1040	2.19.2(b), 2.19.3(c), 4.1.1, 4.1.7
153.1045	No comparable requirement in IMO Chemical Code
153.1046	No comparable requirement in IMO Chemical Code
153.1052	No comparable requirement in IMO Chemical Code
153.1500	No comparable requirement in IMO Chemical Code
153.1502	No comparable requirement in IMO Chemical Code
153.1504	3.16.8

<u>IMO Chemical Code, Section</u>	<u>Equivalent section in 46 CFR Part 153</u>
CHAPTER 1	
1.1	153.1
1.2.1	153.1
1.2.2	153.1
1.3	No comparable requirement in Part 153
1.4	153.2, .292 (Equivalent or comparable definitions may not appear in both Part 153 and the Code.)
1.5.1	153.10
1.5.2	No comparable requirement in Part 153
1.6.1	153.5, .12
1.6.2	153.9 and footnote
1.7.1	153.7(a),(b)
1.7.2	153.7(a)(2)
1.7.3	153.7(b),(c)
1.8	153.5
CHAPTER 2	
2.1	No comparable requirement in Part 153
2.1.1	No comparable requirement in Part 153
2.1.2	Table I
2.1.3	153.230, .231, .232
2.2.1	153.806
2.2.2	153.30, .32
2.2.3	153.34
2.2.4(a)	153.20, .230

2.2.4(b)	153.21, .231
2.2.4(c)	153.22, .232
2.2.5	153.10
2.3.1	153.2
2.3.2	153.2, .251, .252, .358
2.4	No comparable requirement in Part 153 (Part 153 specifies that a cargo tank must be designed to withstand a cargo's vapor pressure at 46°C. The design requirements for cargo tanks are found in Subchapter D)
2.5	153.252
2.5.1	153.233
2.5.2	(For cargo compatibility, see 46 CFR Part 150, Subpart A.)
2.6.3	153.234, .280(b)
2.6.4	153.234
2.7.1	153.234(a)
2.7.2	153.312, .350(b), .351(b)
2.7.3	153.200, .202
2.8.1	153.330(b),(c), .931
2.8.2	153.332
2.8.3	153.330(b)
2.8.4	153.330(d)
2.8.5	153.330(e)
2.8.6	153.334
2.8.7	153.333
2.8.8	Table I
2.9.1	153.217, .219, .254
2.9.2	153.256(a)(2)

2.9.3	153.254(c), .332
2.9.4	153.254(b)
2.9.5	153.10
2.10.1	153.280(a), .530(a)
2.10.2	153.280(a)
2.10.3	153.235
2.10.4	153.283 (For cargo compatibility, see 46 CFR Part 150, Subpart A.)
2.10.5	153.285
2.10.6	153.283, .314(b) (For cargo compatibility, see 46 CFR Part 150, Subpart A.)
2.10.7	153.280 (Part 153 references standards given in 46 CFR 56.)
2.11.1(a),(b)	153.283(a),(e)
2.11.1(c)	153.296(d),(e) (IMO does not require shutdown stations as envisioned under 153.296.)
2.11.2	153.296(b),(c)
2.12	153.940
2.13.1	153.350(b), .351(b), .352, .365, .408, .409
2.13.2	153.358(b), .360, .365, .370
2.13.3	No comparable requirement in Part 153 (see Subchapter D)
2.13.4	153.362
2.13.5	153.236, .238
2.14.1	153.2, .360
2.14.2	153.2, .350(b), .351(a), .353, .355, .360, .361, .362, .406(b)(3), .463
2.14.3	153.406(b)(3), .407, .935, .979
2.14.4	Table I

2.15.1	153.430
2.15.2	153.436, .1002, .1004(b)
2.15.3	153.430(b),(c)
2.15.4	153.434
2.15.5	153.438, .440 (Part 153 requires that an alarm sound only with temperature or pressure rise.)
2.15.6	153.525(d), .1020(b),(c)
2.16	Table I
2.17	153.236, .238, .239, .266
2.18	Table I
2.19.1	No comparable requirement in Part 153
2.19.2(a)	153.500(a)
2.19.2(b)	153.500(a), .1040(a) (Under Part 153, requirements for a water pad are specific only to carbon disulfide.)
2.19.2(c)	153.501
2.19.2(d)	153.545(a)(1) (Under Part 153, requirements for a tank ventilation system are specific only to liquid sulfur.)
2.19.3(a),(b)	153.500(c),(d), .923
2.19.3(e)	153.1040(a) (Under Part 153 requirements for a water pad are specific only to carbon disulfide.)
2.19.3(d)	153.1010
2.19.3(e)	153.462
2.19.3(f)	153.501
2.20	Table I
2.21	153.208
2.22	153.209
2.23	153.294

CHAPTER 3

3.1.1	153.310, .312, .934
3.1.2	153.310, .312, .314, .466 (Part 153 states in this provision that the requirements of 46 CFR Subchapter J must be met.)
3.2	153.314
3.3	153.466 (Part 153 states in this provision that the requirements of 46 CFR Subchapter J must be met.)
3.4	153.466 (Part 153 states in this provision that the requirements of 46 CFR Subchapter J must be met.)
3.5	153.466 (Part 153 states in this provision that the requirements of 46 CFR Subchapter J must be met.)
3.6	153.466 (Part 153 states in this provision that the requirements of 46 CFR Subchapter J must be met.)
3.7	153.461
3.8	153.466 (Part 153 states in this provision that the requirements of 46 CFR Subchapter J must be met.)
3.9	153.2, .404, .406, .407 (Equivalent definitions may not appear in both Part 153 and the IMO Code.)
3.10	Table I
3.11	153.465, .526
3.12	Table I
3.13	153.9, .460 (Section 3.13 is satisfied if a vessel has a SOLAS Safety Equipment Certificate.)
3.14	153.9, .460 (Section 3.14 is satisfied if a vessel has a SOLAS Safety Equipment Certificate.)
3.15	153.9, .460 (Section 3.15 is satisfied if a vessel has a SOLAS Safety Equipment Certificate.)
3.16.1	153.214(b)(2), .932
3.16.2	153.215
3.16.3	153.933, .935

3.16.4	153.214(b)(1)
3.16.5	153.214(b)
3.16.6	153.214(b)(1), .336(c)
3.16.7	153.215 (Part 153 does not describe safety equipment lockers in relation to the pumproom locations.)
3.16.8	153.1504
3.16.9	153.214(a)
3.16.10	153.527
3.16.11	153.214(e), .930
3.16.12	153.216
3.17	153.981

CHAPTER 4

4.1.1	153.500, .923, .975, .1040(a)
4.1.2	153.252, .256(b), .281
4.1.3	153.282
4.1.4	No comparable requirement in Part 153
4.1.5	153.520(c)
4.1.6	153.466, .515, .520(a),(b) (153.466 states that the requirements of 46 CFR Subchapter J must be met.)
4.1.7	153.520(a), .1040(c)
4.1.8	153.964, .986 (IMO limits these arrangements to carbon disulfide whereas Part 153 is not cargo specific.)
4.1.9	153.520(d)
4.1.10	153.466 (153.466 states that the requirements of 46 CFR Subchapter J must be met.)
4.2.1	153.466, .515(a) (153.466 states that the requirements of 46 CFR Subchapter J must be met.)
4.2.2	153.515(e)

- 4.2.3 153.964
- 4.2.4 153.466 (153.466 states that the requirements of 46 CFR Subchapter J must be met.)
- 4.2.5 153.466 (153.466 states that the requirements of 46 CFR Subchapter J must be met.)
- 4.2.6 153.515(b)
- 4.2.7 153.500, .923, .975(c)
- 4.3.1 153.545(a)
- 4.3.2 153.545(b), (c)
- 4.3.3 153.440 (IMO requires the temperature not to exceed 155°C while Part 153 has no specific temperature limit.)
- 4.4 153.912, .1004(a), .1085
- 4.5 No comparable requirement in Part 153 since the carriage of phosphorus is not presently permitted under Part 153
- 4.6.1 153.1025(a)
- 4.6.2 153.338 (Part 153 does not require the increased ventilation rates of 153.316 at present.)
- 4.6.3 153.1025(c),(d)
- 4.6.4 153.1025(b)(1)
- 4.7.1 No comparable requirement in Part 153
- 4.7.2 153.530(a), .1011
- 4.7.3 153.530(a),(b),(c),(d),(i)
- 4.7.4 153.530(g)
- 4.7.5 153.262
- 4.7.6 153.404(b), .1010(b)
- 4.7.7 153.530(h),(i),(j), .1010(b)
- 4.7.8 153.530(m), .1010(b)
- 4.7.9 153.530(k),(o), .1010(b), .1011(b)

4.7.10	153.530(h),(k),(l), .1010(c)
4.7.11	No comparable requirement in Part 153
4.7.12	153.983, .1010(b)(1)
4.7.13	153.370, .371
4.7.14	153.370, .371, .530(f)
4.7.15	152.432, .436, .438, .440, .530(f)
4.7.16	153.530(e)
4.7.17	153.292, .530(g),(j), .1010(a),(d)
4.7.18	153.981
4.7.19	153.500 (Part 153 requires gas not to be reactive with the cargo. No specific concentrations are mentioned.)
4.7.20	153.1010(a),(c),(d)
4.7.21	153.297, .530(p), .1010(b)(5)
4.7.22	153.284, .530(n)
4.7.23	153.530(q)
4.8.1	153.555(a)
4.8.2	153.266, .556(a), .557(a)(3), .558(b), .559
4.8.3	153.556, .557, .558, .559
4.8.4	153.554(a)
4.8.5	Table I, 153.466 (153.466 states that the requirements of 46 CFR Subchapter J must be met.)
4.8.6	153.554(b)
4.8.7	153.554(c)
4.8.8	153.236, .238
4.9.1	153.350, .353(b)
4.9.2	153.404, .525(f)

4.9.3	153.525(a),(f), .1020(a)
4.9.4	153.525(b)
4.10.1	153.912
4.10.2	153.236, .1004(a)
4.10.3	153.912
4.10.4	153.500, .501, .923
4.10.5	No comparable requirement in Part 153
4.10.6	153.1002, .1004
4.11.1	153.370, .371, .432
4.11.2	153.372(b)
4.11.3	153.372(a)
4.11.4	153.440
4.12.1	153.236(a),(b),(c),(g)
4.12.2	153.236(b),(c)
4.12.3	153.236(a),(c),(d) (Part 153 has no restrictions on lithium since it, like many other materials, is not used as material of construction.)
4.12.4	153.236(b)
4.12.5	153.236(a),(b)
4.12.6	153.238(a)
4.12.7(a)	153.238(b)
4.12.7(b)	153.238(c) (Part 153 requires type 304L or 316 stainless steel.)
4.12.8	153.236(b),(d),(f),(g)
4.12.9	153.236(b) (The definition of "alloy" is not mentioned in IMO or Part 153.)
4.13.1	153.312(a), .316

4.13.2	153.336
4.14.1	153.365, .404, .409, .975(f)
4.14.2	153.365, .408, .975(f), .980
4.15.1	(For cargo compatibility, see 46 CFR Part 150, Subpart A.)
4.15.2	153.438, .602, .1000
4.16	153.935a
4.17	Table I, 153.527
4.18	153.1002
CHAPTER 5	
5.1.1	153.920(a)
5.1.2	153.920(b)
5.2.1	153.905
5.2.2(a)-(d)	153.907, .908
5.2.2(e)	153.968, .970, .972, .974, .975, .977, .983 (IMO does not detail specific cargo transfer requirements.)
5.2.2(f)	153.912
5.2.3	153.907(a), .908
5.2.4	No comparable requirement in Part 153
5.3.1	No comparable requirement in Part 153
5.3.2	153.957
5.3.3	No comparable requirement in Part 153
5.4.1	153.934
5.4.2	153.934
5.5	153.935
5.6	153.525, .1020(b),(c)