

(2) All inner surfaces must be smooth and free of any protruding nails, screws or other projections.

(3) If constructed of wood, a portable magazine must be framed of nominal 5 cm × 10 cm (2×4 inch) lumber, and sheathed with nominal 20 mm (0.787 inch) thick boards or plywood.

(4) When constructed of metal, the metal must be not less than 3.2 mm (0.126 inch) thick.

(5) Runners, bearers, or skids must be provided to elevate the magazine at least 10 cm (3.9 inches) from the deck. Padeyes, ring bolts, or other suitable means must be provided for securing.

(6) If the portable magazine has a door or hinged cover, the door or cover must have a strong hasp and padlock or equally effective means of securing.

(7) The portable magazine must be marked on its top and four sides, in letters at least 8 cm (3 inches) high, as follows:

EXPLOSIVES—HANDLE CAREFULLY—KEEP LIGHTS AND FIRE AWAY.

(b) A portable magazine which meets the requirements for a type 2 or type 3 magazine under 27 CFR part 55 subpart K may be used for the stowage of Class 1 (explosive) materials on board vessels.

(c) A portable magazine with a capacity exceeding 3.1 m³ (110 cubic feet) may be used for the stowage of Class 1 (explosive) materials under such construction, handling, and stowage requirements as the COTP approves.

[Amdt. 176-30, 55 FR 52696, Dec. 21, 1990, as amended at 66 FR 45185, Aug. 28, 2001]

§ 176.138 Deck stowage.

(a) [Reserved]

(b) Class 1 (explosive) materials may not be stowed within a horizontal distance of 6 m (20 feet) from any fire, machinery exhaust, galley uptake, locker used for combustible stores, or other potential sources of ignition. They must be clear of walkways and cargo working areas, fire hydrants, steam pipes, and means of access; away from all other facilities necessary for the safe working of the vessel, and not less than a horizontal distance of 8 m (26 feet) from the bridge, accommodation areas, and lifesaving appliances.

(c) Where vessels are fitted with container fastening arrangements, freight containers containing Class 1 (explosive) materials may be overstowed by containers of compatible Class 1 (explosive) materials or non-hazardous cargo. Where vessels are not fitted with container fastening arrangements, freight containers loaded with Class 1 (explosive) materials may be stowed only on the bottom tier of the stowage.

[Amdt. 176-30, 55 FR 52696, Dec. 21, 1990, as amended at 69 FR 76184, Dec. 20, 2004]

SEGREGATION

§ 176.140 Segregation from other classes of hazardous materials.

(a) Class 1 (explosive) materials must be segregated from other packaged hazardous materials in accordance with § 176.83.

(b) Class 1 (explosive) materials must be segregated from bulk solid dangerous cargoes in accordance with the IMDG Code (IBR, see § 171.7 of this subchapter). Notwithstanding § 176.83(b), ammonium nitrate and sodium nitrate may be stowed together with blasting explosives, except those containing chlorates, provided the mixed stowage is treated as blasting explosives (see § 176.410(e)).

[Amdt. 176-30, 55 FR 52696, Dec. 21, 1990, as amended at 68 FR 45041, July 31, 2003; 68 FR 75748, Dec. 31, 2003]

§ 176.142 Hazardous materials of extreme flammability.

(a) Except as allowed by paragraph (b) of this section, certain hazardous materials of extreme flammability may not be transported in a vessel carrying Class 1 (explosive) materials. This prohibition applies to the following liquid hazardous materials:

Carbon disulfide.	UN1131 ...	Class 3
Diethylzinc ...	UN1366 ...	Division 4.2
Dimethylzinc	UN1370 ...	Division 4.2
Magnesium alkyls.	UN3053 ...	Division 4.2
Methyl phosphonous dichloride, pyrophoric liquid.	NA2845 ...	Division 6.1

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Nickel carbonyl.	UN1259 ...	Division 6.1
Pyrophoric liquid, inorganic, n.o.s..	UN3194 ...	Division 4.2
Pyrophoric liquid, organic, n.o.s..	UN2845 ...	Division 4.2
Organometallic substance, liquid, pyrophoric..	UN3392 ...	Division 4.2
Organometallic substance, liquid, pyrophoric, water-reactive..	UN3394 ...	Division 4.2

- (iii) CARTRIDGES, SIGNAL: UN Nos. 0054, 0312.
- (iv) SIGNAL DEVICES, HAND: UN No. 0191.
- (v) SIGNALS, DISTRESS: UN Nos. 0194, 0195.
- (vi) SIGNALS, SMOKE: UN Nos. 0196, 0197, 0313.
- (3) Class 1 (explosive) materials in compatibility groups C, D, and E if the total net explosive mass (weight) does not exceed 10 kg (22 pounds) per vessel.
- (4) Explosive articles in compatibility group G, except fireworks and Class 1 (explosive) materials requiring special stowage if the total net explosive mass (weight) does not exceed 10 kg (22 pounds) per vessel.

(b) The hazardous materials listed in paragraph (a) of this section may be transported in a vessel carrying the following Class 1 (explosive) materials as cargo:

(1) Division 1.4 (explosive) materials, compatibility group S.

(2) Explosive articles having the following proper shipping names and identification numbers (see column (4) of the §172.101 table) if designed for life-saving purposes and their total net explosive mass (weight) does not exceed 50 kg (110 lbs) per vessel:

(i) ARTICLES, PYROTECHNIC: UN Nos. 0428, 0429, 0430, 0431.

(ii) CARTRIDGES, FLASH: UN Nos. 0049, 0050.

(c) When a vessel carrying Class 1 (explosive) materials allowed under paragraph (b) of this section also carries a hazardous material of extreme flammability, that hazardous material must be stowed in a part of the vessel as remote as practicable from the Class 1 (explosive) materials.

[Amdt. 176-30, 55 FR 52696, Dec. 21, 1990, as amended at 66 FR 33438, June 21, 2001; 66 FR 45384, Aug. 28, 2001; 69 FR 76184, Dec. 20, 2004]

§ 176.144 Segregation of Class 1 (explosive) materials.

(a) Except as provided in §176.145 of this subchapter, stowage of Class 1 (explosive) materials within the same compartment, magazine, or cargo transport unit is subject to provisions contained in table 176.144(a).

TABLE 176.144(A)—AUTHORIZED MIXED STOWAGE FOR EXPLOSIVES

[An "X" indicates that explosives in the two different compatibility groups reflected by the location of the "X" may not be stowed in the same compartment, magazine, or cargo transport unit]

Compatibility groups	A	B	C	D	E	F	G	H	J	K	L	N	S
A		X	X	X	X	X	X	X	X	X	X	X	X
B	X		X	X	X	X	X	X	X	X	X	X	
C	X	X		6	6	X	1	X	X	X	X	4	
D	X	X	6		6	X	1	X	X	X	X	4	
E	X	X	6	6		X	1	X	X	X	X	4	
F	X	X	X	X			X	X	X	X	X	X	
G	X	X	1	1	1	X		X	X	X	X	X	
H	X	X	X	X	X	X			X	X	X	X	
J	X	X	X	X	X	X	X			X	X	X	
K	X	X	X	X	X	X	X	X			X	X	
L	X	X	X	X	X	X	X	X	X		X	2	X
N	X	X	4	4	4	X	X	X	X	X	X	3	5
S	X										X	5	

NOTES: 1. Explosive articles in compatibility group G, other than fireworks and those requiring special stowage, may be stowed with articles of compatibility groups C, D, and E, provided no explosive substances are carried in the same compartment, magazine or cargo transport unit.

2. Explosives in compatibility group L may only be stowed in the same compartment, magazine or cargo transport unit with identical explosives within compatibility group L.

3. Different types of articles of Division 1.6, compatibility group N, may only be transported together when it is proven that there is no additional risk of sympathetic detonation between the articles. Otherwise they must be treated as division 1.1.