

**DEPARTMENT OF TRANSPORTATION**

**Research and Special Programs Administration**

**49 CFR Part 172**

[Docket No. HM-171; Amdt. No. 68]

**Use of United Nations Shipping Descriptions**

**AGENCY:** Materials Transportation Bureau (MTB), Research and Special Programs Administration, DOT.

**ACTION:** Final rule.

**SUMMARY:** This document publishes a revised version of the Optional Hazardous Materials Table which appears in 49 CFR 172.102. The revision has been necessitated by a number of changes to the Inter-Governmental Maritime Consultative Organization (IMCO) International Maritime Dangerous Goods Code (IMCO Code) upon which the optional table is based. These amendments have been published by IMCO as Amendments 17-79 and 18-79 to the IMCO Code. The purpose of the revision of the Optional Hazardous Materials Table is to maintain alignment between that table and the corresponding provisions of the IMCO Code, in order to insure that the import and export of hazardous materials will not be adversely affected by potentially conflicting and duplicative requirements for the description, classification, labeling and marking of hazardous materials. Since the use of the Optional Hazardous Materials Table is, as the name implies, an option, this rule will

not impose an undue burden on persons affected by the regulations.

**EFFECTIVE DATE:** June 1, 1981.

**FOR FURTHER INFORMATION CONTACT:** Edward A. Altemos (202-426-0656), Office of Hazardous Materials Regulation, Materials Transportation Bureau, Department of Transportation, 400 Seventh Street, S.W., Washington, D.C. 20590. Office hours are from 8:00 a.m. to 4:30 p.m., Eastern time, Monday through Friday.

**SUPPLEMENTARY INFORMATION:** The purpose of the Optional Hazardous Materials Table is to facilitate the international transportation of hazardous materials and to minimize a duplicity of package marking and labeling requirements, and shipping paper descriptions, that would be required to comply with both domestic and international standards. In order to satisfy this intent, it is essential that the Optional Hazardous Materials Table be maintained in alignment with the provisions of the applicable international standards.

The Optional Hazardous Materials Table, in its present form, is reflective of the provisions of the IMCO Code including all amendments through Amendment 16-78. Recently, IMCO published Amendments 17-79 and 18-79 to the IMCO Code, and established June 1, 1981, as the world-wide implementation date for these amendments. Consequently, the MTB is revising the Optional Hazardous Materials Table to maintain the necessary alignment with the IMCO Code and is establishing June 1, 1981, as the effective date for revision of the table.

Amendments 17-79 and 18-79 to the IMCO Code include changes to or deletion of approximately 360 existing hazardous materials entries and the addition of approximately 260 new entries. Because of the optional nature § 172.102, as well as the large number of changes necessitated by the recent IMCO amendments (many of which are minor in nature), the MTB does not consider it necessary to itemize each change being made to the Optional Hazardous Materials Table. However, to facilitate identification of new or modified entries, such entries have been identified by the inclusion of an asterisk (\*) in Column (1) of the table. A copy of the amended optional table has been provided to the Association of American Railroads for use in their efforts to develop a hazardous materials table which consolidates the tables currently appearing in §§ 172.101 and 172.102.

Since this rule does not impose mandatory additional requirements, notice and procedure thereon are considered unnecessary.

**PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS**

In consideration of the foregoing, the Optional Hazardous Materials Table in § 172.102 of Title 49, Code of Federal Regulations, is revised to read as follows:

**§ 172.102 Purpose and use of optional hazardous materials table for international shipments.**

\* \* \* \* \*

BILLING CODE 4910-60-M

## 172.102 Optional Hazardous Materials Table

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pas- senger vessel	
	Acetal	3.1	UN 1038	Flammable Liquid	II	1.3	5	Keep cool
	Acetaldehyde	3.1	UN 1039	Flammable Liquid	I	1.3	5	Keep cool
	Acetaldehyde oxime	3.3	UN 2332	Flammable Liquid	II	1.2	1.2	
	Acetic acid solution containing not less than 80% of acid	3.3	UN 1842	Flammable Liquid, Corrosive	II	1.2	1.2	Stow 'separated from' oxidizers
	Acetic anhydride	8	UN 1715	Corrosive, Flammable Liquid	II	1.2	1.2	Stow 'separated longitudinally by an inter- vening complete compartment or hold from' explosives. Segregation same as for flammable liquids
	Acetone	3.1	UN 1090	Flammable Liquid	II	1.3	5	
	Acetone cyanohydrin, stabilized	6.1	UN 1541	Poison	I	1	5	Shade from radiant heat. Stow 'away from' acids and alkalis
	Acetone oils	3.2	UN 1091	Flammable Liquid	II	1.2	1	
	Acetonitrile. See Methyl cyanide							
	Acetyl acetone peroxide, maximum concentration 40% in solution	5.2	UN 2030	Organic Peroxide	II	1	5	
	Acetyl benzoyl peroxide, maximum concentration 45% in solution	5.2	UN 2031	Organic Peroxide	II	1	5	
	Acetyl bromide	8	UN 1716	Corrosive	I	1	1	Keep dry. Glass carboys prohibited on pas- senger vessels
	Acetyl chloride	3.2	UN 1717	Flammable Liquid, Corrosive	II	1.2	1	
	Acetyl cyclohexane sulphonyl peroxide, maximum concentration 82%, wetted with minimum 12% water	5.2	UN 2032	Organic Peroxide	I	1	5	Control temperature -10 deg C. Emergency temperature 0 deg C
	Acetyl cyclohexane sulphonyl peroxide, maximum concentration 32% in solution	5.2	UN 2033	Organic Peroxide	II	1	5	Control temperature -10 deg C. Emergency temperature 0 deg C
	Acetylene, dissolved	2.1	UN 1001	Flammable Gas	-	1	1	Shade from radiant heat. Stow 'separated from' chlorine
	Acetyl iodide	8	UN 1898	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on pas- senger vessels
	Acetyl methyl carbinol	3.3	UN 2621	Flammable Liquid	III	1.2	1.2	
	Acetyl peroxide, maximum concentration 27% in solution	5.2	UN 2034	Organic Peroxide	II	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
	Acid mixtures, hydrofluoric and sulphuric	8	UN 1786	Corrosive	I	1	5	Stow 'away from' fluorides
	Acid mixtures, nitrating acid	8	UN 1796	Corrosive	I/II	1	5	Stow 'away from' fluorides
	Acid mixtures, spent, nitrating acid	8	UN 1826	Corrosive	I/II	1	5	Stow 'away from' fluorides
	Acids, liquid, n.o.s.. See Corrosive liquids, n.o.s.							
	Acridine	4.1	UN 2713	Flammable Solid	III	1.2	1.2	
	Acrolein dimer, stabilized	3.3	UN 2607	Flammable Liquid	II	1.2	1.2	
	Acrolein, inhibited	3.1	UN 1092	Flammable Liquid, Poison	I	1.3	5	Keep cool
	Acrylamide	6.1	UN 2074	St. Andrews Cross	III	1.2	1.2	Shade from radiant heat. Keep cool
	Acrylic acid, inhibited	8	UN 2218	Corrosive, Flammable Liquid	II	1	1	Shade from radiant heat. Keep cool. Glass carboys prohibited on passenger vessels
	Acrylonitrile, inhibited	3.1	UN 1093	Flammable Liquid, Poison	I	1.3	5	Keep cool
	Activated carbon. See Carbon, activated							
	Activated charcoal. See Carbon, activated							
	Adhesives, n.o.s.. See Cement, adhesive, containing a flammable liquid							
	Adiponitrile	6.1	UN 2205	St. Andrews Cross	III	1.2	1.2	Shade from radiant heat
	Aerosol dispensers, with a capacity below 1400 cubic cm.:							
	(1) more than 10% by weight of total contents consisting of flam- mable gas	2.1	UN 1950	Flammable Gas	-	1.3	1.3	
	(2) internal pressure greater than 160 psig at 130 deg F.	2.2	UN 1950	Nonflammable Gas	-	1.3	1.3	
	(3) more than 45% by weight of total contents consisting of flam- mable liquid. This limit is reduced to 35% if there is any flammable gas present.	3.1	UN 1950	Flammable Liquid	-	1.3	1.3	
		3.2	UN 1950	Flammable Liquid	-	1.3	1.3	
		3.3	UN 1950	Flammable Liquid	-	1.3	1.3	
	(4) more than 10% by weight of toxic substances in the liquid concentrate	6.1	UN 1950	Poison	I/II	1.3	1.3	
		6.1	UN 1950	St. Andrews Cross	III	1.3	1.3	
	(5) more than 5% by weight of corrosive substances in the liquid concentrate	8	UN 1950	Corrosive	-	1.3	1.3	
	(6) as specified under Group 2 on page 9011 of IMCO Code	9	UN 1950	None	-			
N	Aerosol dispensers, with a capacity of 1400 cubic cm. or more	2	UN 1950		-			
	Aerosols or aerosol product. See Aerosol dispensers							
	Agents, blasting, Type B. See Explosives, blasting, Type B							
	Agents, blasting, Type E. See Explosives, blasting, Type E							
	Air, compressed	2.2	UN 1002	Nonflammable Gas	-	1.2	1.2	
	Air, refrigerated liquid	2.2	UN 1003	Nonflammable Gas, Oxidizer	-	1.3	1.3	Stow 'separated from' acetylene. Do not overstow
	Alarm devices, explosive	1.4 S	UN 0001	None. Package to be marked '1.4 S'	-	1.3	1.3	
	Alcohols, (non-toxic), n.o.s.	3.1	UN 1987	Flammable Liquid	I/II	1.3	5	Keep cool
		3.2	UN 1987	Flammable Liquid	II	1.2	1	
		3.3	UN 1987	Flammable Liquid	II	1.2	1	
	Alcohols, toxic, n.o.s.	3.1	UN 1986	Flammable Liquid, Poison	I/II	1.3	5	Keep cool
		3.2	UN 1986	Flammable Liquid, Poison	II	1.2	1	
		3.3	UN 1986	Flammable Liquid, Poison	II	1.2	1	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
•	Aldehydes, ( <i>non-toxic</i> ), n.o.s.	3.1	UN 1989	Flammable Liquid	I/II	1,3	5	Keep cool
		3.2	UN 1989	Flammable Liquid	II	1,2	1	
		3.3	UN 1989	Flammable Liquid	II	1,2	1,2	
•	Aldehydes, <i>toxic</i> , n.o.s.	3.1	UN 1988	Flammable Liquid, Poison	I/II	1,3	5	Keep cool
		3.2	UN 1988	Flammable Liquid, Poison	II	1,2	1	
		3.3	UN 1988	Flammable Liquid, Poison	II	1,2	1,2	
•	Aldol.	6.1	UN 2839	Poison	II	1,3	1,3	Keep cool. Shade from radiant heat. Stow 'away from' living quarters
Alkali metal amalgams, n.o.s.	4.3	UN 1389	Dangerous When Wet	I	1,2	1,2		
Alkali metal amides, n.o.s.	4.3	UN 1390	Dangerous When Wet	II	1,2	5		
•	Alkali metal dispersions, n.o.s. or Alkali earth metal dispersions, n.o.s.	4.3	UN 1391	Dangerous When Wet	I	1,2	5	Keep cool. Shade from radiant heat. Stow 'away from' living quarters
Alkali metals, liquid alloys of	4.3	UN 1421	Dangerous When Wet	I	1,2	5		
Alkaline caustic liquids, n.o.s. See Caustic alkali liquids, n.o.s.	8	UN 1760	Corrosive	II	1,2	1,2		
•	Alkaline corrosive liquids, n.o.s.	4.3	UN 1382	Dangerous When Wet	I	1,2	1,2	Keep cool. Shade from radiant heat. Stow 'away from' living quarters
Alkaline earth metal amalgams, n.o.s.	6.1	UN 1544	Poison	I/II	1,2	1,2		
Alkaloids, n.o.s. or Alkaloid salts, n.o.s.	6.1	UN 1544	St. Andrews Cross	III	1,2	1,2		
•	Alkanesulphonic acids	8	UN 1899	Corrosive	II	1,2	1	If flashpoint 61 deg C or below, segregation same as for flammable liquids
Alkylamines and polyamines, flashpoint below 23 deg C and boiling point above 35 deg C but not more than 200 deg C, n.o.s.	3.2	UN 2733	Flammable Liquid, Corrosive	II	1,2	1		
Alkylamines and polyamines, flashpoint 23 deg C or above, boiling point above 35 deg C but not more than 200 deg C, n.o.s.	8	UN 2734	Corrosive, Flammable Liquid (only if flashpoint 61 deg C or below)	II	1,2	1,2		
•	Alkylamines and polyamines, flashpoint of 23 deg C or above and boiling point above 200 deg C, n.o.s.	8	UN 2735	Corrosive, Flammable Liquid (only if flashpoint 61 deg C or below)	III	1,2	1,2	If flashpoint 61 deg C or below, segregation same as for flammable liquids
•	Alkyl, Aryl or Toluene sulphonic acid, liquid, containing more than 5% free sulphuric acid	8	UN 2584	Corrosive	II	1,2	1	Glass carboys not permitted under deck
•	Alkyl, Aryl or Toluene sulphonic acid, liquid, containing not more than 5% free sulphuric acid	8	UN 2586	Corrosive	III	1,2	1	Glass carboys not permitted under deck
•	Alkyl, Aryl or Toluene sulphonic acid, solid, containing more than 5% free sulphuric acid	8	UN 2583	Corrosive	II	1,2	1,2	Keep dry
•	Alkyl, Aryl or Toluene sulphonic acid, solid, containing not more than 5% free sulphuric acid	8	UN 2585	Corrosive	III	1,2	1,2	Keep dry
•	Alkyl phenols, n.o.s.	6.1	UN 2430	St. Andrews Cross	III	1,2	1,2	Keep cool
Alloys of alkaline earth metals, ( <i>non-pyrophoric</i> ), n.o.s.	4.3	UN 1393	Dangerous When Wet	II	1,2	5		
Allyl acetate	3.2	UN 2333	Flammable Liquid, Poison	II	1,3	5		
•	Allyl alcohol	3.2	UN 1098	Flammable Liquid, Poison	I	1,2	1	Keep cool
Allylamine	3.1	UN 2334	Flammable Liquid, Poison	I	1,3	5		
Allyl bromide	3.2	UN 1099	Flammable Liquid, Poison	I	1,2	1		
•	Allyl chloride	3.1	UN 1100	Flammable Liquid, Poison	I	1,3	5	Keep cool
Allyl chlorocarbonate. See Allyl chloroformate	8	UN 1722	Corrosive, Flammable Liquid	I	1	5		
Allyl chloroformate	3.2	UN 2335	Flammable Liquid, Poison	II	1,3	5		
•	Allyl ethyl ether	3.2	UN 2336	Flammable Liquid, Poison	I	1,3	5	Keep cool
Allyl formate	3.2	UN 2336	Flammable Liquid, Poison	I	1,3	5		
Allyl glycidyl ether	3.3	UN 2219	Flammable Liquid	III	1,2	1,2		
•	Allyl iodide	3.2	UN 1723	Flammable Liquid, Corrosive	I	1,2	1	Shade from radiant heat. Stow 'away from' living quarters. Segregation same as for flammable liquids
Allyl isothiocyanate, stabilized	6.1	UN 1545	Poison, Flammable Liquid	II	1	5		
Allyl trichlorosilane, stabilized	8	UN 1724	Corrosive, Flammable Liquid	II	1	1		
•	Aluminium alkyl chlorides, pure	4.2	UN 2221	Spontaneously Combustible	I	1	1	Keep dry. Stow 'separated longitudinally by an intervening complete compartment or hold from' explosives. Segregation same as for flammable liquids
Aluminium alkyl halides, in solution	4.2	UN 2220	Spontaneously Combustible	II	1	1		
Aluminium alkyl halides, pure	4.2	UN 2221	Spontaneously Combustible	I	1	1		
•	Aluminium alkyls	4.2	UN 2003	Spontaneously Combustible	I	1	1	Keep dry
Aluminium bromide, anhydrous	8	UN 1725	Corrosive	II	1,2	1,2		
Aluminium carbide	4.3	UN 1394	Dangerous When Wet	II	1,2	1,2		
•	Aluminium chloride, anhydrous	8	UN 1726	Corrosive	II	1,2	1,2	Keep dry
Aluminium ferrosilicon, powder	4.3	UN 1395	Dangerous When Wet	II	1,2	1,2		

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Passenger vessel	
	Aluminum hydride	4.2	UN 2463	Spontaneously Combustible	I	1.2	5	
	Aluminum nitrate	5.1	UN 1438	Oxidizer	III	1.2	1.2	
*	Aluminum phosphide	4.3	UN 1397	Dangerous When Wet, Poison	I	1	5	
*	Aluminum powder, coated	4.1	UN 1309	Flammable Solid	III	1.2	1.2	Keep dry. Stow 'away from' liquid halogenated hydrocarbons
	Aluminum, powder, pyrophoric. See Pyrophoric metals							
*	Aluminum, powder, uncoated, non-pyrophoric	4.3	UN 1396	Dangerous When Wet	II	1.2	1.2	
	Aluminum silicon, powder, uncoated	4.3	UN 1398	Dangerous When Wet	III	1.2	1.2	
	Aluminum tributyl	4.2	UN 2003	Spontaneously Combustible	I	1	1	
	Aluminum triethyl	4.2	UN 1102	Spontaneously Combustible	I	1	1	
	Aluminum trimethyl	4.2	UN 1103	Spontaneously Combustible	I	1	1	
*	Aluminum bromide solution	8	UN 2580	Corrosive	III	1.2	1.2	
*	Aluminum chloride solution	8	UN 2581	Corrosive	III	1.2	1.2	
*	Aluminum resin	4.1	UN 2715	Flammable Solid	III	1.2	1.2	
*	2-Amino-4-chlorophenol	6.1	UN 2673	Poison	II	1.2	1.2	
*	N-Ammoethylpiperazine	8	UN 2815	Corrosive	III	1.3	1.3	Keep cool
*	Aminophenols (o-, m-, p-)	6.1	UN 2512	St. Andrews Cross	III	1.2	1.2	
*	Aminopyridines	6.1	UN 2671	Poison	II	1.3	1	Keep cool. Stow 'away from' living quarters
*	Ammonia, anhydrous, liquefied, or ammonia solutions, density (specific gravity) less than 0.880 at 15 degrees C, in water, containing more than 50% ammonia.	2.3	UN 1005	Poison Gas	--	1.2	5	Stow 'separated from' chlorine. Stow 'away from' living quarters
*	Ammonia solutions, density (specific gravity) less than 0.880 at 15 degrees C, in water, containing more than 35% and not more than 50% ammonia.	2.2	UN 2073	Nonflammable Gas	--	1.2	5	Stow 'separated from' chlorine. Stow 'away from' living quarters
	Ammonia solutions having a density (specific gravity) between 0.880 and 0.957 at 15 deg C, in water, containing more than 10% and not more than 35% by weight ammonia.	8	UN 2672	Corrosive	III	1.2	1.2	Stow 'away from' living quarters
	Ammonium arsenate	6.1	UN 1546	Poison	II	1.2	1.2	Stow 'away from' alkalis
	Ammonium bifluoride. See Ammonium hydrogen fluoride							
	Ammonium dichromate	5.1	UN 1439	Oxidizer	II	1.2	1.2	Stow 'away from' foodstuffs
	Ammonium dinitro-o-cresolate	9	UN 1843	None	II	1.2	1.2	Stow 'away from' heavy metals, 'separated from' flammable substances and 'separated longitudinally by an intervening complete compartment or hold from' explosives
	Ammonium fluoride	6.1	UN 2505	St. Andrews Cross	III	1.2	1.2	Stow 'away from' acids
*	Ammonium hydrogen fluoride, solid	8	UN 1727	Corrosive	II	1.2	1.2	Keep dry
*	Ammonium hydrogen fluoride, solution	8	UN 2817	Corrosive, Poison	II	1.2	1	
*	Ammonium hydrogen sulphate	8	UN 2506	Corrosive	II	1.2	1.2	Stow 'away from' strong alkalis
*	Ammonium metavanadate	6.1	UN 2859	Poison	II	1.2	1.2	Stow 'away from' living quarters
	Ammonium nitrate, containing more than 0.2% by weight of combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance	1.1 D	UN 0222	Explosive (I.1D)	--	1.2	1.2	
	Ammonium nitrate, containing not more than 0.2% of combustible material (including organic material calculated as carbon) and free from any other added matter	5.1	UN 1942	Oxidizer	III	1.2	1.2	
	Ammonium nitrate fertilizer, containing ammonium nitrate, n.o.s.	5.1	UN 2072	Oxidizer	III	1.2	1.2	
	Ammonium nitrate fertilizers, of the same composition as defined in class 5.1 on pages 5015 and 5016 of the IMCO Code but containing greater amounts of organic and/or combustible material than specified in these entries	1.1 D	UN 0223	Explosive (I.1D)	--	1.2	1.2	
	Ammonium nitrate fertilizers, Type A							
	(1) Uniform non-segregating mixtures of ammonium nitrate with added matter which is inorganic and chemically inert towards ammonium nitrate, containing not less than 90% of ammonium nitrate and not more than 0.2% of combustible material (including organic material calculated as carbon), or containing less than 90% but more than 70% of ammonium nitrate and not more than 0.4% of total combustible material	5.1	UN 2067	Oxidizer	III	1.2	1.2	
	(2) Uniform non-segregating mixtures of ammonium nitrate with calcium carbonate and/or dolomite, containing more than 80% but less than 90% of ammonium nitrate and not more than 0.4% of total combustible material	5.1	UN 2068	Oxidizer	III	1.2	1.2	
	(3) Uniform non-segregating mixtures of ammonium nitrate/ammonium sulphate, containing more than 45% but not more than 70% of ammonium nitrate and containing not more than 0.4% of total combustible material	5.1	UN 2069	Oxidizer	III	1.2	1.2	
	(4) Uniform non-segregating mixtures of nitrogen/phosphate or nitrogen/potash types or complete fertilizers of nitrogen/phosphate/potash type, containing more than 70% but less than 90% of ammonium nitrate and not more than 0.4% of total combustible material	5.1	UN 2070	Oxidizer	III	1.2	1.2	
	Ammonium nitrate fertilizers, Type B. Uniform non-segregating mixtures of nitrogen/phosphate or nitrogen/potash types or complete fertilizers of nitrogen/phosphate/potash type, containing not more than 70% of ammonium nitrate and not more than 0.4% of total added combustible material or containing not more than 45% of ammonium nitrate with unrestricted combustible material	9	UN 2071	None	III	1.2	1.2	
	Ammonium perchlorate	5.1	UN 1442	Oxidizer	II	1.2	5	Stow 'away from' powdered metals
*N	Ammonium perchlorate, average particle size less than 45 microns	1.1D	UN 0402	Explosive (I.1D)	--	--	--	

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Ammonium persulphate	5.1	UN 1444	Oxidizer	III	1,2	1,2	
N	Ammonium picrate, dry or containing, by weight, less than 10% water	1.1D	UN 0004	Explosive (1.1D)	--	--	--	
	• Ammonium picrate, wetted, with, by weight, at least 33 1/3 % water	4.1	UN 1310	Flammable Solid	I	1,2	5	Stow 'away from' heavy metals
	• Ammonium picrate, wetted, with, by weight, at least 10% water	4.1	UN 1310	Flammable Solid	I	1	5	Stow 'away from' heavy metals
	• Ammonium polysulphide, solution	8	UN 2818	Corrosive, Poison	II	1,3	1	Keep cool. Stow 'away from' acids
	• Ammonium polyvanadate	6.1	UN 2861	Poison	II	1,2	1,2	Stow 'away from' living quarters
	• Ammonium silicofluoride	6.1	UN 2854	St. Andrews Cross	III	1,2	1,2	Stow 'away from' acids
	• Ammonium sulphide, solution	8	UN 2683	Corrosive, Poison, Flammable Liquid (only if flashpoint below 61 deg C)	II	1,3	1	Keep cool. Stow 'away from' all other corrosives. If flashpoint below 61 deg C, segregation same as for flammable liquids
	Ammunition, illuminating, with or without burster, expelling charge or propelling charge	1.4 G	UN 0297	Explosive (1.4G)	--	1,3	1,3	
N	Ammunition, illuminating, with or without burster, expelling charge or propelling charge	1.2G	UN 0171	Explosive (1.2G)	--	--	--	
N	Ammunition, illuminating, with or without burster, expelling charge or propelling charge	1.3G	UN 0254	Explosive (1.3G)	--	--	--	
N	Ammunition, incendiary, liquid or gel, with burster, expelling charge or propelling charge	1.3J	UN 0247	Explosive (1.3J)	--	--	--	
	Ammunition, incendiary (other than water-activated ammunition), without white phosphorus or phosphides, with or without burster, expelling charge or propelling charge	1.4 G	UN 0300	Explosive (1.4G)	--	1,3	1,3	
N	Ammunition, incendiary (other than water-activated ammunition), without white phosphorus or phosphides, with or without burster, expelling charge or propelling charge	1.2G	UN 0009	Explosive (1.2G)	--	--	--	
N	Ammunition, incendiary (other than water-activated ammunition), without white phosphorus or phosphides, with or without burster, expelling charge or propelling charge	1.3G	UN 0010	Explosive (1.3G)	--	--	--	
N	Ammunition, incendiary, white phosphorus, with burster, expelling charge or propelling charge	1.2H	UN 0243	Explosive (1.2H)	--	--	--	
N	Ammunition, incendiary, white phosphorus, with burster, expelling charge or propelling charge	1.3H	UN 0244	Explosive (1.3H)	--	--	--	
	Ammunition, practice	1.4G	UN 0362	Explosive (1.4G)	--	1,3	1,3	
	Ammunition, proof	1.4G	UN 0363	Explosive (1.4G)	--	1,3	1,3	
*N	Ammunition, smoke (other than water-activated ammunition) without white phosphorus or phosphides, with or without burster, expelling charge or propelling charge	1.2G	UN 0015	Explosive (1.2G), Corrosive	--	--	--	
*N	Ammunition, smoke (other than water-activated ammunition) without white phosphorus or phosphides, with or without burster, expelling charge or propelling charge	1.3G	UN 0016	Explosive (1.3G), Corrosive	--	--	--	
*N	Ammunition, smoke (other than water-activated ammunition) without white phosphorus or phosphides, with or without burster, expelling charge or propelling charge	1.4G	UN 0303	Explosive (1.4G), Corrosive	--	--	--	
N	Ammunition, smoke, white phosphorus (other than water-activated ammunition), with burster, expelling charge or propelling charge	1.2H	UN 0245	Explosive (1.2H)	--	--	--	
N	Ammunition, smoke, white phosphorus (other than water-activated ammunition), with burster, expelling charge or propelling charge	1.3H	UN 0246	Explosive (1.3H)	--	--	--	
	Ammunition, (tear producing), non-explosive, with neither burster nor expelling charge, non-fuzed	6.1	UN 2017	Poison	II	1,2	5	Keep dry
N	Ammunition, tear producing, with burster, expelling charge or propelling charge	1.2G	UN 0018	Explosive (1.2G), Poison, Corrosive	--	--	--	
N	Ammunition, tear producing, with burster, expelling charge or propelling charge	1.3G	UN 0019	Explosive (1.3G), Poison, Corrosive	--	--	--	
	Ammunition, tear-producing, with burster, expelling charge or propelling charge	1.4 G	UN 0301	Explosive (1.4G), Poison, Corrosive	--	1,3	1,3	
	Ammunition, (toxic), non-explosive, with neither burster nor expelling charge, non-fuzed	6.1	UN 2016	Poison	II	1,2	5	Keep dry
N	Ammunition, toxic (other than water-activated ammunition) with burster, expelling charge or propelling charge	1.2K	UN 0020	Explosive (1.2K), Poison	--	--	--	
N	Ammunition, toxic (other than water-activated ammunition) with burster, expelling charge or propelling charge	1.3K	UN 0021	Explosive (1.3K), Poison	--	--	--	
	Amorces	1.4 S	UN 0022	None. Package to be marked '1.4 S'	--	1,3	1,3	
	Amyl acetates	3.2	UN 1104	Flammable Liquid	II	1,2	1	
		3.3	UN 1104	Flammable Liquid	II	1,2	1,2	
	• Amyl acid phosphate	8	UN 2819	Corrosive	III	1,2	1,2	
	Amyl alcohols	3.2	UN 1105	Flammable Liquid	II	1,2	1	
		3.3	UN 1105	Flammable Liquid	II	1,2	1,2	
	Amylamine	3.2	UN 1106	Flammable Liquid	II	1,2	1	
	Amyl chloride	3.2	UN 1107	Flammable Liquid	II	1,2	1	
	• n-Amylene	3.1	UN 1108	Flammable Liquid	I	1,3	5	Keep cool
	Amyl formates	3.3	UN 1109	Flammable Liquid	II	1,2	1,2	
	Amyl hydride. See Pentane							
	Amyl mercaptan	3.2	UN 1111	Flammable Liquid	II	1,2	1	
	Amyl methyl ketone	3.3	UN 1110	Flammable Liquid	III	1,2	1,2	
	Amyl nitrate	3.3	UN 1112	Flammable Liquid	II	1,3	5	
	• Amyl nitrite	3.1	UN 1113	Flammable Liquid	II	1,3	5	Keep cool
	• tert-Amyl peroxy-2-ethylhexanoate, technical pure	5.2	UN 2898	Organic Peroxide	II	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
	• tert-Amyl peroxydecanoate with at least 25% phlegmatizer	5.2	UN 2891	Organic Peroxide	II	1	5	Control temperature 0 deg C. Emergency temperature 10 deg C

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
	Amyl trichlorosilane	8	UN 1728	Corrosive	II	1	1	Keep dry. Stow separated longitudinally by an intervening complete compartment or hold from explosives
	Aniline	6.1	UN 1547	Poison	II	1.2	1.2	Stow away from acids and oxidizers
	Aniline hydrochloride	6.1	UN 1548	St. Andrews Cross	III	1.2	1.2	Stow away from alkalis
	Aniline oil. See Aniline							
	o-Anisidine	6.1	UN 2431	St. Andrews Cross	III	1.2	1.2	
	Amsole	3.3	UN 2222	Flammable Liquid	III	1.2	1.2	
	Anisoyl chloride	8	UN 1729	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Anti-freeze. See Flammable liquid preparations, n.o.s.							
	Antimony chloride. See Antimony trichloride, liquid or solid							
	Antimony compounds, inorganic, n.o.s.	6.1	UN 1549	Poison	I/II	1.2	1.2	
		6.1	UN 1549	St. Andrews Cross	III	1.2	1.2	
	Antimony lactate	6.1	UN 1550	St. Andrews Cross	III	1.2	1.2	
	Antimony pentachloride, liquid	8	UN 1730	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Antimony pentachloride, solutions	8	UN 1731	Corrosive	II	1	1	Glass carboys prohibited on passenger vessels
	Antimony pentafluoride	8	UN 1732	Corrosive, Poison	II	1	5	Keep dry
	Antimony potassium tartrate	6.1	UN 1551	St. Andrews Cross	III	1.2	1.2	
	Antimony powder	6.1	UN 2871	St. Andrews Cross	III	1.2	1.2	
	Antimony trichloride, liquid	8	UN 1733	Corrosive	II	1	1	Keep dry
	Antimony trichloride, solid	8	UN 1733	Corrosive	II	1.2	1.2	Keep dry
	Argon, compressed	2.2	UN 1006	Nonflammable Gas	-	1.3	1.3	
	Argon, refrigerated liquid	2.2	UN 1951	Nonflammable Gas	-	1.3	1.3	
	Arsenic acid, liquid	6.1	UN 1553	Poison	I	1.2	1.2	
	Arsenic acid, solid	6.1	UN 1554	Poison	II	1.2	1.2	
	Arsenical dust	6.1	UN 1562	Poison	II	1.2	1.2	
	Arsenical flue dust. See Arsenical dust							
	Arsenical pesticides, liquid, n.o.s.	6.1	UN 2759	Poison	I	1	1	
		6.1	UN 2759	Poison	II	1.2	1	
		6.1	UN 2759	St. Andrews Cross	III	1.2	1.2	
	Arsenical pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2759	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2759	Poison, Flammable Liquid	II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 2759	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	Segregation same as for flammable liquids
	Arsenical pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2760	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1.2	1	
	Arsenical pesticides, solid, n.o.s.	6.1	UN 2759	Poison	I/II	1.2	1.2	
		6.1	UN 2759	St. Andrews Cross	III	1.2	1.2	
	Arsenic bromide	6.1	UN 1555	Poison	II	1.2	1.2	
	Arsenic chloride. See Arsenic trichloride							
	Arsenic compounds, liquid, n.o.s.	6.1	UN 1556	Poison	I/II	1.2	1.2	
		6.1	UN 1556	St. Andrews Cross	III	1.2	1.2	
	Arsenic compounds, solid, n.o.s.	6.1	UN 1557	Poison	I/II	1.2	1.2	Keep dry.
		6.1	UN 1557	St. Andrews Cross	III	1.2	1.2	Keep dry
	Arsenic, metallic	6.1	UN 1558	Poison	II	1.2	1.2	
	Arsenic pentoxide	6.1	UN 1559	Poison	II	1.2	1.2	
	Arsenic sulphides, (solid), n.o.s. See Arsenic compounds, (solid), n.o.s.							
	Arsenic trichloride	6.1	UN 1560	Poison	I	1.2	1.2	
	Arsenic trioxide	6.1	UN 1561	Poison	II	1.2	1.2	
	Arsine	2.3	UN 2188	Poison Gas, Flammable Gas	-	1	5	Stow away from living quarters
	Articles, explosive, n.o.s.	1.4B	UN 0350	Explosive (1.4B)	-	1.3	1.3	
	Articles, explosive, n.o.s.	1.4C	UN 0351	Explosive (1.4C)	-	1.3	1.3	
	Articles, explosive, n.o.s.	1.4D	UN 0352	Explosive (1.4D)	-	1.3	1.3	
	Articles, explosive, n.o.s.	1.4G	UN 0353	Explosive (1.4G)	-	1.3	1.3	
	Articles, explosive, n.o.s.	1.4S	UN 0349	Note. Package to be marked "1.4S"	-	1.3	1.3	
N	Articles, explosive, n.o.s.	1.1L	UN 0354	Explosive (1.1L)	-	-	-	
N	Articles, explosive, n.o.s.	1.2L	UN 0355	Explosive (1.2L)	-	-	-	
N	Articles, explosive, n.o.s.	1.3L	UN 0356	Explosive (1.3L)	-	-	-	
N	Articles, pyrophoric	1.2L	UN 0360	Explosive (1.2L)	-	-	-	
	Asbestos, blue	9	UN 2212	Note	II	1.2	1.2	
	Asbestos, white	9	UN 2590	Note	III	1.2	1.2	
	Asphalt cut-backs. See Cut-backs, asphalt or bitumen							
	Bags, (empty and unwashed), having contained Potassium nitrate or sodium nitrate	4.1	UN 1359	Flammable Solid	III	1.2	5	
	Barium, alloys, non-pyrophoric	4.3	UN 1399	Dangerous When Wet	II	1.2	5	
	Barium alloys, pyrophoric	4.2	UN 1854	Spontaneously Combustible	II	1	5	

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Storage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
N	Barium azide, dry or containing, by weight, less than 50% water or alcohol	1.1A	UN 0224	Explosive (1.1A), Poison	--	--	--	
	• Barium azide, wetted with, by weight, at least 50% water	4.1	UN 1571	Flammable Solid, Poison	I	1	5	Stow 'away from' heavy metals
	• Barium bromate	5.1	UN 2719	Oxidizer, Poison	II	1,2	1,2	Stow 'separated from' ammonium compounds and 'away from' finely powdered metals and foodstuffs
	Barium chlorate	5.1	UN 1445	Oxidizer, Poison	II	1,2	1,2	Stow 'away from' foodstuffs and powdered metals, 'separated from' Ammonium compounds
	Barium compounds, n.o.s.	6.1	UN 1564	Poison	I/II	1,2	1,2	
		6.1	UN 1564	St. Andrews Cross	III	1,2	1,2	
	Barium cyanide	6.1	UN 1565	Poison	I	1,2	1,2	Stow 'away from' acids
	• Barium hypochlorite, containing more than 22% available chlorine	5.1	UN 2741	Oxidizer, Poison	II	1,2	1,2	Stow 'away from' foodstuffs
	Barium, metal, non-pyrophoric	4.3	UN 1400	Dangerous When Wet	II	1,2	5	
	Barium nitrate	5.1	UN 1446	Oxidizer, Poison	II	1,2	1,2	Stow 'away from' foodstuffs
	Barium oxide	6.1	UN 1884	St. Andrews Cross	III	1,2	1,2	
	Barium perchlorate	5.1	UN 1447	Oxidizer, Poison	II	1,2	1,2	Stow 'away from' powdered metals and foodstuffs
	Barium permanganate	5.1	UN 1448	Oxidizer, Poison	II	1,2	1,2	Stow 'away from' foodstuffs and 'separated from' ammonium compounds and hydrogen peroxide
	Barium peroxide	5.1	UN 1449	Oxidizer, Poison	II	1,2	1,2	Keep dry. Stow 'away from' foodstuffs
	• Batteries, wet, filled with acid, electric storage	8	UN 2794	Corrosive	III	1,2	1,2	
	• Batteries, wet, filled with alkali, electric storage	8	UN 2795	Corrosive	III	1,2	1,2	
	• Batteries, wet, non-spillable, electric storage	8	UN 2800	Corrosive	III	1,2	1,2	
	• Battery fluid, acid	8	UN 2796	Corrosive	II	1,2	1,2	Glass carboys in hampers, prohibited under deck
	• Battery fluid, alkali	8	UN 2797	Corrosive	II	1,2	1,2	
	Benzene	3.2	UN 1114	Flammable Liquid	II	1,2	1	
	• Benzene sulphonyl chloride	8	UN 2225	Corrosive	III	1,2	1,2	
	Benzidine	6.1	UN 1885	Poison	II	1,2	1,2	
	• Benzene	3.1	UN 1115	Flammable Liquid	II	1,3	5	Keep cool
		3.2	UN 1115	Flammable Liquid	II	1,2	1	
		3.3	UN 1115	Flammable Liquid	II	1,2	1,2	
	• Benzoic derivative pesticides, liquid, n.o.s.	6.1	UN 2769	Poison	I	1	1	
		6.1	UN 2769	Poison	II	1,2	1	
		6.1	UN 2769	St. Andrews Cross	III	1,2	1,2	
	• Benzoic derivative pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2769	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2769	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable liquids
		6.1	UN 2769	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
	• Benzoic derivative pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2770	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
	• Benzoic derivative pesticides, solid, n.o.s.	6.1	UN 2769	Poison	I/II	1,2	1,2	
		6.1	UN 2769	St. Andrews Cross	III	1,2	1,2	
	Benzonitrile	6.1	UN 2224	Poison	II	1,2	1,2	Stow 'away from' acids
	Benzotrithloride	8	UN 2226	Corrosive	II	1,2	1,2	Stow 'away from' living quarters
	Benzotrifluoride	3.2	UN 2338	Flammable Liquid	II	1,2	1	
	Benzoyl chloride	8	UN 1736	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	• Benzoyl peroxide, in a concentration of more than 77% but less than 95% with water	5.2	UN 2038	Organic Peroxide	I	1	5	
	Benzoyl peroxide, in a concentration of more than 72% but less than 95% as a paste	5.2	UN 2036	Organic Peroxide	I	1	5	
	Benzoyl peroxide, in a concentration of not more than 72% as a paste	5.2	UN 2037	Organic Peroxide	II	1	5	
	• Benzoyl peroxide, in a concentration of not more than 77% with water	5.2	UN 2090	Organic Peroxide	II	1	5	
	Benzoyl peroxide, in concentrations from 30% to maximum 52% with inert solid	5.2	UN 2089	Organic Peroxide	II	1	5	
	Benzoyl peroxide, technical pure or in a concentration of more than 52% with inert solid	5.2	UN 2085	Organic Peroxide	I	1	5	
	Benzyl bromide	8	UN 1737	Corrosive	II	1	5	Keep dry
	Benzyl chloride	8	UN 1738	Corrosive	II	1	5	Keep dry. Stow 'separated longitudinally by an intervening complete compartment or hold from' explosives
	Benzyl chloroformate	8	UN 1739	Corrosive	I	1	5	Keep dry
	Benzyl dimethylamine	3.3	UN 2619	Flammable Liquid	III	1,2	1,2	
	Benzylidene chloride	6.1	UN 1886	Poison	II	1	5	
	• Benzyl iodide	6.1	UN 2653	Poison	II	1,3	1	Keep cool. Stow 'away from' living quarters
	Beryllium compounds	6.1	UN 1566	Poison	II	1,2	1,2	
	Beryllium, metal powder	6.1	UN 1567	Poison, Flammable Solid	II	1,2	1,2	Segregation same as for flammable solids

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Storage Requirements		
						(a) Cargo vessel	(b) Pas- senger vessel	(c) Other requirements
	Beryllium nitrate	5.1	UN 2464	Oxidizer, Poison	II	1,2	1,2	Keep cool. If packaged in a liner within a wooden barrel, fiber drum or plywood drum or in plastic bags within a fiberboard box, stow 'away from' sources of heat
	Bhusa	4.1	UN 1327	None	III	1,2	1,2	Stow 'away from' animal or vegetable oils
	Bifluorides, n.o.s.	8	UN 1740	Corrosive	II	1,2	1,2	Keep dry
	Bipyridilium pesticides, liquid, n.o.s.	6.1	UN 2781	Poison	I	1	1	
		6.1	UN 2781	Poison	II	1,2	1	
		6.1	UN 2781	St. Andrews Cross	III	1,2	1,2	
	Bipyridilium pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2781	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2781	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable liquids
		6.1	UN 2781	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
	Bipyridilium pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2782	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
	Bipyridilium pesticides, solid, n.o.s.	6.1	UN 2781	Poison	I/II	1,2	1,2	
		6.1	UN 2781	St. Andrews Cross	III	1,2	1,2	
	Bis-(4-tert-butylcyclohexyl) peroxydicarbonate, maximum concentration 42%, stable dispersion in water	5.2	UN 2894	Organic Peroxide	II	1	5	Control temperature 25 deg C. Emergency temperature 30 deg C
	Bis-(4-tert-butylcyclohexyl) peroxydicarbonate, technical pure	5.2	UN 2154	Organic Peroxide	II	1	5	Control temperature 30 deg C. Emergency temperature 35 deg C
	2,2-Bis-(tert-butylperoxy) butane, maximum concentration 55% in solution	5.2	UN 2111	Organic Peroxide	II	1	5	
	1,1-Bis-(tert-butylperoxy) cyclohexane, maximum concentration 77% in solution	5.2	UN 2180	Organic Peroxide	II	1	5	
	1,2-Bis-(tert-butylperoxy) cyclohexane, maximum concentration 77% in solution	5.2	UN 2181	Organic Peroxide	II	1	5	
	1,1-Bis-(tert-butylperoxy) cyclohexane, technical pure	5.2	UN 2179	Organic Peroxide	II	1	5	
	1,1-Bis-(tert-butylperoxy) cyclohexane with at least 13% phlegmatizer and 47% inert inorganic solid	5.2	UN 2885	Organic Peroxide	II	1	5	
	1,1-Bis-(tert-butylperoxy) cyclohexane with at least 50% phlegmatizer	5.2	UN 2897	Organic Peroxide	II	1	5	
	1,4-Bis-(2-tert-butylperoxy isopropyl) benzene, or 1,3-bis-(2-tert-butylperoxy isopropyl) benzene, and mixtures thereof, (including technical pure or in a concentration of more than 40% with inert solid)	5.2	UN 2112	Organic Peroxide	II	1	5	
	2,2-Bis-(tert-butylperoxy) propane, with at least 50% phlegmatizer	5.2	UN 2883	Organic Peroxide	II	1	5	
	2,2-Bis-(tert-butylperoxy) propane, with at least 13% phlegmatizer and 47% inert inorganic solid	5.2	UN 2884	Organic Peroxide	II	1	5	
	1,1-Bis-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, technical pure	5.2	UN 2145	Organic Peroxide	II	1	5	
	1,1-Bis-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, maximum concentration 57% in solvent	5.2	UN 2146	Organic Peroxide	II	1	5	
	1,1-Bis-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, maximum concentration 58% with inert solid	5.2	UN 2147	Organic Peroxide	II	1	5	
	2,2-Bis-(4,4-di-tert-butylperoxy cyclohexyl) propane, maximum concentration 42% with inert solid	5.2	UN 2168	Organic Peroxide	II	1	5	
	1,2-Bis-(dimethylamino)ethane	3.2	UN 2372	Flammable Liquid	II	1,2	1	
	Bis-(1-hydroxy cyclohexyl) peroxide, technical pure	5.2	UN 2148	Organic Peroxide	II	1	5	
	Bisotrydecyl peroxidicarbonate, technical pure	5.2	UN 2889	Organic Peroxide	II	1	5	Control temperature -10 deg C. Emergency temperature 0 deg C
	Bis-(2-methylbenzoyl)peroxide, with at least 15% water	5.2	UN 2593	Organic Peroxide	I	1	5	Control temperature 30 deg C. Emergency temperature 35 deg C
	Bis-(3,5,5-trimethyl-1,2-dioxolanyl-3)peroxide, as a paste with at least 50% phlegmatizer	5.2	UN 2597	Organic Peroxide	II	1	5	Control temperature 30 deg C. Emergency temperature 35 deg C
	Bis-(3,5,5-trimethylhexanoyl)peroxide, technical pure or in solution	5.2	UN 2128	Organic Peroxide	II	1	5	Control temperature 0 deg C. Emergency temperature 10 deg C
	Bisulfites, inorganic, aqueous solution, n.o.s.	8	UN 2693	Corrosive	III	1,2	1,2	Stow 'away from' all other corrosive substances. Glass carboys prohibited on passenger vessels
N	Black powder, compressed	1.1D	UN 0028	Explosive (1.1D)	--	--	--	
N	Black powder, granular or as meal	1.1D	UN 0027	Explosive (1.1D)	--	--	--	
	Blasting cap assemblies, non electric	1.4B	UN 0361	Explosive (1.4B)	--	1,3	1,3	
N	Blasting cap assemblies, non-electric	1.1B	UN 0360	Explosive (1.1B)	--	--	--	
	Blasting caps, electric	1.4 B	UN 0255	Explosive (1.4B)	--	1,2	5	Portable magazine or metal locker. Do not handle blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded
N	Blasting caps, electric	1.1B	UN 0030	Explosive (1.1B)	--	--	--	
	Blasting caps, non-electric	1.4.B	UN 0267	Explosive (1.4B)	--	1,2	5	Portable magazine or metal locker. Do not handle blasting caps with any high explosive. Do not handle blasting caps at the same time high explosives are being loaded
N	Blasting caps, non-electric	1.1B	UN 0029	Explosive (1.1B)	--	--	--	
	Bleaching powder. See Calcium hypochlorite mixtures, dry, containing 39% or less, but more than 10% available chlorine							
	Blue asbestos. See Asbestos, blue							
*N	Bombs, containing flammable liquid, with bursting charge	1.1J	UN 0399	Explosive (1.1J)	--	--	--	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Pas- senger vessel	(c) Other requirements
*N	Bombs, containing flammable liquid, with bursting charge	1.2J	UN 0400	Explosive (1.2J)	--	--	--	
N	Bombs, photo-flash	1.1D	UN 0038	Explosive (1.1D)	--	--	--	
N	Bombs, photo-flash	1.1F	UN 0037	Explosive (1.1F)	--	--	--	
N	Bombs, photo-flash	1.2G	UN 0039	Explosive (1.2G)	--	--	--	
N	Bombs, photo-flash	1.3G	UN 0299	Explosive (1.3G)	--	--	--	
	Bombs, smoke, containing a corrosive liquid, non-explosive, without initiating device	8	UN 2028	Corrosive	II	1,2	5	Keep dry. Stow 'away from' living quarters
N	Bombs, with bursting charge	1.1D	UN 0034	Explosive (1.1D)	--	--	--	
N	Bombs, with bursting charge	1.2D	UN 0035	Explosive (1.2D)	--	--	--	
N	Bombs, with bursting charge	1.1F	UN 0033	Explosive (1.1F)	--	--	--	
N	Bombs, with bursting charge	1.2F	UN 0291	Explosive (1.2F)	--	--	--	
N	Boosters, with detonator	1.1B	UN 0225	Explosive (1.1B)	--	--	--	
N	Boosters, with detonator	1.2B	UN 0268	Explosive (1.2B)	--	--	--	
N	Boosters, without detonator	1.1D	UN 0042	Explosive (1.1D)	--	--	--	
N	Boosters, without detonator	1.2D	UN 0283	Explosive (1.2D)	--	--	--	
	Borate and chlorate, mixtures	5.1	UN 1458	Oxidizer	II	1,2	5	Stow 'away from' powdered metals and 'separated from' ammonium compounds
	Borneol	4.1	UN 1312	None. Package to be marked 'Class 4.1'	III	1,2	1,2	
*	Boron tribromide	8	UN 2692	Corrosive	I	1	1	Keep cool and dry. Stow 'away from' foodstuffs
	Boron trichloride	2.3	UN 1741	Poison Gas, Corrosive	--	1	5	Shade from radiant heat. Stow 'away from' foodstuffs and living quarters
	Boron trifluoride	2.3	UN 1003	Poison Gas	--	1	5	Stow 'away from' foodstuffs and living quarters
	Boron trifluoride acetic acid complex	8	UN 1742	Corrosive	II	1,2	1,2	
	Boron trifluoride diethyletherate	3.2	UN 2604	Flammable Liquid, Corrosive	II	1,2	1	
*	Boron trifluoride diethyl etherate	8	UN 2604	Corrosive, Flammable Liquid (only if flashpoint between 23 and 61 deg C)	II	1,2	1	If flashpoint between 23 and 61 deg C, segregation same as for flammable liquids
*	Boron trifluoride dihydrate	8	UN 2851	Corrosive	II	1,3	1	Keep cool
	Boron trifluoride propionic acid complex	8	UN 1743	Corrosive	II	1,2	1,2	
	Box toe gum. See Nitrocellulose							
	Brake fluid, hydraulic	3.2	UN 1118	Flammable Liquid	II	1,2	1	
	Bromates, (inorganic), n.o.s.	5.1	UN 1450	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals and 'separated from' ammonium compounds
	Bromine, (and solutions)	8	UN 1744	Corrosive, Poison	I	1	5	Keep cool
*	Bromine pentafluoride	5.1	UN 1745	Oxidizer, Poison, Corrosive	I	1	5	Keep dry. Shade from radiant heat
*	Bromine trifluoride	5.1	UN 1746	Oxidizer, Poison, Corrosive	I	1	5	Keep dry. Shade from radiant heat
	Bromoacetic acid, solid	8	UN 1938	Corrosive	II	1,2	1,2	Keep dry
	Bromoacetic acid, solution	8	UN 1938	Corrosive	II	1,2	1,2	Glass carboys in hampers not permitted under deck
*	Bromoacetone	6.1	UN 1569	Poison, Flammable Liquid	II	1	5	Segregation same as for flammable liquids. Stow 'away from' living quarters
	Bromoacetyl bromide	8	UN 2513	Corrosive	II	1	1	Glass carboys prohibited on passenger vessels
	Bromobenzene	3.3	UN 2514	Flammable Liquid	III	1,2	1,2	
	Bromobenzyl cyanide	6.1	UN 1694	Poison	I	1	5	Keep cool
	2-Bromobutane	3.2	UN 2339	Flammable Liquid	II	1,2	1	
	Bromochloromethane	9	UN 1887	None	III	1,2	1,2	Stow 'away from' foodstuffs
	2-Bromoethyl ethyl ether	3.2	UN 2340	Flammable Liquid	II	1,2	1	
	Bromoform	6.1	UN 2515	St. Andrews Cross	III	1,2	1,2	
	1-Bromo-3-methylbutane	3.2	UN 2341	Flammable Liquid	II	1,2	1	
	Bromomethylpropanes	3.2	UN 2342	Flammable Liquid	II	1,2	1	
	Bromomethylpropanes	3.3	UN 2342	Flammable Liquid	II	1,2	1,2	
	2-Bromopentane	3.2	UN 2343	Flammable Liquid	II	1,2	1	
	Bromopropanes	3.2	UN 2344	Flammable Liquid	II	1,2	1	
	Bromopropanes	3.3	UN 2344	Flammable Liquid	II	1,2	1,2	
	3-Bromopropyne	3.2	UN 2345	Flammable Liquid	II	1,2	1	
	Bromotrifluoromethane	2.2	UN 1009	Nonflammable Gas	--	1,2	1,2	
	Brucine	6.1	UN 1570	Poison	II	1,2	1,2	
N	Bursters, explosive	1.1D	UN 0043	Explosive (1.1D)	--	--	--	
	Butadiene, inhibited	2.1	UN 1010	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
	Butanedione	3.2	UN 2346	Flammable Liquid	II	1,2	1	
	Butane or butane mixtures	2.1	UN 1011	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
	sec-Butanol	3.3	UN 1121	Flammable Liquid	II	1,2	1,2	
	tert-Butanol	3.2	UN 1122	Flammable Liquid	II	1,2	1	
	Butanol	3.3	UN 1120	Flammable Liquid	II	1,2	1,2	
	Butoxyl	3.3	UN 2703	Flammable Liquid	III	1,2	1,2	
*	Butyl acetates	3.2	UN 1123	Flammable Liquid	II	1,2	1	
*	Butyl acid phosphate	8	UN 1718	Corrosive	III	1,2	1,2	Glass carboys in hampers prohibited under deck
	Butylacrylate, inhibited	3.3	UN 2348	Flammable Liquid	II	1,2	1,2	
	Butyl alcohol. See Butanol							

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
	sec-Butyl alcohol. See sec-Butanol							
	tert-Butyl alcohol. See tert-Butanol							
	n-Butylamine	3.2	UN 1125	Flammable Liquid	II	1,2	1	
*	N-n-Butylaniline	6.1	UN 2738	Poison	II	1,2	1,2	Stow 'away from' living quarters
	Butyl benzenes	3.3	UN 2709	Flammable Liquid	III	1,2	1,2	
	n-Butyl-4,4-bis-(tert-butyl-peroxy) valerate, maximum concentration 52% with inert solid	5.2	UN 2141	Organic Peroxide	II	1	5	
	n-Butyl-4,4-bis-(tert-butyl-peroxy) valerate, technical pure	5.2	UN 2140	Organic Peroxide	II	1	5	
	n-Butyl bromide	3.3	UN 1126	Flammable Liquid	II	1,2	1,2	
	n-Butyl chloride	3.2	UN 1127	Flammable Liquid	II	1,2	1	
*	n-Butylchloroformate	6.1	UN 2743	Poison, Corrosive, Flammable Liquid	II	1,3	1,3	Keep cool and dry. Shade from radiant heat. Stow 'away from' living quarters. Segregation same as for flammable liquids
	tert-Butyl cumene peroxide. See tert-Butyl cumyl peroxide							
	tert-Butyl cumyl peroxide, technical pure	5.2	UN 2091	Organic Peroxide	II	1	5	
*	tert-Butylcyclohexylchloroformate	6.1	UN 2747	St. Andrews Cross	III	1,3	1,3	Keep cool and dry. Shade from radiant heat
	Butylene	2.1	UN 1012	Flammable Gas	-	1,2	1	Stow 'away from' living quarters
	Butyl ether. See Dibutyl ethers							
	n-Butyl formate	3.2	UN 1128	Flammable Liquid	II	1,2	1	
	tert-Butyl hydroperoxide, in a concentration over 72% to maximum 90% with water	5.2	UN 2094	Organic Peroxide	I	1	5	
	tert-Butyl hydroperoxide, maximum concentration 80% in di-tert-butyl peroxide and/or solvent	5.2	UN 2092	Organic Peroxide, Flammable Liquid (only if flashpoint of solvent is 23 deg C. or below)	I	1	5	
	tert-Butyl hydroperoxide, maximum concentration 72% with water	5.2	UN 2093	Organic Peroxide	II	1	5	
*	N-n-Butyl imidazole	6.1	UN 2690	Poison	II	1,2	1,2	Stow 'away from' living quarters
	tert-Butyl isocyanate	3.2	UN 2484	Flammable Liquid, Poison	I	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
	n-Butyl isocyanate	3.2	UN 2485	Flammable Liquid, Poison	II	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
*	Butyl mercaptan	3.2	UN 2347	Flammable Liquid	II	1,2	1	
	n-Butyl methacrylate	3.3	UN 2227	Flammable Liquid	III	1,2	1,2	
	Butyl methyl ether	3.2	UN 2350	Flammable Liquid	II	1,2	1	
*	tert-Butyl monoperoxyphthalate, technical pure	5.2	UN 2105	Organic Peroxide	II	1	5	
	Butyl nitrite	3.2	UN 2351	Flammable Liquid	II	1,2	1	
*	tert-Butyl peroxide. See Di-tert-butyl peroxide							
*	tert-Butyl peroxyacetate, in a concentration of more than 52% to a maximum concentration of 76% in solution	5.2	UN 2095	Organic Peroxide	II	1	5	
*	tert-Butyl peroxyacetate, maximum concentration 52% in solution	5.2	UN 2096	Organic Peroxide	II	1	5	
*	tert-Butyl peroxybenzoate, maximum concentration 75% in solution	5.2	UN 2098	Organic Peroxide	II	1	5	
*	tert-Butyl peroxybenzoate, technical pure or in a concentration of more than 75% in solution	5.2	UN 2097	Organic Peroxide	II	1	5	
*	tert-Butyl peroxybenzoate with at least 50% inert organic solid	5.2	UN 2890	Organic Peroxide	II	1	5	
*	tert-Butyl peroxycrotonate, maximum concentration 76% in solution	5.2	UN 2183	Organic Peroxide	II	1	5	
*	n-Butyl peroxydicarbonate, in a concentration of more than 27% to a maximum concentration of 52% in solution	5.2	UN 2169	Organic Peroxide	II	1	5	Control temperature -15 deg C. Emergency temperature -5 deg C
*	n-Butyl peroxydicarbonate, maximum concentration 27% in solution	5.2	UN 2170	Organic Peroxide	II	1	5	Control temperature 0 deg C. Emergency temperature 10 deg C
*	tert-Butyl peroxydiethylacetate, (in a maximum concentration of 33%), with tert-butyl peroxybenzoate, (in a maximum concentration of 33%), and solvent	5.2	UN 2551	Organic Peroxide	II	1	5	
*	tert-Butyl peroxydiethylacetate, technical pure	5.2	UN 2144	Organic Peroxide	II	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
*	tert-Butyl peroxy-2-ethylhexanoate, maximum concentration 30% with 2,2-Bis-(tert-butyl peroxy) butane maximum concentration 35% and with at least 35% phlegmatizer	5.2	UN 2856	Organic Peroxide	II	1	5	Control temperature 35 deg C. Emergency temperature 40 deg C
*	tert-Butyl peroxy-2-ethylhexanoate maximum concentration 12% with 2,2-Bis-(tert-butyl peroxy)butane maximum concentration 14%, and with at least 14% phlegmatizer and 60% inert inorganic solid	5.2	UN 2887	Organic Peroxide	II	1	5	
*	tert-Butyl peroxy-2-ethyl hexanoate, technical pure	5.2	UN 2143	Organic Peroxide	II	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
*	tert-Butyl peroxy-2-ethylhexanoate, with at least 50% phlegmatizer	5.2	UN 2888	Organic Peroxide	II	1	5	Control temperature 35 deg C. Emergency temperature 40 deg C
*	tert-Butyl peroxyisobutyrate, in a concentration of more than 52% to a maximum concentration of 77% in solution	5.2	UN 2142	Organic Peroxide	II	1	5	Control temperature 15 deg C. Emergency temperature 20 deg C
*	tert-Butyl peroxyisobutyrate, maximum concentration 52% in solution	5.2	UN 2562	Organic Peroxide	II	1	5	Emergency temperature 15 deg C. Emergency temperature 20 deg C
	tert-Butyl peroxy isopropyl carbonate, technical pure	5.2	UN 2103	Organic Peroxide	II	1	5	
*	tert-Butyl peroxysebacate, maximum concentration 55% as a paste	5.2	UN 2101	Organic Peroxide	II	1	5	
*	tert-Butyl peroxysebacate, maximum concentration 55% in solution	5.2	UN 2100	Organic Peroxide	II	1	5	
*	tert-Butyl peroxysebacate, technical pure	5.2	UN 2099	Organic Peroxide	II	1	5	
*	tert-Butyl peroxyneodecanoate, maximum concentration 77% in solution	5.2	UN 2177	Organic Peroxide	II	1	5	Control temperature 0 deg C. Emergency temperature 10 deg C
*	tert-Butyl peroxyneodecanoate, technical pure	5.2	UN 2594	Organic Peroxide	II	1	5	Control temperature -5 deg C. Emergency temperature 5 deg C
*	3-tert-Butylperoxy-3-phenyl phthalide, technical pure	5.2	UN 2596	Organic Peroxide	II	1	5	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pas- senger vessel	
	tert-Butyl peroxyvalate, <i>maximum concentration 77% in solution</i>	5.2	UN 2110	Organic Peroxide	II	1	5	Control temperature 0 deg C. Emergency temperature 10 deg C
	tert-Butyl peroxy-3,5,5-trimethyl hexanoate, <i>technical pure</i>	5.2	UN 2104	Organic Peroxide	II	1	5	
	Butylphenols, liquid	6.1	UN 2228	St. Andrews Cross	III	1,2	1	
	Butylphenols, solid	6.1	UN 2229	St. Andrews Cross	III	1,2	1,2	
	Butyl phosphoric acid. <i>See Acid butyl phosphate</i>							
	Butyl propionate	3.3	UN 1914	Flammable Liquid	II	1,2	1,2	
	Butyl toluenes	6.1	UN 2667	Poison, Flammable Liquid (only if flashpoint below 61 deg C)	III	1,2	1,2	Shade from radiant heat. If flashpoint below 61 deg C segregation same as for flammable liquids
	Butyl trichlorosilane	8	UN 1747	Corrosive, Flammable Liquid	II	1	1	Keep dry. Stow 'separated longitudinally by an intervening complete compartment or hold from' explosives. Segregation same as for flammable liquids
	Butyl vinyl ether, <i>Inhibited</i>	3.2	UN 2352	Flammable Liquid	II	1,2	1	
	1,4-Butynediol	4.1	UN 2716	Flammable Solid	III	1,2	1	Stow 'separated from' mercury salts, strong acids, alkaline compounds and halides
	Butyraldehyde	3.2	UN 1129	Flammable Liquid	II	1,2	1	
	n-Butyric acid	8	UN 2820	Corrosive	III	1,3	1,3	Keep cool. Glass carboys in hampets prohibited under deck
	Butyric anhydride	8	UN 2739	Corrosive	III	1,2	1,2	
	Butyrene	3.3	UN 2710	Flammable Liquid	III	1,2	1,2	
	Butyronitrile	3.2	UN 2411	Flammable Liquid, Poison	II	1,3	5	Keep cool
	Butyryl chloride	3.2	UN 2353	Flammable Liquid, Poison	II	1	1	Keep dry. Shade from radiant heat
	Cacodylic acid	6.1	UN 1572	Poison	II	1,2	5	Stow 'away from' acids
	Cadmium compounds	6.1	UN 2570	Poison	I/II	1,2	1,2	Stow 'away from' living quarters
	Caesium hydroxide, solution	6.1	UN 2570	St. Andrews Cross	III	1,2	1,2	Stow 'away from' living quarters
	Caesium, <i>metal</i>	8	UN 2631	Corrosive	II	1,2	1,2	
	Caesium nitrate	4.3	UN 1407	Dangerous When Wet	I	1,2	5	
	Caesium, <i>powdered. See Pyrophoric metals</i>	5.1	UN 1451	Oxidizer	III	1,2	1,2	
	Calcium arsenate	6.1	UN 1573	Poison	II	1,2	1,2	
	Calcium arsenate and arsenite, <i>solid mixtures</i>	6.1	UN 1574	Poison	II	1,2	1,2	
	Calcium bisulphite, <i>solution. See Calcium hydrogen sulphite, solution</i>							
	Calcium carbide	4.3	UN 1402	Dangerous When Wet	II	1,2	1,2	Stow 'away from' copper, its alloys and its salts
	Calcium chlorate	5.1	UN 1452	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals and 'separated from' ammonium compounds
	Calcium chlorate, <i>aqueous solution</i>	5.1	UN 2429	Oxidizer	II	1,2	1	Stow 'away from' powdered metals and 'separated from' ammonium compounds
	Calcium chlorite	5.1	UN 1453	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals and cyanides, 'separated from' ammonium compounds
	Calcium cyanamide, <i>containing more than 0.1% of calcium carbide</i>	4.3	UN 1403	Dangerous When Wet	III	1,2	1,2	
	Calcium cyanide	6.1	UN 1575	Poison	I	1,2	1,2	Stow 'away from' acids
	Calcium hydride	4.3	UN 1404	Dangerous When Wet	I	1,2	5	
	Calcium hydrogen sulphite, <i>solution</i>	8	UN 1901	Corrosive	II	1,2	1,2	
	Calcium hydrosulphite	4.2	UN 1923	Spontaneously Combustible	III	1,2	5	Keep dry
	Calcium hypochlorite, dry or Calcium hypochlorite mixtures, dry, <i>containing more than 39% available chlorine (8.8% available oxygen)</i>	5.1	UN 1748	Oxidizer	II	1,2	1,2	
	Calcium hypochlorite mixtures, dry containing 39% or less, but more than 10% available chlorine	9	UN 2208	None	III	1,2	1,2	Stow 'separated from' flammable liquids and acids, 'away from' combustible materials
	Calcium manganese silico	4.3	UN 2844	Dangerous When Wet	III	1,2	1,2	
	Calcium, <i>metal and alloys, non-pyrophoric</i>	4.3	UN 1401	Dangerous When Wet	II	1,2	5	
	Calcium nitrate	5.1	UN 1454	Oxidizer	III	1,2	1,2	
	Calcium perchlorate	5.1	UN 1455	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals
	Calcium permanganate	5.1	UN 1456	Oxidizer	II	1,2	1,2	Stow 'separated from' ammonium compounds and hydrogen peroxide
	Calcium peroxide	5.1	UN 1457	Oxidizer	II	1,2	1,2	Keep dry
	Calcium phosphide	4.3	UN 1360	Dangerous When Wet	I	1	5	
	Calcium, pyrophoric or Calcium alloys, pyrophoric	4.2	UN 1855	Spontaneously Combustible	II	1	5	
	Calcium resinate, fused	4.1	UN 1314	Flammable Solid	III	1,2	1,2	
	Calcium resinate, <i>technical pure</i>	4.1	UN 1313	Flammable Solid	III	1,2	1,2	
	Calcium silicide	4.3	UN 1405	Dangerous When Wet	II	1,2	1,2	
	Calcium silicon	4.3	UN 1406	Dangerous When Wet	III	1,2	1,2	
	Camphor, <i>natural or synthetic</i>	4.1	UN 2717	Flammable Solid	III	1,2	1,2	
	Camphor oil	3.3	UN 1130	Flammable Liquid	III	1,3	1,3	
	Capryloyl peroxide. <i>See n-Octanoyl peroxide</i>							
	Caps, blasting. <i>See Blasting caps</i>							
	Caps, percussion	1.4 S	UN 0044	None. Package to be marked '1.4 S'	--	1,3	1,3	
	Caps, toy. <i>See Amorces</i>							
	Carbamate pesticides, <i>liquid, n.o.s.</i>	6.1	UN 2757	Poison	I	1	1	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Pas- senger vessel	(c)
								Other requirements
		6.1	UN 2757	Poison	II	1,2	1	
		6.1	UN 2757	St. Andrews Cross	III	1,2	1,2	
	* Carbamate pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2757	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2757	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable liquids
		6.1	UN 2757	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
	* Carbamate pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2758	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
	* Carbamate pesticides, solid, n.o.s.	6.1	UN 2757	Poison	I/II	1,2	1,2	
		6.1	UN 2757	St. Andrews Cross	III	1,2	1,2	
	Carbolic acid. See Phenol							
	Carbon, activated	4.2	UN 1362	Spontaneously Combustible	III	1,3	1,3	Keep cool. Stow 'away from' oily matter
	Carbon bisulphide. See Carbon disulphide							
	Carbon dioxide	2.2	UN 1013	Nonflammable Gas	--	1,2	1,2	
	Carbon dioxide and nitrous oxide, mixtures	2.2	UN 1015	Nonflammable Gas	--	1,2	1,2	
	Carbon dioxide and oxygen, mixtures	2.2	UN 1014	Nonflammable Gas	--	1,2	1,2	
	* Carbon disulphide	3.1	UN 1131	Flammable Liquid, Poison	I	1	5	Prohibited on any ship carrying explosives (except explosives in Division 1.4, Compatibility Group S). Keep cool
	Carbon monoxide	2.1	UN 1016	Flammable Gas, Poison Gas	--	1	5	Stow 'away from' living quarters
	* Carbon monoxide and hydrogen mixture	2.1	UN 2600	Flammable Gas, Poison Gas	--	1	5	Stow 'away from' living quarters
	* Carbon, non-activated, of animal or vegetable origin	4.2	UN 1361	Spontaneously Combustible	III	1,3	1,3	Keep cool. Stow 'away from' oily matter
	Carbon paper. See Paper, treated with unsaturated oils, incompletely dried							
	Carbon remover, liquid	3.2	UN 1132	Flammable Liquid	II	1,2	1	
	Carbon sulphide. See Carbon disulphide							
	Carbon tetrabromide	6.1	UN 2516	St. Andrews Cross	III	1,2	1,2	Shade from radiant heat
	Carbon tetrachloride	6.1	UN 1846	Poison	II	1,2	1,2	
	Carbonyl chloride. See Phosgene							
	Carbonyl fluoride	2.3	UN 2417	Poison Gas	--	1	5	Stow 'away from' living quarters
	Carbonyl sulfide	2.3	UN 2204	Poison Gas, Flammable Gas	--	1	5	Stow 'away from' living quarters
N	Cartouche	2.1	UN 2037	Flammable Gas	--			
	Cartridge cases, empty, with primer. See Cases, cartridges, empty, with primer							
N	Cartridges, flash	1.1G	UN 0049	Explosive (1.1G)	--	--	--	
N	Cartridges, flash	1.3G	UN 0050	Explosive (1.3G)	--	--	--	
	Cartridges for weapons, blank	1.4 C	UN 0338	Explosive (1.4C)	--	1,3	1,3	
	Cartridges for weapons, blank	1.4 S	UN 0014	None. Package to be marked '1.4 S'	--	1,3	1,3	
N	Cartridges for weapons, blank	1.1C	UN 0326	Explosive (1.1C)	--	--	--	
N	Cartridges for weapons, blank	1.3C	UN 0327	Explosive (1.3C)	--	--	--	
	Cartridges for weapons, other than blank	1.4 S	UN 0012	None. Package to be marked '1.4 S'	--	1,3	1,3	
N	Cartridges for weapons, with bursting charge	1.1E	UN 0006	Explosive (1.1E)	--	--	--	
N	Cartridges for weapons, with bursting charge	1.2E	UN 0321	Explosive (1.2E)	--	--	--	
N	Cartridges for weapons, with bursting charge	1.1F	UN 0005	Explosive (1.1F)	--	--	--	
N	Cartridges for weapons, with bursting charge	1.2F	UN 0007	Explosive (1.2F)	--	--	--	
N	Cartridges for weapons, with bursting charge	1.4F	UN 0348	Explosive (1.4F)	--	--	--	
	Cartridges for weapons, with inert projectile	1.4 C	UN 0339	Explosive (1.4C)	--	1,3	1,3	
N	Cartridges for weapons, with inert projectile	1.2C	UN 0328	Explosive (1.2C)	--	--	--	
	Cartridges, oil well	1.4 C	UN 0278	Explosive (1.4C)	--	1,3	1,3	
N	Cartridges, oil well	1.3C	UN 0277	Explosive (1.3C)	--	--	--	
	Cartridges, power device	1.4 C	UN 0276	Explosive (1.4C)	--	1,3	1,3	
	Cartridges, power device	1.4 S	UN 0323	None. Package to be marked '1.4 S'	--	1,3	1,3	
N	Cartridges, power device	1.2C	UN 0381	Explosive (1.2C)	--	--	--	
N	Cartridges, power device	1.3C	UN 0275	Explosive (1.3C)	--	--	--	
	Cartridges, safety. See Cartridges for weapons, other than blank (UN 0012) or Cartridges for weapons, blank (UN 0014)							
	Cartridges, signal	1.4 G	UN 0312	Explosive (1.4G)	--	1,3	1,3	
N	Cartridges, signal	1.3G	UN 0054	Explosive (1.3G)	--	--	--	
	* Cartridges, signal	1.4S	UN 0405	None. Package to be marked '1.4S'	--	1,3	1,3	
	Cases, cartridge, empty, with primer	1.4C	UN 0379	Explosive (1.4C)	--	1,3	1,3	
	Cases, cartridges, empty, with primer	1.4 S	UN 0055	None. Package to be marked '1.4 S'	--	1,3	1,3	
	* Casinghead gasoline	3.1	UN 1257	Flammable Liquid	II	1,3	5	Keep cool
	Caustic alkali liquids; n.o.s.	8	UN 1719	Corrosive	II	1,2	1,2	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c)
						Cargo vessel	Pas- senger vessel	Other requirements
	Caustic potash. <i>See</i> Potassium hydroxide, <i>solution</i>							
	Caustic potash, solid. <i>See</i> Potassium hydroxide, <i>solid</i>							
	Celluloid, <i>in blocks, rods, rolls, sheets, tubes, etc. (scrap excluded)</i>	4.1	UN 2000	Flammable Solid	III	1,2	1,2	
	Celluloid, <i>scrap</i>	4.2	UN 2002	Spontaneously Combustible	II	1	5	
	Cement, adhesive, ( <i>containing a flammable liquid</i> ), n.o.s.	3.2	UN 1133	Flammable Liquid	II	1,2	1	
	Cement, ( <i>liquid</i> ), n.o.s. <i>See</i> Cement, adhesive, ( <i>containing a flamma- ble liquid</i> ), n.o.s.	3.3	UN 1133	Flammable Liquid	II	1,2	1,2	
*	Cerium, crude, powder	4.1	UN 1333	Flammable Solid	II	1,2	5	Stow 'separated from' flammable substances and oxidizers
*	Cerium, crude, slabs or ingots	4.1	UN 1333	Flammable Solid	III	1,2	1,2	Stow 'separated from' flammable substances and oxidizers
	Charcoal, activated. <i>See</i> Carbon, activated							
*	Charcoal, non-activated, of animal or vegetable origin. <i>See</i> Carbon							
N	Charges, demolition	1.1D	UN 0048	Explosive (1.1D)	--	--	--	
N	Charges, depth	1.1D	UN 0056	Explosive (1.1D)	--	--	--	
N	Charges, propelling, for cannon	1.1C	UN 0279	Explosive (1.1C)	--	--	--	
N	Charges, propelling, for cannon	1.3C	UN 0242	Explosive (1.3C)	--	--	--	
N	Charges, propelling, for rocket motors	1.1C	UN 0271	Explosive (1.1C)	--	--	--	
N	Charges, propelling, for rocket motors	1.3C	UN 0272	Explosive (1.3C)	--	--	--	
N	Charges, propelling, for rocket motors, <i>composite mixture</i>	1.1C	UN 0273	Explosive (1.1C)	--	--	--	
N	Charges, propelling, for rocket motors, <i>composite mixture</i>	1.3C	UN 0274	Explosive (1.3C)	--	--	--	
N	Charges, shaped, <i>commercial, without detonator</i>	1.1D	UN 0059	Explosive (1.1D)	--	--	--	
N	Charges, shaped, flexible, linear, <i>metal clad</i>	1.4D	UN 0237	Explosive (1.4D)	--	1,3	1,3	
N	Charges, shaped, flexible, linear, <i>metal clad</i>	1.1D	UN 0288	Explosive (1.1D)	--	--	--	
N	Charges, supplementary, explosive	1.1D	UN 0060	Explosive (1.1D)	--	--	--	
	Chloral, <i>anhydrous, inhibited</i>	6.1	UN 2075	Poison	II	1	5	
	Chlorate and borate, mixtures. <i>See</i> Borate and chlorate mixtures							
*	Chlorate and magnesium chloride, mixture	5.1	UN 1459	Oxidizer	II	1,2	5	Stow 'away from' powdered metals and 'sep- arated from' ammonium compounds
*	Chlorates, inorganic, n.o.s.	5.1	UN 1461	Oxidizer	II	1,2	5	Stow 'away from' powdered metals and 'sep- arated from' ammonium compounds
*	Chloric acid solution <i>containing not more than 10% acid</i>	5.1	UN 2626	Oxidizer	II	1	5	Stow 'separated from' ammonium compounds and 'away from' finely powdered metals
	Chlorinated anthracene oil	6.1	UN 2230	Poison	II	1,3	1,3	Stow 'away from' sources of heat. Segrega- tion same as for flammable liquids
	Chlorine	2.3	UN 1017	Poison Gas, Oxidizer	--	1	5	Stow 'away from' living quarters and organic materials, 'separated from' acetylene, am- monia, diborane and hydrogen
	Chlorine trifluoride	2.3	UN 1749	Poison Gas, Oxidizer, Corrosive	--	1,2	5	Stow 'away from' food stuffs and living quar- ters
	Chlorites, ( <i>inorganic</i> ), n.o.s.	5.1	UN 1462	Oxidizer	II	1,2	5	Stow 'away from' powdered metals and cyanides, 'separated from' ammonium com- pounds
	Chloroacetaldehyde	6.1	UN 2232	Poison	II	1	5	
	Chloroacetic acid, <i>liquid</i>	8	UN 1750	Corrosive	II	1,2	1,2	Glass carboys in hampers not permitted under deck
	Chloroacetic acid, <i>solid</i>	8	UN 1751	Corrosive	II	1,2	1,2	Keep dry
*	Chloroacetone, <i>stabilized</i>	6.1	UN 1695	Poison	II	1	5	Stow 'away from' living quarters
*	Chloroacetonitrile	6.1	UN 2668	Poison, Flammable Liquid	II	1,3	1,3	Keep cool. Shade from radiant heat. Stow 'away from' acids. Segregation same as for flammable liquids
	Chloroacetophenone	6.1	UN 1697	Poison	II	1	5	
	Chloroacetyl chloride	8	UN 1752	Corrosive	II	1	5	Keep dry
	Chloroanilines, <i>liquid</i>	6.1	UN 2019	Poison	II	1,2	1,2	
	Chloroanilines, <i>solid</i>	6.1	UN 2018	Poison	II	1,2	1,2	
	p-Chloro-o-ansidine	6.1	UN 2233	St. Andrews Cross	III	1,2	1,2	
	Chlorobenzene	3.3	UN 1134	Flammable Liquid	II	1,3	1,3	
	Chlorobenzotrifluorides	3.3	UN 2234	Flammable Liquid	III	1,2	1,2	
*	p-Chlorobenzoyl peroxide. <i>See</i> Di-(4-chlorobenzoyl) peroxide							
*	p-Chlorobenzyl chloride	6.1	UN 2235	St. Andrews Cross	III	1,2	1,2	
*	1-Chloro-3-bromopropane	6.1	UN 2688	St. Andrews Cross	III	1,2	1,2	
*	Chlorocresols	6.1	UN 2669	Poison	II	1,3	1,3	Keep cool. Stow 'away from' living quarters
	Chlorodifluorobromomethane	2.2	UN 1974	Nonflammable Gas	--	1,2	1,2	
	Chlorodifluoromethane	2.2	UN 1018	Nonflammable Gas	--	1,2	1,2	
	Chlorodifluoromethane and chloropentafluoroethane, <i>mixture with a fixed boiling point containing about 49% of chlorodifluoromethane</i>	2.2	UN 1973	Nonflammable Gas	--	1,2	1,2	
	Chlorodinitrobenzene	6.1	UN 1577	Poison	II	1,2	1,2	
	2-Chloroethanol	3.3	UN 1135	Flammable Liquid	II	1,2	1,2	
	Chloroform	6.1	UN 1888	Poison	II	1,2	1,2	
*	Chloroformates, n.o.s., <i>with a flashpoint not less than 23 deg C</i>	6.1	UN 2742	Poison, Corrosive, Flammable Liquid (only if flashpoint below 61 deg C)	II	1,3	1,3	Keep cool and dry. Shade from radiant heat. Stow 'away from' living quarters. If flash- point below 61, segregation same as for flammable liquids
*	Chloromethylchloroformate	6.1	UN 2745	Poison, Corrosive	II	1,3	1,3	Keep cool and dry. Shade from radiant heat. Stow 'away from' living quarters
	Chloromethyl ethyl ether	3.2	UN 2354	Flammable Liquid, Poison	II	1,3	5	Keep cool

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Pas- senger vessel	(c) Other requirements
	3-Chloro-4-methylphenyl isocyanate	6.1	UN 2236	Poison	II	1,2	1,2	Shade from radiant heat
	Chloronitroanilines	6.1	UN 2237	St. Andrews Cross	III	1,2	1,2	
	Chloronitrobenzenes ( <i>o</i> -, <i>m</i> -, <i>p</i> -)	6.1	UN 1578	Poison	II	1,2	1,2	
	Chloro- <i>o</i> -nitrotoluene	6.1	UN 2433	St. Andrews Cross	III	1,2	1,2	
	Chloropentafluoroethane	2.2	UN 1020	Nonflammable Gas	-	1,2	1,2	
	<i>m</i> -Chloroperoxybenzoic acid, maximum concentration 86%	5.2	UN 2755	Organic Peroxide	II	1	5	
	3-Chloroperoxybenzoic acid, maximum concentration 86%	5.2	UN 2755	Organic Peroxide	II	1	5	
*	Chlorophenates, liquid	8	UN 2904	Corrosive	III	1,2	1,2	
*	Chlorophenates, solid	8	UN 2905	Corrosive	III	1,2	1,2	
*	Chlorophenols, liquid	6.1	UN 2021	St. Andrews Cross	III	1,2	1,2	
*	Chlorophenols, solid	6.1	UN 2020	St. Andrews Cross	III	1,2	1,2	
	Chlorophenyl trichlorosilane	8	UN 1753	Corrosive	II	1	1	Keep dry
	Chloropicrin	6.1	UN 1580	Poison	I	1	5	
*	Chloropicrin and methyl bromide, mixtures	2.3	UN 1581	Poison Gas	-	1	5	Shade from radiant heat. Stow 'away from' living quarters
*	Chloropicrin and methyl chloride, mixtures	2.3	UN 1582	Poison Gas	-	L	5	Shade from radiant heat. Stow 'away from' living quarters
	Chloropicrin mixtures, n.o.s.	6.1	UN 1583	Poison	I/II	1	5	
		6.1	UN 1583	St. Andrews Cross	III	1,2	1,2	
	Chloroplatinic acid, solid	8	UN 2507	Corrosive	III	1,2	1,2	
	Chloroprene, inhibited	3.2	UN 1991	Flammable Liquid	I	1,2	1	
	2-Chloropropane	3.1	UN 2356	Flammable Liquid	I	1,3	5	Keep cool
*	3-Chloropropanol-1	6.1	UN 2849	St. Andrews Cross	III	1,2	1,2	
*	2-Chloropropene	3.1	UN 2456	Flammable Liquid	I	1,3	5	Keep cool
	Chloropropionic acid	8	UN 2511	Corrosive	III	1,2	1,2	Glass carboys prohibited on passenger vessels
*	3-Chloropyridine	6.1	UN 2822	Poison	II	1,2	1,2	Stow 'away from' living quarters
	Chlorosulphonic acid, with or without sulphur trioxide	8	UN 1754	Corrosive	I	1	1	Glass carboys prohibited on passenger vessels
	Chlorotetrafluoroethane	2.2	UN 1021	Nonflammable Gas	-	1,2	1,2	
	Chlorotoluenes ( <i>o</i> -, <i>m</i> -, <i>p</i> -)	3.3	UN 2238	Flammable Liquid	III	1,2	1,2	
	4-Chloro- <i>o</i> -toluidine hydrochloride	6.1	UN 1579	St. Andrews Cross	III	1,2	1,2	
	Chlorotoluidines	6.1	UN 2239	St. Andrews Cross	III	1,2	1,2	
*	Chlorotrifluoroethane	2.2	UN 1983	Nonflammable Gas	-	1,2	1,2	
	Chlorotrifluoroethane. See Trifluorochloroethane							
	Chlorotrifluoroethylene. See Trifluorochloroethylene							
	Chlorotrifluoromethane	2.2	UN 1022	Nonflammable Gas	-	1,2	1,2	
	Chromic acid, solid. See Chromium trioxide, anhydrous							
	Chromic acid, solution	8	UN 1755	Corrosive	II	1	1	
	Chromic anhydride. See Chromium trioxide, anhydrous							
	Chromic fluoride, solid	8	UN 1756	Corrosive	II	1,2	1,2	
	Chromic fluoride, solution	8	UN 1757	Corrosive	II	1,2	1,2	
*	Chromium nitrate	5.1	UN 2720	Oxidizer	III	1,2	1,2	
	Chromium oxychloride	8	UN 1758	Corrosive	I	1	1	Keep dry. Glass carboys prohibited on passenger vessels
*	Chromium trioxide, anhydrous	5.1	UN 1463	Oxidizer, Corrosive	II	1,2	1,2	Stow 'separated from' flammable substances and 'away from' foodstuffs
	Chromosulphuric acid	8	UN 2240	Corrosive	I	1,2	1	Carboys not permitted on passenger vessels and permitted only on deck on cargo vessels
	Chrysotile. See Asbestos, white							
	Cigarettes, self-lighting	4.1	UN 1867	Flammable Solid	III	1,2	1,2	Keep dry
	Cleaning compound. See Flammable liquid preparations, n.o.s.							
	Cleaning compounds, liquid, corrosive	8	UN 1759	Corrosive	II	1,2	1,2	
	Coal gas	2.1	UN 1023	Flammable Gas, Poison Gas	-	1	5	Stow 'away from' living quarters
	Coal tar distillate	3.2	UN 1136	Flammable Liquid	-	1,2	1	
		3.3	UN 1136	Flammable Liquid	-	1,2	1,2	
	Coal tar light oil	3.2	UN 1137	Flammable Liquid	-	1,2	1	
		3.3	UN 1137	Flammable Liquid	-	1,2	1,2	
	Coal tar naphtha	3.2	UN 2553	Flammable Liquid	II	1,2	1	
	Coal tar oil. See Coal tar distillate							
	Coating solution	3.2	UN 1139	Flammable Liquid	II	1,2	1	
		3.3	UN 1139	Flammable Liquid	II	1,2	1,2	
	Cobalt naphthenates, powder	4.1	UN 2001	Flammable Solid	III	1,2	1,2	
	Cobalt resinates, precipitated	4.1	UN 1318	Flammable Solid	III	1,2	1,2	
	Cocculus, solid	6.1	UN 1584	Poison	II	1,2	1,2	
	Cologne spirits. See Ethanol							
	Columbian spirits. See Methanol							
	Components, explosive train, n.o.s.	1.4B	UN 0383	Explosive (1.4B)	-	1,3	1,3	
	Components, explosive train, n.o.s.	1.4S	UN 0384	None. Package to be marked '1.4S'	-	1,3	1,3	
N	Components, explosive train, n.o.s.	1.2B	UN 0382	Explosive (1.2B)	-	-	-	
	Compressed or liquefied gases, (flammable, non-toxic), n.o.s.	2.1	UN 1954	Flammable Gas	-	1	5	Stow 'away from' living quarters
	Compressed or liquefied gases, (flammable, toxic), n.o.s.	2.1	UN 1953	Flammable Gas, Poison Gas	-	1	5	Stow 'away from' living quarters
	Compressed or liquefied gases; (non-flammable, non-toxic), n.o.s.	2.2	UN 1956	Nonflammable Gas	-	1,2	1,2	

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Compressed or liquefied gases, (non-flammable, toxic), n.o.s.	2.3	UN 1955	Poison Gas	--	1	5	Stow 'away from' living quarters
N	Contrivances, water-activated, with burster, expelling charge or propelling charge	1.2L	UN 0248	Explosive (1.2L), Dangerous When Wet	--	--	--	
N	Contrivances, water-activated, with burster, expelling charge or propelling charge	1.3L	UN 0249	Explosive (1.3L), Dangerous When Wet	--	--	--	
	Copper acetoarsenite	6.1	UN 1585	Poison	II	1,2	1,2	
	Copper arsenite	6.1	UN 1586	Poison	II	1,2	1,2	
*	Copper based pesticides, liquid, n.o.s.	6.1	UN 2775	Poison	I	1	1	
		6.1	UN 2775	Poison	II	1,2	1	
		6.1	UN 2775	St. Andrews Cross	III	1,2	1,2	
*	Copper based pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2775	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2775	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable liquids
		6.1	UN 2775	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
*	Copper based pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2776	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
*	Copper based pesticides, solid, n.o.s.	6.1	UN 2775	Poison	I/II	1,2	1,2	
		6.1	UN 2775	St. Andrews Cross	III	1,2	1,2	
*	Copper chlorate	5.1	UN 2721	Oxidizer	II	1,2	1,2	Stow 'separated from' ammonium compounds and 'away from' finely powdered metals
	Copper cyanide	6.1	UN 1587	Poison	II	1,2	1,2	Stow 'away from' acids
	Copra	4.2	UN 1363	None. Package to be marked 'Class 4.2'	III	1,2	1,2	Keep dry. Protect from sparks and open flame
	Cord, detonating, flexible	1.4 D	UN 0289	Explosive (1.4D)	--	1,3	1,3	
N	Cord, detonating, flexible	1.1D	UN 0065	Explosive (1.1D)	--	--	--	
N	Cord, detonating, metal clad	1.1D	UN 0290	Explosive (1.1D)	--	--	--	
N	Cord, detonating, metal clad	1.2D	UN 0102	Explosive (1.2D)	--	--	--	
	Cord, detonating, mild effect, metal clad	1.4 D	UN 0104	Explosive (1.4D)	--	1,3	1,3	
	Cord, igniter	1.4 G	UN 0066	Explosive (1.4G)	--	1,3	1,3	
*	Corrosive liquids, n.o.s.	8	UN 1760	Corrosive, Flammable Liquid (only if flashpoint between 23 and 61 deg C)	I/II/III	1	5	For a material that meets only the corrosion to skin criteria of 49 CFR 173.240(a)(1), 'under deck' stowage is also authorized if the description includes the additional entry specified in Sec. 172.203(l)(3). If flashpoint below 61 deg C, segregation same as for flammable gases
*	Corrosive solids, n.o.s.	8	UN 1759	Corrosive	I/II/III	1	5	For a material that meets only the corrosion to skin criteria of 49 CFR 173.240(a)(1), 'under deck' stowage is also authorized if the description includes the additional entry specified in Sec. 172.203(l)(3). Keep dry
	Cosmetics, n.o.s. See Perfumery products							
	Cotton, dry. See Fibres, vegetable, dry							
	Cotton waste, oily	4.2	UN 1364	Spontaneously Combustible	III	1,2	1,2	Keep dry. Stow 'separated from' explosives, animal oils or vegetable oils
	Cotton, wet or contaminated	4.2	UN 1365	Spontaneously Combustible	III	1,2	1,2	Keep dry
	Cresols (o-, m-, p-)	6.1	UN 2076	Poison	II	1,2	1,2	
	Cresylic acid	6.1	UN 2022	Poison	II	1,2	1,2	
	Crocidolite. See Asbestos, blue							
*	Crotonaldehyde, inhibited	3.2	UN 1143	Flammable Liquid	II	1,2	1	
	Crotonic acid	8	UN 2823	Corrosive	III	1,3	1,3	Keep cool
	Crotonylene	3.1	UN 1144	Flammable Liquid	I	1,3	5	Keep cool
*	Cumene hydroperoxide. See Cumyl hydroperoxide							
	Cumyl hydroperoxide, technical pure	5.2	UN 2116	Organic Peroxide	I	1	5	
	Cupric cyanide. See Copper cyanide							
	Cuprithylenediamine, solution	8	UN 1761	Corrosive, Poison	II	1,2	1,2	
	Cut-backs, asphalt or bitumen	3.2	UN 1999	Flammable Liquid	II	1,2	1	
		3.3	UN 1999	Flammable Liquid	II	1,2	1,2	
	Cutters, cable, explosive	1.4 S	UN 0070	None. Package to be marked '1.4 S'	--	1,3	1,3	
	Cyanide mixtures. See Cyanides, (inorganic), n.o.s.							
*	Cyanides, inorganic, n.o.s.	6.1	UN 1588	Poison	I/II	1,2	1,2	Stow 'away from' acids.
		6.1	UN 1588	St. Andrews Cross	III	1,2	1,2	Stow 'away from' acids
*	Cyanide, solutions	6.1	UN 1935	Poison	I	1,2	1,2	Stow 'away from' living quarters and acids
	Cyanogen	2.3	UN 1026	Poison Gas, Flammable Gas	--	1	5	Stow 'away from' foodstuffs and living quarters
	Cyanogen bromide	6.1	UN 1889	Poison, Corrosive	I	1	5	Shade from radiant heat. Segregation same as for corrosives
	Cyanogen chloride, inhibited	2.3	UN 1589	Poison Gas	--	1	5	
	Cyanuric chloride (cyanuric trichloride)	8	UN 2670	Corrosive	II	1,2	1,2	Keep dry

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Storage Requirements		
						(a)	(b)	(c)
						Cargo vessel	Pass- enger vessel	Other requirements
*	Cyclobutylchloroformate	6.1	UN 2744	Poison, Corrosive, Flammable Liquid	II	1.3	1.3	Keep cool and dry. Shade from radiant heat. Stow 'away from' living quarters. Segregation same as for flammable liquids
	1,5,9-Cyclododecatene	8	UN 2518	Corrosive	III	1	5	
	Cycloheptane	3.2	UN 2241	Flammable Liquid	II	1.2	1	Stow 'away from' living quarters
	Cycloheptatriene	3.2	UN 2603	Flammable Liquid, Poison	II	1.3	5	Keep cool
	Cycloheptene	3.2	UN 2242	Flammable Liquid	II	1.2	1	Keep cool
*	Cyclohexane	3.1	UN 1145	Flammable Liquid	II	1.3	5	
	Cyclohexanone	3.3	UN 1915	Flammable Liquid	III	1.2	1.2	Keep cool
*	Cyclohexanone peroxides, in a concentration of more than 90% with less than 10% water	5.2	UN 2117	Organic Peroxide	I	1	5	
*	Cyclohexanone peroxides, maximum concentration 90%, with at least 10% water	5.2	UN 2119	Organic Peroxide	I	1	5	Keep cool
*	Cyclohexanone peroxides, maximum concentration 72% and containing not more than 9% available oxygen, in solution	5.2	UN 2118	Organic Peroxide	I	1	5	
*	Cyclohexanone peroxides, maximum concentration 72% and containing not more than 9% available oxygen, as a paste	5.2	UN 2696	Organic Peroxide	II	1	5	Keep cool
	Cyclohexene	3.1	UN 2256	Flammable Liquid	II	1.3	5	
	Cyclohexene	3.2	UN 2256	Flammable Liquid	II	1.2	1	Keep dry
	Cyclohexenyl trichlorosilane	8	UN 1762	Corrosive	II	1	1	
	Cyclohexyl acetate	3.3	UN 2243	Flammable Liquid	III	1.2	1.2	Keep cool
	Cyclohexylamine	3.2	UN 2357	Flammable Liquid, Poison	II	1.2	1	
	Cyclohexylamine	3.3	UN 2357	Flammable Liquid, Corrosive	II	1.2	1.2	Shade from radiant heat. Stow 'away from' living quarters. Segregation same as for flammable liquids
*	Cyclohexyl isocyanate	6.1	UN 2488	Poison, Flammable Liquid	II	1	5	
	Cyclohexyl trichlorosilane	8	UN 1763	Corrosive	II	1	1	Keep dry
	Cyclooctadienes	3.3	UN 2520	Flammable Liquid	II	1.2	1.2	Keep cool
	Cyclooctatetraene	3.2	UN 2358	Flammable Liquid	II	1.2	1	
*	Cyclopentane	3.1	UN 1146	Flammable Liquid	II	1.3	5	Keep cool
	Cyclopentanol	3.3	UN 2244	Flammable Liquid	III	1.2	1.2	
	Cyclopentanone	3.3	UN 2245	Flammable Liquid	II	1.2	1.2	Keep cool
	Cyclopentene	3.1	UN 2246	Flammable Liquid	II	1.3	5	
	Cyclopropane	2.1	UN 1027	Flammable Gas	-	1.2	1	Stow 'away from' living quarters
N	Cyclotetramethylenetetramine, containing, by weight, at least 15% water or at least 10% phlegmatizer	1.1D	UN 0226	Explosive (1.1D)	-	-	-	Keep cool
*N	Cyclotrimethylenetrinitramine, containing, by weight, at least 15% water or at least 10% phlegmatizer	1.1D	UN 0072	Explosive (1.1D), Corrosive	-	-	-	
N	Cyclotrimethylenetrinitramine mixed with cyclotetramethylenetetramine, containing, by weight, at least 15% water or at least 10% phlegmatizer	1.1D	UN 0391	Explosive (1.1D)	-	-	-	Keep cool
*	Cymenes	3.3	UN 2046	Flammable Liquid	II	1.2	1.2	
	Decaborane	4.1	UN 1868	Flammable Solid, Poison	II	1.2	1.2	Control temperature 30 deg C. Emergency temperature 35 deg C
	Decahydronaphthalene	3.3	UN 1147	Flammable Liquid	II	1.2	1.2	
	Decalin. See Decahydronaphthalene							Stow 'away from' living quarters
	n-Decane	3.3	UN 2247	Flammable Liquid	III	1.2	1.2	
N	Deflagrating metal salts of aromatic nitro-derivatives, n.o.s.	1.3C	UN 0132	Explosive (1.3C)	-	-	-	Keep cool. Shade from radiant heat. Segregation same as for flammable liquids
	Detonators for ammunition	1.4B	UN 0365	Explosive (1.4B)	-	1.3	1.3	
	Detonators for ammunition	1.4S	UN 0366	None. Package to be marked '1.4S'	-	1.3	1.3	Keep cool
N	Detonators for ammunition	1.1B	UN 0073	Explosive (1.1B)	-	-	-	
N	Detonators for ammunition	1.2B	UN 0364	Explosive (1.2B)	-	-	-	Stow 'away from' living quarters
	Deuterium	2.1	UN 1957	Flammable Gas	-	1.2	5	
	Diacetone alcohol	3.2	UN 1148	Flammable Liquid	II	1.2	1	Control temperature 25 deg C. Emergency temperature 30 deg C
*	Diacetone alcohol peroxides, maximum 57% in solution with maximum 9% hydrogen peroxide, minimum 26% diacetone alcohol and minimum 9% water; total active oxygen content maximum 10%	5.2	UN 2163	Organic Peroxide	I	1	5	
	Diallylamine	3.2	UN 2359	Flammable Liquid	II	1.2	1	Keep cool
	Diallylether	3.2	UN 2360	Flammable Liquid, Poison	II	1.3	5	
*	4,4'-Diaminodiphenyl methane	6.1	UN 2651	St. Andrews Cross	III	1.2	1.2	Keep cool. Shade from radiant heat. Segregation same as for flammable liquids
*	Di-n-amyllamine	6.1	UN 2841	St. Andrews Cross, Flammable Liquid	III	1.3	1.3	
N	Diazodinitrophenol, containing, by weight, at least 40% water or mixture of alcohol and water	1.1A	UN 0074	Explosive (1.1A)	-	-	-	Keep dry
	Dibenzylchlorosilane	8	UN 2434	Corrosive	II	1	1	
*	Dibenzyl peroxydicarbonate, maximum concentration 87% with water	5.2	UN 2149	Organic Peroxide	I	1	5	Control temperature 25 deg C. Emergency temperature 30 deg C
	Diborane	2.1	UN 1911	Flammable Gas, Poison Gas	-	1	5	Stow 'away from' foodstuffs and living quarters, 'separated from' chlorine
	Dibromobenzene	3.3	UN 2711	Flammable Liquid	III	1.2	1.2	Keep cool
*	1,2-Dibromobutan-3-one	6.1	UN 2648	Poison	II	1.2	1	
*	1,2-Dibromo-3-chloropropane	6.1	UN 2672	St. Andrews Cross	III	1.2	1.2	Keep cool
*	Dibromomethane	6.1	UN 2664	St. Andrews Cross	III	1.2	1.2	

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pas- senger vessel	
	Di-(n-butyl)amine	8	UN 2248	Corrosive, Flammable Liquid	II	1,2	1,2	Segregation same as for flammable liquids
*	<—&Di-n-butylaminoethanol	6.1	UN 2873	St. Andrews Cross	III	1,2	1,2	
	Dibutyl ethers	3.3	UN 1149	Flammable Liquid	III	1,2	1,2	
*	Di-tert-butyl peroxide, <i>technical pure</i>	5.2	UN 2102	Organic Peroxide, Flammable Liquid	II	1	5	
*	Di-sec-butyl peroxydicarbonate, <i>maximum concentration 52% in solution</i>	5.2	UN 2151	Organic Peroxide	II	1	5	Control temperature -15 deg C. Emergency temperature -5 deg C
*	Di-sec-butyl peroxydicarbonate, <i>technical pure</i>	5.2	UN 2150	Organic Peroxide	I	1	5	Control temperature -20 deg C. Emergency temperature -10 deg C
*	Di-(tert-butylperoxy)phthalate, <i>maximum concentration 55% as a paste</i>	5.2	UN 2108	Organic Peroxide	II	1	5	
*	Di-(tert-butylperoxy)phthalate, <i>maximum concentration 55% in solution</i>	5.2	UN 2107	Organic Peroxide	II	1	5	
*	Di-(tert-butylperoxy)phthalate, <i>technical pure</i>	5.2	UN 2106	Organic Peroxide	II	1	5	
*	Dicetyl peroxydicarbonate <i>maximum concentration 42%, stable dispersion in water</i>	5.2	UN 2985	Organic Peroxide	II	1	5	Control temperature 25 deg C. Emergency temperature 30 deg C
*	Dicetyl peroxydicarbonate, <i>technical pure</i>	5.2	UN 2164	Organic Peroxide	II	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
	Dichloroacetic acid	8	UN 1764	Corrosive	II	1,2	1,2	Glass carboy in hampers not permitted under deck
*	1,3-Dichloroacetone	6.1	UN 2649	Poison	II	1,3	1	Keep cool. Stow 'away from' living quarters
	Dichloroacetyl chloride	8	UN 1754	Corrosive	II	1	5	Keep dry
	Dichloroanilines	6.1	UN 1590	Poison	II	1,2	1,2	Stow 'away from' acids
	p-Dichlorobenzene	9	UN 1592	None	III	1,2	1,2	Stow 'away from' foodstuffs
	Dichlorobenzenes ( <i>o</i> -, <i>m</i> -)	6.1	UN 1591	St. Andrews Cross	III	1,2	1,2	
*	Di-(4-chlorobenzoyl) peroxide, <i>maximum concentration 52% as a paste</i>	5.2	UN 2114	Organic Peroxide	II	1	5	
*	Di-(4-chlorobenzoyl) peroxide, <i>maximum concentration 52% in solution</i>	5.2	UN 2115	Organic Peroxide	II	1	5	
*	Di-(4-chlorobenzoyl) peroxide, <i>maximum concentration 75% with water</i>	5.2	UN 2113	Organic Peroxide	II	1	5	
	Dichlorodifluoromethane	2.2	UN 1028	Nonflammable Gas	—	1,2	1,2	
*	sym-Dichlorodimethyl ether	6.1	UN 2249	Poison, Flammable Liquid	I	1	5	Stow 'away-from' living quarters. Segregation same as for flammable liquids
	1,1-Dichloroethane	3.2	UN 2362	Flammable Liquid	II	1,2	1	
	Dichloroethylene	3.2	UN 1150	Flammable Liquid	II	1,2	1	
	Dichloroethyl ether	3.3	UN 1916	Flammable Liquid, Poison	II	1,2	1,2	
	Dichloroisocyanuric acid, <i>dry</i> or dichloroisocyanuric acid salts	5.1	UN 2465	Oxidizer	II	1,2	1,2	
	Dichloroisopropyl ether	6.1	UN 2490	Poison	II	1,2	1	
*	Dichloromethane	6.1	UN 1593	St. Andrews Cross	III	1,2	1,2	Shade from radiant heat
	Dichloromonofluoromethane	2.2	UN 1029	Nonflammable Gas	—	1,2	1,2	
*	1,1-Dichloro-1-nitroethane	6.1	UN 2650	Poison	II	1,3	1,3	Keep cool. Stow 'away from' living quarters
	Dichloropentanes	3.3	UN 1152	Flammable Liquid	II	1,2	1,2	
*	Dichlorophenyl isocyanates	6.1	UN 2250	Poison	II	1,3	1,3	Shade from radiant heat. Stow 'away from' living quarters
	Dichlorophenyl trichlorosilane	8	UN 1766	Corrosive	II	1	1	Keep dry
*	1,3-Dichloropropanol-2	6.1	UN 2750	Poison	II	1,3	1,3	Keep cool. Stow 'away from' living quarters
	Dichloropropene	3.3	UN 2047	Flammable Liquid	II	1,2	1,2	
	Dichlorosilane	2.3	UN 2189	Poison Gas, Flammable Gas	—	1	5	Stow 'away from' living quarters
	Dichlorotetrafluoroethane	2.2	UN 1958	Nonflammable Gas	—	1,2	1,2	
*	Dicumyl peroxide, <i>technical pure</i> or <i>with inert solid</i>	5.2	UN 2121	Organic Peroxide	II	1	5	
	Dicyclohexylamine	8	UN 2565	Corrosive	III	1	5	Keep dry
*	Dicyclohexylammonium nitrate	6.1	UN 2687	St. Andrews Cross	III	1,2	1,2	
*	Dicyclohexyl peroxydicarbonate, <i>maximum concentration 91% with water</i>	5.2	UN 2153	Organic Peroxide	I	1	5	Control temperature 5 deg C. Emergency temperature 10 deg C
*	Dicyclohexyl peroxydicarbonate, <i>technical pure</i>	5.2	UN 2152	Organic Peroxide	I	1	5	Control temperature 5 deg C. Emergency temperature 10 deg C
	Dicyclopentadiene	3.3	UN 2048	Flammable Liquid	II	1,2	1,2	
*	Didecanoyl peroxide, <i>technical pure</i>	5.2	UN 2120	Organic Peroxide	II	1	5	Control temperature 15 deg C. Emergency temperature 20 deg C
*	Di-2,4-dichlorobenzoyl peroxide, <i>maximum concentration 75% with water</i>	5.2	UN 2137	Organic Peroxide	II	1	5	
*	Di-2,4-dichlorobenzoyl peroxide, <i>maximum concentration 52% as a paste</i>	5.2	UN 2138	Organic Peroxide	II	1	5	
*	Di-2,4-dichlorobenzoyl peroxide, <i>maximum concentration 52% in solution</i>	5.2	UN 2139	Organic Peroxide	II	1	5	
	Didymum nitrate	5.1	UN 1465	Oxidizer	III	1,2	1,2	
	Diethoxymethane	3.1	UN 2373	Flammable Liquid	II	1,3	5	Keep cool
*	3,3-Diethoxypropene	3.2	UN 2374	Flammable Liquid	II	1,2	1	
	Diethylaluminum chloride	4.2	UN 1101	Spontaneously Combustible	I	1	1	
	Diethylamine	3.1	UN 1154	Flammable Liquid	II	1,3	5	Keep cool
	Diethylaminoethanol	3.3	UN 2686	Flammable Liquid	III	1,2	1,2	
*	3-(Diethylamino) propylamine	8	UN 2684	Corrosive, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
	<—&Diethylaniline	6.1	UN 2432	St. Andrews Cross	III	1,2	1,2	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
	Diethylbenzene	3.3	UN 2049	Flammable Liquid	II	1.2	1.2	
	Diethylcarbinol	3.3	UN 2706	Flammable Liquid	II	1.2	1.2	
	Diethyl carbonate	3.3	UN 2366	Flammable Liquid	II	1.2	1.2	
	Diethyl dichlorosilane	8	UN 1767	Corrosive, Flammable Liquid	II	1	1	Keep dry. Separate longitudinally by an inter- vening compartment or hold from ex- plosives. Segregation same as for flamma- ble liquids
	<—&Diethylene diamine	8	UN 2685	Corrosive, Flammable Liquid	II	1.3	1.3	Keep cool. Segregation same as for flamma- ble liquids
N	Diethyleneglycol dinitrate, containing, by weight, at least 25% non- volatile water-insoluble phlegmatizer	1.1D	UN 0075	Explosive (1.1D)	—	—	—	
	Diethylenetriamine	8	UN 2079	Corrosive	II	1.2	1.2	Stow 'away from' acids, copper and copper alloys, and living quarters; separated from nitric acid
	Diethyl ether	3.1	UN 1155	Flammable Liquid	I	1.3	5	Keep cool
	Di-(2-ethylhexyl) peroxydicarbonate, maximum concentration 67% in solution	5.2	UN 2123	Organic Peroxide	II	1	5	Control temperature -15 deg C. Emergency temperature -5 deg C
	Di-(2-ethylhexyl) peroxydicarbonate, technical pure	5.2	UN 2122	Organic Peroxide	II	1	5	Control temperature -20 deg C. Emergency temperature -10 deg C
	Diethyl ketone	3.2	UN 1156	Flammable Liquid	II	1.2	1	
	Diethylmagnesium	4.2	UN 1367	Spontaneously Combustible	I	1	5	Prohibited on any ship carrying explosives (except explosives in Division 1.4, Com- patibility Group 5)
	Diethyl-p-nitrosoaniline	4.2	—	Spontaneously Combustible	—	1.2	5	
	Diethyl peroxydicarbonate, maximum concentration 27% in solution	5.2	UN 2175	Organic Peroxide	II	1	5	Control temperature -10 deg C. Emergency temperature 0 deg C
	Diethyl sulfide	3.2	UN 2375	Flammable Liquid, Poison	II	1.3	5	Keep cool and dry
	Diethyl sulphate	6.1	UN 1594	Poison	II	1	1	
	Diethylthiophosphoryl chloride	8	UN 2751	Corrosive, Flammable Liquid	II	1	5	Keep cool and dry. Segregation same as for flammable liquids
	Diethylzinc	4.2	UN 1366	Spontaneously Combustible	I	1	5	Prohibited on any ship carrying explosives (except explosives in Division 1.4, Com- patibility Group 5)
	1,1-Difluoroethane	2.1	UN 1030	Flammable Gas	—	1.2	1	Stow 'away from' living quarters
	1,1-Difluoroethylene	2.1	UN 1959	Flammable Gas	—	1.2	5	Stow 'away from' living quarters
	Difluoromonochloroethane	2.1	UN 2517	Flammable Gas	—	1.2	1	Stow 'away from' living quarters
	Difluorophosphonic acid, anhydrous	8	UN 1768	Corrosive	II	1.2	1.2	
	2,2-Dihydroperoxy propane, maximum concentration 25% with inert organic solid	5.2	UN 2178	Organic Peroxide	II	1	5	
	2,3-Dihydropyran	3.2	UN 2376	Flammable Liquid	II	1.2	1	
	Diisobutylamine	3.3	UN 2361	Flammable Liquid	II	1.2	1.2	
	Diisobutylene, (isomeric compounds)	3.2	UN 2050	Flammable Liquid	II	1.2	1	
	Diisobutyl ketone	3.3	UN 1157	Flammable Liquid	III	1.2	1.2	
	Diisooctyl acid phosphate	8	UN 1902	Corrosive	III	1.2	1.2	Glass carboys in hampers not permitted under deck
	Diisopropylamine	3.2	UN 1158	Flammable Liquid	II	1.2	1	
	Diisopropylbenzene hydroperoxide, maximum concentration 72% in solution	5.2	UN 2171	Organic Peroxide	I	1	5	
	<—&Diisopropyl ethanolamine	8	UN 2825	Corrosive	III	1.2	1.2	Stow 'away from' caustic alkalis
	Diisopropyl ether	3.1	UN 1159	Flammable Liquid	II	1.3	5	Keep cool
	Diisopropyl peroxydicarbonate, technical pure	5.2	UN 2133	Organic Peroxide	II	1	5	Control temperature -15 deg C. Emergency temperature -5 deg C
	Diisopropyl peroxydicarbonate, maximum concentration 52% in so- lution	5.2	UN 2134	Organic Peroxide	II	1	5	Control temperature -10 deg C. Emergency temperature 0 deg C
	Diketene, inhibited	3.3	UN 2521	Flammable Liquid	II	1.2	1.2	
	Dilauroyl peroxide, maximum concentration 42%, stable dispersion in water	5.2	UN 2983	Organic Peroxide	II	1	5	
	Dilauroyl peroxide, technical pure	5.2	UN 2124	Organic Peroxide	II	1	5	
	1,1-Dimethoxyethane	3.2	UN 2377	Flammable Liquid	III	1.2	1	
	1,2-Dimethoxyethane	3.2	UN 2252	Flammable Liquid	II	1.2	1	
	Dimethylamine, anhydrous	2.1	UN 1032	Flammable Gas	—	1.2	5	Stow 'away from' living quarters
	Dimethylamine, solution	3.2	UN 1160	Flammable Liquid	II	1.2	1	
	2-Dimethylaminoacetonitrile	3.3	UN 2378	Flammable Liquid, Poison	II	1.2	1.2	
	Dimethylaminoethyl methacrylate	6.1	UN 2522	Poison	II	1.2	1	
	<—&Dimethylaniline	6.1	UN 2253	Poison	II	1.3	1.3	Stow 'away from' sources of heat
	2,5-Dimethyl-2,5-bis-(tert-butylperoxy) hexane, maximum concentra- tion 52% with inert solid	5.2	UN 2156	Organic Peroxide	II	1	5	
	2,5-Dimethyl-2,5-bis-(tert-butylperoxy) hexane, technical pure	5.2	UN 2155	Organic Peroxide	II	1	5	
	2,5-Dimethyl-2,5-bis-(tert-butylperoxy) hexyne-3, maximum concen- tration 52% with inert solid	5.2	UN 2159	Organic Peroxide	II	1	5	
	2,5-Dimethyl-2,5-bis-(tert-butylperoxy) hexyne-3, technical pure	5.2	UN 2158	Organic Peroxide	II	1	5	
	2,5-Dimethyl-2,5-bis-(2-ethylhexanoylperoxy) hexane, technical pure	5.2	UN 2157	Organic Peroxide	II	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
	2,3-Dimethylbutane	3.1	UN 2457	Flammable Liquid	II	1.3	5	Keep cool
	1,3-Dimethylbutylamine	3.2	UN 2379	Flammable Liquid	II	1.2	1	
	<—&Dimethylcarbamoyl chloride	8	UN 2262	Corrosive	II	1.2	1.2	
	Dimethyl carbonate	3.2	UN 1161	Flammable Liquid	II	1.2	1	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
	Dimethylcyclohexanes	3.2	UN 2263	Flammable Liquid	II	1,2	1	Keep cool. Segregation same as for flammable liquids
	<—&Dimethylcyclohexylamine	8	UN 2264	Corrosive, Flammable Liquid	II	1,3	1,3	
	<—&Dimethylcyclohexylamine	8	UN 2264	Corrosive	II	1,2	1,2	
	2,5-Dimethyl-2,5-di-(benzoylperoxy) hexane, maximum concentration 82% with inert solid	5.2	UN 2173	Organic Peroxide	II	1	5	
	2,5-Dimethyl-2,5-di-(benzoylperoxy) hexane, technical pure	5.2	UN 2172	Organic Peroxide	II	1	5	
	Dimethyldichlorosilane	3.2	UN 1162	Flammable Liquid, Corrosive	I	1,2	1	
	Dimethyldiethoxysilane	3.2	UN 2380	Flammable Liquid	II	1,2	1	
	2,5-Dimethyl-2,5-dihydroperoxy hexane, maximum concentration 82% with water	5.2	UN 2174	Organic Peroxide	I	1	5	
	Dimethyldioxanes	3.2	UN 2707	Flammable Liquid	II	1,2	1	
	Dimethyldioxanes	3.3	UN 2707	Flammable Liquid	II	1,2	1,2	
	Dimethyl disulfide	3.2	UN 2381	Flammable Liquid	II	1,2	1	
	Dimethylethanolamine	3.3	UN 2051	Flammable Liquid	II	1,3	1,3	
	Dimethyl ether	2.1	UN 1033	Flammable Gas	—	1,2	1	Stow 'away from' living quarters
	<—&Dimethylformamide	3.3	UN 2265	Flammable Liquid	III	1,2	1,2	
	Dimethylhydrazine, symmetrical	3.2	UN 2382	Flammable Liquid, Poison	I	1,3	5	Keep cool
	Dimethylhydrazine, unsymmetrical	3.2	UN 1163	Flammable Liquid	I	1,2	1	Stow 'separated from' corrosive liquids and oxidizers
	Dimethylmagnesium	4.2	UN 1368	Spontaneously Combustible	I	1	5	Prohibited on any ship carrying explosives (except explosives in Division 1.4, Compatibility Group S)
	Dimethyl-p-nitrosoaniline	4.2	UN 1369	Spontaneously Combustible	II	1,2	5	Stow 'away from' foodstuffs
	2,2-Dimethylpropane	2.1	UN 2044	Flammable Gas	—	1,2	1	Stow 'away from' living quarters
	Dimethyl-N-propylamine	3.2	UN 2266	Flammable Liquid, Corrosive	II	1,2	1	
	Dimethyl sulphate	6.1	UN 1595	Poison	I	1	5	Stow 'away from' living quarters
	Dimethyl sulphide	3.1	UN 1164	Flammable Liquid	I	1,3	5	Keep cool
	Dimethyl thiophosphoryl chloride	8	UN 2267	Corrosive	III	1,2	1	Keep dry. Shade from radiant heat. Glass carboys prohibited on passenger vessels
	Dimethylzinc	4.2	UN 1370	Spontaneously Combustible	I	1	5	Prohibited on any ship carrying explosives (except explosives in Division 1.4, Compatibility Group S)
	Dimyristylperoxydicarbonate, maximum concentration 22%, stable dispersion in water	5.2	UN 2892	Organic Peroxide	II	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
	Dimyristylperoxydicarbonate, technical pure	5.2	UN 2595	Organic Peroxide	II	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
	Dinitroanilines	6.1	UN 1596	Poison	II	1,2	1,2	
	Dinitrobenzenes (o-, m-, p-)	6.1	UN 1597	Poison	II	1,2	1,2	
	Dinitrogen tetroxide. See Nitrogen dioxide							
N	Dinitrophenates (alkali metals), dry or containing, by weight, less than 15% water	1.3C	UN 0077	Explosive (1.3C), Poison	—	—	—	
	Dinitrophenolates, wetted with, by weight, at least 15% water	4.1	UN 1321	Flammable Solid, Poison	I	1,2	5	Stow 'away from' heavy metals and their compounds
N	Dinitrophenol, dry or containing, by weight, less than 15% water	1.1D	UN 0076	Explosive (1.1D), Poison	—	—	—	
	Dinitrophenol, solution in water or flammable liquid	6.1	UN 1599	Poison, Flammable Liquid (only if flashpoint between 23 deg C and 61 deg C)	II	1,2	5	Stow 'away from' heavy metals and their compounds. Segregation same as for flammable liquids if flash point below 61 deg C
	Dinitrophenol, wetted with, by weight, at least 15% water	4.1	UN 1320	Flammable Solid, Poison	I	1,2	5	Stow 'away from' heavy metals and their compounds and sodium compounds
N	Dinitrosorcinol, dry or containing, by weight, less than 15% water	1.1D	UN 0078	Explosive (1.1D)	—	—	—	
	Dinitrosorcinol, wetted with, by weight, at least 15% water	4.1	UN 1322	Flammable Solid	I	1,2	5	Stow 'away from' heavy metals and their compounds
N	Dinitrosobenzene	1.3C	UN 0406	Explosive (1.3C)	—	—	—	
	Dinitrotoluenes, liquid	6.1	UN 1600	Poison, Flammable Liquid	II	1,2	1,2	Segregation same as for flammable liquids
	Dinitrotoluenes, solid	6.1	UN 2038	Poison	II	1,2	1,2	
	Di-n-nonanoyl peroxide, technical pure	5.2	UN 2130	Organic Peroxide	II	1	5	Control temperature 0 deg C. Emergency temperature 10 deg C
	Di-n-octanoyl peroxide, technical pure	5.2	UN 2129	Organic Peroxide	II	1	5	Control temperature 10 deg C. Emergency temperature 15 deg C
	Dioxane	3.2	UN 1165	Flammable Liquid	II	1,2	1	
	Dioxolane	3.2	UN 1166	Flammable Liquid	II	1,2	1	
	Dipentene	3.3	UN 2052	Flammable Liquid	II	1,2	1,2	
	Diphenylamnechloroarsine	6.1	UN 1698	Poison	I	1	5	
	Diphenylchloroarsine	6.1	UN 1699	Poison	I	1	5	Stow 'away from' living quarters
	Diphenyl dichlorosilane	8	UN 1769	Corrosive	II	1	1	Keep dry
	Diphenylmethane diisocyanate (M.D.I.)	9	UN 2489	None	III	1,3	1,3	Stow 'away from' foodstuffs
	Diphenylmethyl bromide	8	UN 1770	Corrosive	II	1	5	
N	Dipicryl sulfide, dry or containing, by weight, less than 10% water	1.1D	UN 0401	Explosive (1.1D)	—	—	—	
	Dipicryl sulphide, wetted with, by weight, at least 10% water	4.1	UN 2852	Flammable Solid	I	1	5	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
	Dipropionyl peroxide, <i>maximum concentration 28% in solution</i>	5.2	UN 2132	Organic Peroxide	II	1	5	Control temperature 15 deg C. Emergency temperature 20 deg C
	Dipropylamine	3.2	UN 2383	Flammable Liquid	II	1.2	1	
	Dipropyl ether	3.1	UN 2384	Flammable Liquid	II	1.3	5	Keep cool
	Di-n-propyl peroxydicarbonate, <i>technical pure</i>	5.2	UN 2176	Organic Peroxide	I	1	5	Control temperature -25 deg C. Emergency temperature -15 deg C
	Disinfectants, <i>corrosive, liquid</i>	8	UN 1903	Corrosive	II	1.2	1.2	
	Distearylperoxydicarbonate, <i>with 15% of stearyl alcohol</i>	5.2	UN 2592	Organic Peroxide	II	1	5	
	Disuccinic acid peroxide. <i>See Succinic acid peroxide</i>							
	Disuccinic acid peroxide, <i>technical pure</i>	5.2	UN 2135	Organic Peroxide	I	1	5	
	Dithiocarbamate pesticides, <i>liquid, n.o.s.</i>	6.1	UN 2771	Poison	I	1	1	
		6.1	UN 2771	Poison	II	1.2	1	
		6.1	UN 2771	St. Andrews Cross	III	1.2	1.2	
	Dithiocarbamate pesticides, <i>liquid, n.o.s., flashpoint between 23 deg C and 61 deg C</i>	6.1	UN 2771	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2771	Poison, Flammable Liquid	II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 2771	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	Segregation same as for flammable liquids
	Dithiocarbamate pesticides, <i>n.o.s., flashpoint below 23 deg C</i>	3.2	UN 2772	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1.2	1	
	Dithiocarbamate pesticides, <i>solid, n.o.s.</i>	6.1	UN 2771	Poison	I/II	1.2	1.2	
		6.1	UN 2771	St. Andrews Cross	III	1.2	1.2	
	Divinyl ether, <i>inhibited</i>	3.1	UN 1167	Flammable Liquid	II	1.3	5	Keep cool
	Dodecyl trichlorosilane	8	UN 1771	Corrosive	II	1	1	Keep dry
	Dressing, leather. <i>See Flammable liquid preparations, n.o.s.</i>							
	Driers, <i>paint or varnish, liquid, n.o.s.</i>	3.2	UN 1168	Flammable Liquid	II	1.2	1	
		3.3	UN 1168	Flammable Liquid	II	1.2	1.2	
	Driers, <i>paint or varnish, solid, n.o.s.</i>	4.1	UN 1371	Flammable Solid	III	1.2	1.2	
	Dyes, <i>n.o.s. or Dye intermediates, n.o.s., liquid or solid, corrosive</i>	8	UN 2801	Corrosive	II/III	1.2	1.2	Stow 'away from' foodstuffs and living quarters
	Dyes, <i>n.o.s. or Dye intermediates, n.o.s., poisonous</i>	6.1	UN 1602	Poison, Flammable Liquid (only if flashpoint between 23 and 61 deg C)	I/II	1.2	1.2	If flashpoint below 61 deg, segregation same as for flammable liquids
		6.1	UN 1602	St. Andrews Cross	III	1.2	1.2	
	Electrolyte, <i>acid. See Battery fluid, acid</i>							
	Electrolyte, <i>alkaline. See Battery fluid, alkaline corrosive</i>							
	Enamels. <i>See Paints, etc.</i>							
	Engine starting fluid, <i>with flammable gas</i>	2.1	UN 1960	Flammable Gas	-	1.2	5	Stow 'away from' living quarters
	Epibromohydrin	6.1	UN 2558	Poison	I	1	5	
	Epichlorohydrin	6.1	UN 2023	Poison, Flammable Liquid	II	1.2	1.2	Segregation same as for flammable liquids. Stow 'away from' living quarters
	1,2-Epoxy-3-ethoxy propane	3.3	UN 2752	Flammable Liquid	III	1.2	1.2	
	Eradicators, <i>paint or grease, liquid. To be classified and labeled according to the principle hazardous constituent</i>	-	UN 1850		-	1.2	1	
	Essences. <i>See Extracts, aromatic, liquid</i>							
	Ethane, <i>compressed</i>	2.1	UN 1035	Flammable Gas	-	1.2	5	
	Ethane, <i>refrigerated liquid</i>	2.1	UN 1961	Flammable Gas	-	1	5	
	Ethanolamine, <i>and solutions thereof</i>	8	UN 2491	Corrosive	III	1.2	1.2	Stow 'away from' copper, copper alloys, copper compounds and rubber products
	Ethanol or Ethanol solutions including Alcoholic beverages	3.2	UN 1170	Flammable Liquid	II	1.2	1	
		3.3	UN 1170	Flammable Liquid	III	1.2	1.2	
	Ether. <i>See Diethyl ether</i>							
	2-Ethoxyethyl acetate	3.3	UN 1172	Flammable Liquid	III	1.2	1.2	
	Ethyl acetate	3.2	UN 1173	Flammable Liquid	II	1.2	1	
	Ethyl acrylate, <i>inhibited</i>	3.2	UN 1917	Flammable Liquid	II	1.2	1	
	Ethyl alcohol. <i>See Ethanol</i>							
	Ethyl aldehyde. <i>See Acetaldehyde</i>							
	Ethyl aluminum dichloride	4.2	UN 1924	Spontaneously Combustible	I	1	1	
	Ethyl aluminum sesquichloride	4.2	UN 1925	Spontaneously Combustible	I	1	1	
	Ethylamine	2.1	UN 1036	Flammable Gas	-	1.2	5	
	Ethylamine solution in water, <i>concentrations up to 70%</i>	3.1	UN 2270	Flammable Liquid	II	1.3	5	Keep cool
	Ethylamine solution, in water, <i>concentrations up to 70%</i>	3.2	UN 2270	Flammable Liquid	II	1.2	1	
		3.3	UN 2270	Flammable Liquid	II	1.2	1.2	
	Ethyl amyl ketone	3.3	UN 2271	Flammable Liquid	III	1.2	1.2	
	N-Ethylaniline	6.1	UN 2272	St. Andrews Cross	III	1.2	1.2	Stow 'away from' acids
	2-Ethylaniline	6.1	UN 2273	St. Andrews Cross	III	1.2	1.2	
	Ethylbenzene	3.3	UN 1175	Flammable Liquid	II	1.2	1.2	
	N-Ethyl-n-benzylaniline	6.1	UN 2274	St. Andrews Cross	III	1.2	1.2	Stow 'away from' living quarters
	N-ethylbenzyltoluidines	6.1	UN 2753	St. Andrews Cross	III	1.3	1.3	Keep cool
	Ethyl-3,3-bis-(tert-butylperoxy) butyrate, <i>maximum concentration 77% in solution</i>	5.2	UN 2185	Organic Peroxide	II	1	5	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c)
						Cargo vessel	Pas- senger vessel	Other requirements
	Ethyl-3,3-bis-(tert-butylperoxy) butyrate, <i>technical pure</i>	5.2	UN 2184	Organic Peroxide	II	1	5	
	Ethyl-3,3-bis-(tert-butylperoxy)butyrate, with at least 50% inert, inorganic solid	5.2	UN 2598	Organic Peroxide	II	1	5	
	Ethyl borate	3.2	UN 1176	Flammable Liquid	II	1,2	1	
	Ethyl bromide	9	UN 1891	None	II	1,2	1,2	Stow 'away from' foodstuffs and living quarters
*	Ethyl bromoacetate	6.1	UN 1603	Poison, Flammable Liquid	II	1	5	Stow 'away from' living quarters. Segregation same as for flammable liquids
	2-Ethylbutanol	3.3	UN 2275	Flammable Liquid	III	1,2	1,2	
	Ethylbutyl acetate	3.3	UN 1177	Flammable Liquid	III	1,2	1,2	
	Ethyl butyl ether	3.2	UN 1179	Flammable Liquid	II	1,2	1	
	2-Ethylbutyraldehyde	3.2	UN 1178	Flammable Liquid	II	1,2	1	
	Ethyl butyrate	3.3	UN 1180	Flammable Liquid	II	1,2	1,2	
	Ethyl chloride	2.1	UN 1037	Flammable Gas	--	1,2	5	Stow 'away from' living quarters
	Ethyl chloroacetate	3.3	UN 1181	Flammable Liquid	II	1,2	1,2	
	Ethyl chlorocarbonate. See Ethyl chloroformate							
	Ethyl chloroformate	3.2	UN 1182	Flammable Liquid, Poison, Corrosive	I	1,2	1	
*	Ethyl chloroformate	8	UN 2826	Corrosive	II	1,2	1,2	
	Ethyl crotonate	3.2	UN 1862	Flammable Liquid	II	1,2	1	
*	Ethyl cyanoacetate	6.1	UN 2666	St. Andrews Cross	III	1,2	1,2	Stow 'away from' acids
*	Ethyl dichloroarsine	6.1	UN 1892	Poison	I	1	5	Stow 'away from' living quarters
*	Ethyl dichlorosilane	3.2	UN 1183	Flammable Liquid, Corrosive	II	1,2	1	
	Ethylene chlorohydrin. See 2-Chloroethanol							
	Ethylene, compressed	2.1	UN 1962	Flammable Gas	--	1,2	5	Stow 'away from' living quarters
*	Ethylenediamine	8	UN 1604	Corrosive, Flammable Liquid	II	1,2	1,2	Segregation same as for flammable liquids
*	Ethylene dibromide	6.1	UN 1605	Poison	II	1,2	1,2	Stow 'away from' living quarters
*	Ethylene dichloride	3.2	UN 1184	Flammable Liquid, Poison	II	1,2	1	
*	Ethylene glycol diethyl ether	3.3	UN 1153	Flammable Liquid	III	1,2	1,2	
*	Ethylene glycol monobutyl ether	6.1	UN 2369	St. Andrews Cross, Flammable Liquid (only if flashpoint below 61 deg C)	III	1,3	1,3	Shade from radiant heat. Stow 'away from' living quarters. If flashpoint below 61 deg C, segregation same as for flammable liquids
*	Ethylene glycol monoethyl ether	3.3	UN 1172	Flammable Liquid	III	1,2	1,2	
	Ethylene glycol monoethyl ether acetate. See 2-Ethoxyethyl acetate							
	Ethylene glycol monomethyl ether	3.3	UN 1188	Flammable Liquid	III	1,2	1,2	
	Ethylene glycol monomethyl ether acetate	3.3	UN 1189	Flammable Liquid	III	1,2	1,2	
	Ethylenimine, inhibited	3.2	UN 1185	Flammable Liquid, Poison	I	1,2	1	
	Ethylene, liquid	2.1	UN 1038	Flammable Gas	--	1,2	5	Stow 'away from' living quarters
	Ethylene oxide and carbon dioxide, mixtures containing not more than 10% carbon dioxide	2.1	UN 1041	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
	Ethylene oxide and carbon dioxide, mixtures containing not more than 17% of ethylene oxide	2.1	UN 1952	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
	Ethylene oxide, containing not more than 0.2% of nitrogen	2.1	UN 1040	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
*	Ethylene, refrigerated liquid	2.1	UN 1038	Flammable Gas	--	1	5	
	Ethyl ether. See Diethyl ether							
	Ethyl fluid. See Motor fuel antiknock mixtures.							
	Ethyl formate	3.1	UN 1190	Flammable Liquid	II	1,3	5	Keep cool
	Ethyl hexaldehyde	3.3	UN 1191	Flammable Liquid	III	1,2	1,2	
*	2-Ethylhexylamine	8	UN 2276	Corrosive, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
*	2-Ethylhexylchloroformate	6.1	UN 2748	Poison, Corrosive	II	1,3	1,3	Keep cool and dry. Shade from radiant heat. Stow 'away from' living quarters
	Ethylisobutyrate	3.2	UN 2385	Flammable Liquid	II	1,2	1	
	Ethyl isocyanate	3.2	UN 2481	Flammable Liquid, Poison	I	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
	Ethyl lactate	3.3	UN 1192	Flammable Liquid	III	1,2	1,2	
*	Ethyl mercaptan	3.1	UN 2363	Flammable Liquid, Poison	II	1,3	5	Keep cool and dry. Stow 'away from' foodstuffs and all odor absorbing cargo
	Ethyl methacrylate, inhibited	3.2	UN 2277	Flammable Liquid	II	1,2	1	
	Ethyl methyl ether	2.1	UN 1039	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
	Ethyl methyl ketone	3.2	UN 1193	Flammable Liquid	II	1,2	1	
	Ethyl methyl ketone peroxide(s), maximum concentration 60%	5.2	UN 2127	Organic Peroxide	I	1	5	
	Ethyl methyl ketone peroxide(s), maximum concentration 50%, containing not more than 10% available oxygen	5.2	UN 2550	Organic Peroxide	I	1	5	
*N	Ethyl methyl ketone peroxide(s), maximum concentration 50%, containing more than 10% available oxygen				--	--	--	
	Ethyl nitrite, solutions	3.1	UN 1194	Flammable Liquid	I	1,3	5	Keep cool
	Ethyl orthoformate	3.3	UN 2524	Flammable Liquid	II	1,2	1,2	
*	Ethyl oxalate	6.1	UN 2525	St. Andrews Cross	III	1,2	1	Stow 'away from' living quarters
	Ethylphenyldichlorosilane	8	UN 2435	Corrosive	II	1	1	Keep dry
	1-Ethyl piperidine	3.2	UN 2386	Flammable Liquid	II	1,2	1	
	Ethyl propionate	3.2	UN 1195	Flammable Liquid	II	1,2	1	
	Ethyl propyl ether	3.1	UN 2615	Flammable Liquid	II	1,3	5	Keep cool

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Storage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Ethyl silicate. See Tetraethyl silicate							
*	Ethylsulphuric acid	8	UN 2571	Corrosive	II	1,2	1	Keep dry. Metal drums only permitted under deck
*	N-Ethyltoluidines (o,m,p)	6.1	UN 2754	Poison, Flammable Liquid (only if flashpoint below 61 deg C)	II	1,3	1,3	Keep cool. Shade from radiant heat. Stow 'away from' living quarters. If flashpoint below 61 deg C, segregation same as for flammable liquids
	Ethyltrichlorosilane	3.2	UN 1196	Flammable Liquid, Corrosive	II	1,2	1	
N	Explosives, blasting, Type A	1.1D	UN 0081	Explosive (1.1D)	--	--	--	
	Explosives, blasting, Type B	1.5 D	UN 0331	Explosive (1.5D)	--	6	5	
N	Explosives, blasting, Type B	1.1D	UN 0082	Explosive (1.1D)	--	--	--	
N	Explosives, blasting, Type C	1.1D	UN 0083	Explosive (1.1D)	--	--	--	
N	Explosives, blasting, Type D	1.1D	UN 0084	Explosive (1.1D)	--	--	--	
	Explosives, blasting, Type E	1.5 D	UN 0332	Explosive (1.5D)	--	6	5	
N	Explosives, blasting, Type E	1.1D	UN 0241	Explosive (1.1D)	--	--	--	
*	Extracts, aromatic, liquid	3.2	UN 1169	Flammable Liquid	II/III	1,2	1	
		3.3	UN 1169	Flammable Liquid	III	1,2	1,2	
*	Extracts, flavouring, liquid	3.2	UN 1197	Flammable Liquid	II/III	1,2	1	
		3.3	UN 1197	Flammable Liquid	III	1,2	1,2	
	Fabric, animal or vegetable, containing more than 5% of animal or vegetable oil	4.2	UN 1373	Spontaneously Combustible	III	1,2	1,2	
	Ferric arsenate	6.1	UN 1605	Poison	II	1,2	1,2	
	Ferric arsenite	6.1	UN 1607	Poison	II	1,2	1,2	
*	Ferric chloride, anhydrous	8	UN 1773	Corrosive	III	1,2	1,2	
*	Ferric chloride, solution	8	UN 2582	Corrosive	III	1,2	1,2	
	Ferric nitrate	5.1	UN 1466	Oxidizer	III	1,2	1,2	
	Ferrocenium	4.1	UN 1323	Flammable Solid	II	1,2	1,2	
	Ferrosilicon, containing between 30% and 90% silicon	4.3	UN 1408	Dangerous When Wet, Poison	III	1,2	1,2-	Stow in a well ventilated compartment
	Ferrous arsenate	6.1	UN 1608	Poison	II	1,2	1,2	
*	Ferrous metal borings, cuttings, drillings, filings, shavings, or turnings, in a form liable to self heating	4.2	UN 2793	None	--	1,2	1,2	
	Fertilizer ammoniating solution, containing free ammonia in excess of 35% ammonia	2.2	UN 1043	Nonflammable Gas	--	1,2	5	Stow 'away from' living quarters
	Fibres, animal or vegetable, burnt, wet or damp	4.2	UN 1372	Spontaneously Combustible	III	1,2	1,2	
	Fibres, animal or vegetable, containing more than 5% of animal or vegetable oil	4.2	UN 1373	Spontaneously Combustible	III	1,2	1,2	
	Fibres, vegetable, dry	4.1	--	None	--	1,2	1,2	Stow 'away from' animal or vegetable oils
	Fillers, liquid. See Paints, etc.							
	Film from which gelatine has been removed. See Celluloid, scrap							
	Film, motion picture, nitrocellulose base, exposed or unexposed, developed or undeveloped	4.1	UN 1324	Flammable Solid	III	1,2	1,2	Stow 'away from' flammable substances. Maximum 250 Kg. net on deck on passenger vessels
	Film, motion picture, nitrocellulose base, old film	4.1	UN 1324	Flammable Solid	III	1	5	Stow 'away from' flammable substances
	Fire extinguisher charges, corrosive liquid	8	UN 1774	Corrosive	II	1,2	1,2	
	Fire extinguishers, containing compressed or liquefied gas	2.2	UN 1044	Nonflammable Gas	--	1,2	1,2	
*	Firelighters, solid, containing a flammable liquid	4.1	UN 2623	Flammable Solid	II/III	1,2	1,2	
N	Fireworks, Type A	1.1G	UN 0333	Explosive (1.1G)	--	--	--	
N	Fireworks, Type B	1.2G	UN 0334	Explosive (1.2G)	--	--	--	
N	Fireworks, Type C	1.3G	UN 0335	Explosive (1.3G)	--	--	--	
	Fireworks, Type D	1.4 G	UN 0336	Explosive (1.4G)	--	1,3	1,3	
	Fireworks, Type D	1.4 S	UN 0337	None. Package to be marked '1.4 S'	--	1,3	1,3	
	Fishmeal or fishscrap, antioxidant treated, moisture content greater than 6% but not exceeding 12% by weight, fat content not exceeding 18% by weight	4.1	UN 2216	None. Package to be marked 'Class 4.1'	III	1,2	1,2	Double stowage recommended. Provide good surface and through ventilation
	Fishmeal or fishscrap, antioxidant treated, moisture content between 5% and 11% by weight, fat content not more than 18% by weight	9	UN 2216	None	III	2	2	
	Fishmeal or fishscrap, antioxidant treated, unrestricted moisture content, fat content exceeding 18% by weight	4.2	UN 2216	Spontaneously Combustible	II	1,2	1,2	
	Fishmeal or fishscrap, not antioxidant treated, moisture content greater than 6% but not exceeding 12% by weight, fat content not exceeding 15% by weight	4.1	UN 1374	None. Package to be marked 'Class 4.1'	III	1,2	1,2	Double stowage recommended. Provide good surface and through ventilation
	Fishmeal or fishscrap, not antioxidant treated, moisture content greater than 6% but not exceeding 12% by weight, fat content not exceeding 12% by weight	9	UN 1374	None	III	1,2	1,2	
	Fishmeal or fishscrap, not antioxidant treated, unrestricted moisture content, fat content exceeding 15% by weight	4.2	UN 1374	Spontaneously Combustible	II	1,2	1,2	
	Flammable liquid preparation, n.o.s.	3.2	UN 1142	Flammable Liquid	II	1,2	1	
		3.3	UN 1142	Flammable Liquid	II	1,2	1,2	
*	Flammable liquids, corrosive, n.o.s.	3.1	UN 2924	Flammable Liquid, Corrosive	I/II	1,3	5	Keep cool. Stow 'away from' foodstuffs
		3.2	UN 2924	Flammable Liquid, Corrosive	I/II	1,2	1	
*	Flammable liquids, n.o.s.	3.1	UN 1993	Flammable Liquid	I/II	1,3	5	Keep cool
		3.2	UN 1993	Flammable Liquid	II	1,2	1	
		3.3	UN 1993	Flammable Liquid	II	1,2	1,2	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Storage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pas- senger vessel	
*	Flammable liquids, toxic, n.o.s.	3.1	UN 1992	Flammable Liquid,	I/II	1,3	5	Keep cool
		3.2	UN 1992	Poison	II	1,2	1	
		3.3	UN 1992	Flammable Liquid, Poison	II	1,2	1,2	
	Flammable solids, n.o.s.	4.1	UN 1325	Flammable Solid	II	1,2	1,2	
N	Flares, aerial	1.3G	UN 0093	Explosive (1.3G)	--	--	--	
*	Flares, aerial	1.4G	UN 0403	Explosive (1.4G)	--	1,3	1,3	
*	Flares, aerial	1.4S	UN 0404	None. Package to be marked '1.4S'	--	1,3	1,3	
N	Flares, surface (other than water-activated flares) <i>Flax, dry. See Fibres, vegetable, dry</i>	1.3G	UN 0092	Explosive (1.3G)	--	--	--	
	Fluoboric acid	8	UN 1775	Corrosive	II	1,2	1,2	
	Fluonic acid. <i>See Hydrofluoric acid, solution</i>							
*	Fluorine, compressed	2.3	UN 1045	Poison Gas, Oxidizer	--	1	5	Stow 'away from' foodstuffs, organic materi- als, and living quarters
*	Fluoroacetic acid	6.1	UN 2642	Poison	I	1,3	1,3	Keep cool. Stow 'away from' living quarters
	Fluorobenzene	3.2	UN 2387	Flammable Liquid	II	1,2	1	
	Fluorophosphoric acid, anhydrous	8	UN 1776	Corrosive	II	1,2	1,2	
	Fluorosulphonic acid	8	UN 1777	Corrosive	I	1	5	Keep dry. Stow 'away from' fluorides
	Fluorotoluenes	3.2	UN 2388	Flammable Liquid	II	1,2	1	
		3.3	UN 2388	Flammable Liquid	II	1,2	1,2	
	Fluosilicic acid	8	UN 1778	Corrosive	II	1,2	1,2	
*	Formaldehyde solutions	3.3	UN 1198	Flammable Liquid	II	1,2	1,2	
*	Formaldehyde, solutions with a flashpoint above 61 degrees C <i>Formalin. See Formaldehyde</i>	9	UN 2209	None	III	1,2	1,2	Stow 'away from' foodstuffs
	Formic acid	8	UN 1779	Corrosive	II	1,2	1,2	Glass carboy in hampers prohibited
N	Fracturing devices, explosive, for oil wells	1.1D	UN 0099	Explosive (1.1D)	--	--	--	
	Fuel, aviation, turbine engine	3.2	UN 1863	Flammable Liquid	II	1,2	1	
	Fumaryl chloride	8	UN 1780	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on pas- senger vessels
*	Fungicides, (poisonous), n.o.s.	6.1	UN 1609	Poison	I/II	1,2	1,2	Stow 'separated from' foodstuffs.
		6.1	UN 1609	St. Andrews Cross	III	1,2	1,2	Stow 'separated from' foodstuffs.
		9	UN 1609	None	III	1,2	1,2	Stow 'away from' foodstuffs
	Furan	3.1	UN 2389	Flammable Liquid	I	1,3	5	Keep cool
	Furfural	3.3	UN 1199	Flammable Liquid	II	1,2	1,2	
*	Furfuryl alcohol	6.1	UN 2874	St. Andrews Cross	III	1,2	1,2	Stow 'separated from' oxidizing substances
	Furfurylamine	3.3	UN 2526	Flammable Liquid	II	1,2	1,2	
	Fuse, igniter, tubular, metal clad	1.4 G	UN 0103	Explosive (1.4G)	--	1,3	1,3	
N	Fuse, instantaneous, non-detonating	1.3G	UN 0101	Explosive (1.3G)	--	--	--	
	Fusel oil	3.2	UN 1201	Flammable Liquid	II	1,2	1	
	Fuse, safety	1.4 S	UN 0105	None. Package to be marked '1.4 S'	--	1,3	1,3	
	Fuzes, detonating	1.4S	UN 0367	None. Package to be marked '1.4S'	--	1,3	1,3	
	Fuzes, detonating	1.4 B	UN 0257	Explosive (1.4B)	--	1,3	1,3	
N	Fuzes, detonating	1.1B	UN 0106	Explosive (1.1B)	--	--	--	
N	Fuzes, detonating	1.2B	UN 0107	Explosive (1.2B)	--	--	--	
*N	Fuzes, detonating, with protective features	1.1D	UN 0408	Explosive (1.1D)	--	--	--	
*N	Fuzes, detonating, with protective features	1.2D	UN 0410	Explosive (1.2D)	--	--	--	
*N	Fuzes, detonating, with protective features	1.4D	UN 0409	Explosive (1.4D)	--	--	--	
	Fuzes, igniting	1.4S	UN 0368	None. Package to be marked '1.4S'	--	1,3	1,3	
N	Fuzes, igniting	1.3G	UN 0316	Explosive (1.3G)	--	--	--	
N	Fuzes, igniting	1.4G	UN 0317	Explosive (1.4G)	--	--	--	
N	Gaunes, with detonator	1.1B	UN 0225	Explosive (1.1B)	--	--	--	
N	Gaunes, with detonator	1.2B	UN 0268	Explosive (1.2B)	--	--	--	
N	Gaunes, without detonator	1.1D	UN 0042	Explosive (1.1D)	--	--	--	
N	Gaunes, without detonator	1.2D	UN 0283	Explosive (1.2D)	--	--	--	
	Gas cartridges	2.1	UN 2037	Flammable Gas	--	--	--	
	Gas drops, hydrocarbon	3.2	UN 1864	Flammable Liquid	II	1,2	1	
	Gas oil	3.3	UN 1202	Flammable Liquid	II	1,2	1,2	
*	Gasoline	3.1	UN 1203	Flammable Liquid	II	1,3	5	Keep cool
	Germane	2.3	UN 2192	Poison Gas, Flammable Gas	--	1	5	Stow 'away from' living quarters
	Germicides, (poisonous), n.o.s.	6.1	(UN 1601)	Poison	I/II	1,2	1,2	Stow 'separated from' foodstuffs.
		6.1	(UN 1601)	St. Andrews Cross	III	1,2	1,2	Stow 'separated from' foodstuffs.
		9	(UN 1601)	None	III	1,2	1,2	Stow 'away from' foodstuffs
*	Glycerol-alpha-monochlorohydrin	6.1	UN 2689	St. Andrews Cross	III	1,2	1,2	
	Glyceryl trinitrate, solution up to 1% in alcohol	3.2	UN 1204	Flammable Liquid	II	1,2	1	
	Glycidaldehyde	3.3	UN 2622	Flammable Liquid, Poison	II	1,2	1,2	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
N	Grenades, <i>hand or rifle, with bursting charge</i>	1.1D	UN 0284	Explosive (1.1D)	--	--	--	
N	Grenades, <i>hand or rifle, with bursting charge</i>	1.2D	UN 0285	Explosive (1.2D)	--	--	--	
N	Grenades, <i>hand or rifle, with bursting charge</i>	1.1F	UN 0292	Explosive (1.1F)	--	--	--	
N	Grenades, <i>hand or rifle, with bursting charge</i>	1.2F	UN 0293	Explosive (1.2F)	--	--	--	
	Grenades, <i>practice, hand or rifle</i>	1.4 S	UN 0110	None. Package to be marked '1.4 S'	--	1.3	1.3	
N	Grenades, <i>practice, hand or rifle</i>	1.2G	UN 0372	Explosive (1.2G)	--	--	--	
N	Grenades, <i>practice, hand or rifle</i>	1.3G	UN 0318	Explosive (1.3G)	--	--	--	
*	Guanidine nitrate	5.1	UN 1467	Oxidizer	III	1.2	1.2	Stow 'separated from' nitro-compounds and chlorates
N	Guanyl nitrosamino guanylidene hydrazine, <i>containing, by weight, at least 30% water</i>	1.1A	UN 0113	Explosive (1.1A)	--	--	--	
N	Guanyl nitrosamino guanyl tetrazene, <i>containing, by weight, at least 30% water or mixture of alcohol and water</i>	1.1A	UN 0114	Explosive (1.1A)	--	--	--	
	Gutta percha, <i>solunon</i>	3.3	UN 1205	Flammable Liquid	II	1.2	1.2	
*	Hafnium metal powder, dry	4.2	UN 2545	Spontaneously Combustible	II	1	5	
*	Hafnium metal powder, wetted, with not less than 25% water (a visible excess of water must be present)	4.1	UN 1326	Flammable Solid	II	1.2	5	
*	Halogenated irritating liquids, n.o.s.	6.1	UN 1610	Poison, Flammable Liquid (only if flashpoint between 23 and 61 deg C)	I/II	1	5	Stow 'away from' living quarters. If flashpoint below 61 deg C, segregation same as for flammable Liquids
		6.1	UN 1610	St. Andrews Cross, Flammable Liquid (only if flashpoint between 23 and 61 deg C)	III	1	5	Stow 'away from' living quarters. If flashpoint below 61 deg C, segregation same as for flammable Liquids
	Hay	4.1	UN 1327	None	III	1.2	1.2	Stow 'away from' animal or vegetable oils
	Helium, <i>compressed</i>	2.2	UN 1046	Nonflammable Gas	--	1.2	1.2	
*	Helium, <i>refrigerated liquid</i>	2.2	UN 1963	Nonflammable Gas	--	1.2	1.2	
	Hemp, <i>dry. See Fibres, vegetable, dry</i>							
*	Heptane, and its isomers	3.2	UN 1206	Flammable Liquid	II	1.2	1	
	n-Heptene	3.2	UN 2278	Flammable Liquid	II	1.2	1	
*	Hexachloroacetone	6.1	UN 2661	Poison	II	1.3	1	Keep cool
*	Hexachlorobenzene	6.1	UN 2729	St. Andrews Cross	III	1.2	1.2	
*	Hexachlorobutadiene	6.1	UN 2279	St. Andrews Cross	III	1.2	1.2	Stow 'away from' living quarters
*	Hexachlorophene	6.1	UN 2875	St. Andrews Cross	III	1.2	1.2	
	Hexadecyl trichlorosilane	8	UN 1781	Corrosive	II	1	1	Keep dry
	Hexadiene	3.1	UN 2458	Flammable Liquid	II	1.3	5	Keep cool
*	Hexaethyl tetraphosphate	6.1	UN 1611	Poison	I/II	1.2	5	Stow 'away from' living quarters
		6.1	UN 1611	St. Andrews Cross	III	1.2	5	Stow 'away from' living quarters
*	Hexaethyl tetraphosphate and compressed gas mixture	2.3	UN 1612	Poison Gas	--	1	5	Stow 'away from' living quarters
		6.1	UN 1612	St. Andrews Cross, Non-flammable Compressed Gas	III	1	5	Shade from radiant heat. Segregation same as for non-flammable gas
	Hexafluoroacetone	2.3	UN 2420	Poison Gas	--	1	5	Stow 'away from' living quarters
*	Hexafluoroacetone hydrate	6.1	UN 2552	Poison	II	1.2	1	Stow 'away from' living quarters
	Hexafluorophosphonic acid	8	UN 1782	Corrosive	II	1.2	1.2	
	Hexafluoropropylene-	2.2	UN 1858	Nonflammable Gas	--	1.2	1.2	
	Hexaldehyde	3.3	UN 1207	Flammable Liquid	III	1.2	1.2	
	Hexamethylenediamine, <i>solid</i>	8	UN 2280	Corrosive	III	1.3	1.3	Keep cool
	Hexamethylenediamine, <i>solution</i>	8	UN 1783	Corrosive, Poison	II	1.2	1.2	
*	Hexamethylenediisocyanate	6.1	UN 2281	Poison	II	1.2	1	Keep dry
*	Hexamethylenimine	6.1	UN 2493	Poison, Flammable Liquid	II	1.2	1.2	Shade from radiant heat. Stow 'away from' living quarters. Segregation same as for flammable Liquids
*	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxocyclononane, maximum concentration 52% with inert solid	5.2	UN 2166	Organic Peroxide	II	1	5	
*	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxocyclononane, maximum concentration 52% in solution	5.2	UN 2167	Organic Peroxide	II	1	5	
*	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxocyclononane, technical pure	5.2	UN 2165	Organic Peroxide	I	1	5	
	Hexamine	4.1	UN 1328	Flammable Solid	III	1.2	1.2	
N	Hexane, and its isomers	3.1	UN 1208	Flammable Liquid	II	1.3	5	Keep cool
N	Hexanitrodiphenylamine	1.1D	UN 0079	Explosive (1.1D)	--	--	--	
N	Hexanitrostilbene	1.1D	UN 0392	Explosive (1.1D)	--	--	--	
	Hexanols	3.3	UN 2282	Flammable Liquid	III	1.2	1.2	
N	Hexatonal, cast	1.1D	UN 0393	Explosive (1.1D)	--	--	--	
	Hex-1-ene	3.1	UN 2370	Flammable Liquid	II	1.3	5	Keep cool
N	Hexolite, <i>dry or containing, by weight, less than 15% water</i>	1.1D	UN 0118	Explosive (1.1D)	--	--	--	
	Hexyl trichlorosilane	8	UN 1784	Corrosive	II	1	1	Keep dry
*	Hydrazine, anhydrous or Hydrazine aqueous solutions containing more than 64%, by weight, hydrazine	3.3	UN 2029	Flammable Liquid, Poison, Corrosive	I	1	5	
*	Hydrazine hydrate or Hydrazine aqueous solutions containing not more than 64%, by weight, hydrazine	8	UN 2030	Corrosive, Poison	II	1.2	5	Under deck not permitted if containing less than 64% water by weight. Stow 'away from' nitric acids and perchloric acids exceeding 50% acid by weight
	Hydrides, (metal), n.o.s.	4.3	UN 1409	Dangerous When Wet	I	1.2	5	
	Hydroiodic acid	8	UN 1787	Corrosive	II	1	1	Glass carboys prohibited on passenger vessels

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
	Hydrobromic acid	8	UN 1788	Corrosive	II	1	1	Glass carboys prohibited on passenger ves- sels. Stow 'away from' fluorides
	Hydrocarbon gases (and mixtures of such gases, compressed), n.o.s.	2.1	UN 1964	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
	Hydrocarbon gases (and mixtures of such gases, liquefied), n.o.s.	2.1	UN 1965	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
	Hydrochloric acid	8	UN 1789	Corrosive	II	1	1	Glass carboys prohibited on passenger ves- sels. Stow 'away from' fluorides
	Hydrocyanic acid, anhydrous. See Hydrogen cyanide							
*	Hydrocyanic acid, aqueous solutions, with not more than 20% hydro- cyanic acid	6.1	UN 1613	Poison	I	1	5	Stow 'away from' living quarters
	Hydrofluoric acid, solution	8	UN 1790	Corrosive	I/II	1	5	Keep cool
	Hydrofluoric and sulphuric acid, mixtures. See Acid mixtures, hy- drofluoric and sulphuric							
	Hydrofluosilicic acid. See Fluosilicic acid							
	Hydrogen and methane, mixtures	2.1	UN 2034	Flammable Gas	--	1,2	5	Stow 'away from' living quarters
	Hydrogen bromide, anhydrous	2.3	UN 1048	Poison Gas, Corrosive	--	1	5	Stow 'away from' foodstuffs and living quar- ters
	Hydrogen chloride, anhydrous	2.3	UN 1050	Poison Gas, Corrosive	--	1	5	Stow 'away from' foodstuffs and living quar- ters
	Hydrogen, compressed	2.1	UN 1049	Flammable Gas	--	1,2	5	Stow 'separated from' chlorine, 'away from' living quarters
	Hydrogen cyanide, anhydrous, stabilized	2.3	UN 1051	Poison Gas, Flammable Gas	--	1	5	Stow 'away from' foodstuffs and living quar- ters
	Hydrogen cyanide, anhydrous, stabilized, absorbed in a porous inert material	6.1	UN 1614	Poison	I	1	5	Shade from radiant heat
	Hydrogen fluoride, anhydrous	2.3	UN 1052	Poison Gas, Corrosive	--	1	5	Stow 'away from' foodstuffs and living quar- ters
	Hydrogen iodide, anhydrous	2.3	UN 2197	Poison Gas, Corrosive	--	1	5	Stow 'away from' living quarters
	Hydrogen iodide, solution. See Hydroiodic acid							
	Hydrogen, liquid	2.1	UN 1966	Flammable Gas	--	5	5	
	Hydrogen peroxide, concentrations of over 40% up to 60% peroxide	5.1	UN 2014	Oxidizer, Corrosive	II	1	5	Shade from radiant heat. Stow 'away from' powdered metals and 'separated from' per- manganates
	Hydrogen peroxide, concentrations of 8% up to 40% peroxide	5.1	UN 2014	Oxidizer	II	1,2	1	Shade from radiant heat. Stow 'away from' powdered metals and 'separated from' per- manganates
	Hydrogen peroxide, stabilized, concentrations of over 60% peroxide	5.1	UN 2015	Oxidizer, Corrosive	I	1	5	Permitted only under conditions approved by the Department
*	Hydrogen, refrigerated liquid	2.1	UN 1966	Flammable Gas	--	5	5	
	Hydrogen selenide	2.3	UN 2202	Poison Gas, Flammable Gas	--	1	5	Stow 'away from' living quarters
	Hydrogen sulphide	2.1	UN 1053	Flammable Gas, Poison Gas	--	1	5	Stow 'away from' foodstuffs and living quar- ters
*	Hydroquinone	6.1	UN 2662	St. Andrews Cross	III	1,2	1,2	
	Hydrosilicofluoric acid. See Fluosilicic acid							
*	Hydroxylamine sulphate	8	UN 2865	Corrosive	III	1,2	1,2	Keep dry
	Hypochlorite, solutions containing more than 5% available chlorine	8	UN 1791	Corrosive	II/III	1,2	1	Glass carboys in hampers prohibited under deck
	Igniters	1.4 G	UN 0325	Explosive (1.4G)	--	1,3	1,3	
N	Igniters	1.1G	UN 0121	Explosive (1.1G)	--	--	--	
N	Igniters	1.2G	UN 0314	Explosive (1.2G)	--	--	--	
N	Igniters	1.3G	UN 0315	Explosive (1.3G)	--	--	--	
*	3,3'-Iminobispropylamine	8	UN 2269	Corrosive	III	1,2	1,2	
	Inflammable gas for lighters. See Lighters, for cigars and cigarettes, containing flammable gas							
	Inflammable liquid preparations, n.o.s. See Flammable liquid prep- arations, n.o.s.							
	Inflammable liquids, (non-toxic), n.o.s. See Flammable liquids, (non- toxic), n.o.s.							
	Inflammable liquids, (toxic), n.o.s. See Flammable liquids, (toxic), n.o.s.							
	Inflammable solids, n.o.s. See Flammable solids, n.o.s.							
*	Ink, printers	3.2	UN 1210	Flammable Liquid	II	1,2	1	
		3.3	UN 2867	Flammable Liquid	III	1,2	1,2	
	Insecticide gases, (non-toxic), n.o.s.	2.1	UN 1968	Flammable Gas	--	1,2	1	
		2.2	UN 1968	Nonflammable Gas	--	1,3	1,3	
	Insecticide gases, (toxic), n.o.s.	2.3	UN 1967	Poison Gas	--	1	5	Shade from radiant heat
	Insecticide gases, toxic, n.o.s.	2.3	UN 1967	Poison Gas	--	1	5	Shade from radiant heat
	Iodine monochloride	8	UN 1792	Corrosive	II	1	5	Keep dry
	Iodine pentafluoride	5.1	UN 2495	Oxidizer, Poison	I	1	5	Keep dry
	2-Iodobutane	3.2	UN 2390	Flammable Liquid	II	1,2	1	
	Iodomethylpropanes	3.2	UN 2391	Flammable Liquid	II	1,2	1	
	Iodopropanes	3.2	UN 2392	Flammable Liquid	II	1,2	1	
		3.3	UN 2392	Flammable Liquid	II	1,2	1,2	
	Iron carbonyl	3.1	UN 1994	Flammable Liquid, Poison	I	1	5	Shade from radiant heat
	Iron chloride. See Ferric chloride							
	Iron oxide, spent	4.2	UN 1376	Spontaneously Combustible	III	1,2	5	
	Iron pentacarbonyl. See Iron carbonyl							

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c)
						Cargo vessel	Pass- enger vessel	Other requirements
	Iron sesquichloride. <i>See</i> Ferric chloride							
	Iron sponge, <i>spent</i> . <i>See</i> Iron oxide, <i>spent</i>							
	Isobutane or isobutane mixtures	2.1	UN 1969	Flammable Gas	--	1.2	1	Stow 'away from' living quarters
	Isobutanol	3.3	UN 1212	Flammable Liquid	II	1.2	1.2	
	Isobutyl acetate	3.2	UN 1213	Flammable Liquid	II	1.2	1	
	Isobutyl acrylate, <i>inhibited</i>	3.3	UN 2527	Flammable Liquid	II	1.2	1.2	
	Isobutyl alcohol. <i>See</i> Isobutanol							
	Isobutyl aldehyde. <i>See</i> Isobutyraldehyde							
	Isobutylamine	3.2	UN 1214	Flammable Liquid	II	1.2	1	
	Isobutylene	2.1	UN 1055	Flammable Gas	--	1.2	1	Stow 'away from' living quarters
	Isobutyl formate	3.2	UN 2393	Flammable Liquid	II	1.2	1	
	Isobutylisobutyrate	3.3	UN 2528	Flammable Liquid	III	1.2	1.2	
	Isobutyl isocyanate	3.2	UN 2456	Flammable Liquid, Poison	II	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
	Isobutyl methacrylate, <i>inhibited</i>	3.3	UN 2283	Flammable Liquid	III	1.2	1.2	
	Isobutyl methyl ketone peroxide, <i>maximum concentration 62% in solution</i>	5.2	UN 2126	Organic Peroxide	I	1	5	
	Isobutyl propionate	3.2	UN 2394	Flammable Liquid	II	1.2	1	
	Isobutyraldehyde	3.1	UN 2045	Flammable Liquid	II	1.3	5	Keep cool
	Isobutyric acid	3.3	UN 2529	Flammable Liquid	III	1.2	1.2	
	Isobutyric anhydride	3.3	UN 2530	Flammable Liquid	III	1.2	1.2	
	Isobutyronitrile	3.2	UN 2284	Flammable Liquid, Poison	II	1.3	5	Keep cool
	Isobutyryl chloride	3.2	UN 2395	Flammable Liquid, Poison	II	1	1	Keep dry. Shade from radiant heat
	Isobutyryl peroxide, <i>maximum concentration 52% in solution</i>	5.2	UN 2182	Organic Peroxide	II	1	5	Control temperature -20 deg C. Emergency temperature -10 deg C
	Isocyanates ( <i>and solutions</i> ), n.o.s.	3.1	UN 2478	Flammable Liquid, Poison	II	1	5	Stow 'away from' living quarters and sources of heat
	Isocyanates ( <i>with a boiling point below 300 degrees C and a flashpoint of 23 degrees C or above, and their solutions</i> ), n.o.s.	6.1	UN 2206	Poison, Flammable Liquid (only if flashpoint of the substance or solution is below 61 deg C)	II	1.3	1.3	Shade from radiant heat. Stow 'away from' sources of heat. Segregation same as for flammable Liquids if flashpoint below 61 deg C
	Isocyanates ( <i>with a boiling point of 300 degrees C and above and their solutions</i> ), n.o.s.	9	UN 2207	None	III	1.2	1.2	Stow 'away from' foodstuffs and sources of heat
	Isoheptene	3.1	UN 2287	Flammable Liquid	II	1.3	5	Keep cool
	Isohexene	3.1	UN 2288	Flammable Liquid	II	1.3	5	Keep cool
	Isononanoyl peroxide. <i>See</i> Bis-(3,3,5-trimethylhexanoyl) peroxide							
	Isocotene	3.2	UN 1216	Flammable Liquid	II	1.2	1	
	Isopentane	3.1	UN 1265	Flammable Liquid	I	1.2	5	
	Isopentenes	3.1	UN 2371	Flammable Liquid	I	1.3	5	Keep cool
	Isophoronediamine	8	UN 2289	Corrosive	III	1.2	1.2	Glass carboys prohibited on passenger vessels
	Isophorone diisocyanate	6.1	UN 2290	Poison	II	1.2	1	
	Isoprene, <i>inhibited</i>	3.1	UN 1218	Flammable Liquid	I	1.3	5	Keep cool
	Isopropanol	3.2	UN 1219	Flammable Liquid	II	1.2	1	
	Isopropenyl acetate	3.2	UN 2403	Flammable Liquid	II	1.2	1	
	Isopropenylbenzene	3.3	UN 2303	Flammable Liquid	II	1.2	1.2	
	Isopropyl acetate	3.2	UN 1220	Flammable Liquid	II	1.2	1	
	Isopropyl acid phosphate	8	UN 1793	Corrosive	III	1.2	1.2	Glass carboys in hampers prohibited under deck
	Isopropyl alcohol. <i>See</i> Isopropanol							
	Isopropylamine	3.1	UN 1221	Flammable Liquid	I	1.3	5	Keep cool
	Isopropylbenzene	3.3	UN 1918	Flammable Liquid	II	1.2	1.2	
	Isopropyl butyrate	3.3	UN 2405	Flammable Liquid	II	1.2	1.2	
	Isopropyl chloroformate	3.2	UN 2407	Flammable Liquid, Corrosive	II	1.2	1	
	Isopropyl formate	3.2	UN 2403	Flammable Liquid	II	1.2	1	
	Isopropyl isobutyrate	3.2	UN 2406	Flammable Liquid	II	1.2	1	
	Isopropyl isocyanate	3.2	UN 2483	Flammable Liquid, Poison	I	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
	Isopropyl mercaptan	3.1	UN 2703	Flammable Liquid	II	1.3	5	Keep cool and dry. Stow 'away from' food- stuffs and all odor absorbing cargo.
		3.2	UN 2703	Flammable Liquid	II	1.3	1	Keep cool and dry. Stow 'away from' food- stuffs and all odor absorbing cargo
	Isopropyl nitrate	3.2	UN 1222	Flammable Liquid	II	1.2	1	
	Isopropyl propionate	3.2	UN 2409	Flammable Liquid	II	1.2	1	
N	Jet perforating guns, charged, oil well, without detonator	1.1D	UN 0124	Explosive (1.1D)	--	--	--	
	Jute, <i>dry</i> . <i>See</i> Fibres, vegetable, <i>dry</i>							
	Kapok, <i>dry</i> . <i>See</i> Fibres, vegetable, <i>dry</i>							
	Kerosene	3.3	UN 1223	Flammable Liquid	II	1.2	1.2	
	Ketones, ( <i>liquid, non-toxic</i> ), n.o.s.	3.1	UN 1224	Flammable Liquid	I/II	1.3	5	Keep cool
		3.2	UN 1224	Flammable Liquid	II	1.2	1	
		3.3	UN 1224	Flammable Liquid	II	1.2	1.2	

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
*	Ketones, liquid, toxic, n.o.s.	3.1	UN 1224	Flammable Liquid,	I/II	1,3	5	Keep cool
		3.2	UN 1224	Poison	II	1,2	1	
		3.3	UN 1224	Flammable Liquid, Poison	II	1,2	1,2	
	Krypton, compressed	2.2	UN 1056	Nonflammable Gas	-	1,2	1,2	
*	Krypton, refrigerated liquid	2.2	UN 1970	Nonflammable Gas	-	1	5	
	Lacquer base. See Paints, etc.							
	Lacquer chips. See Nitrocellulose, wetted with, by weight, more than 40% flammable liquids.							
	Lacquers. See Paints, etc.							
*	Lauroyl peroxide. See Dilauroyl peroxide				-	-	-	
	Lead acetate	6.1	UN 1616	St. Andrews Cross	III	1,2	1,2	
	Lead arsenates	6.1	UN 1617	Poison	II	1,2	1,2	
	Lead arsenites	6.1	UN 1618	Poison	II	1,2	1,2	
N	Lead azide, containing, by weight, at least 20% water or mixture of alcohol and water	1.1A	UN 0129	Explosive (1.1A)	-	-	-	
*	Lead compounds, soluble, n.o.s.	6.1	UN 2291	St. Andrews Cross	III	1,2	1,2	
	Lead cyanide	6.1	UN 1620	Poison	II	1,2	1,2	Stow 'away from' acids
	Lead dioxide	5.1	UN 1872	Oxidizer	III	1,2	1,2	Stow 'away from' foodstuffs
	Lead dross. See Lead sulphate, containing more than 3% free acid							
	Lead nitrate	5.1	UN 1469	Oxidizer, Poison	II	1,2	1,2	Store 'away from' foodstuffs
	Lead perchlorate	5.1	UN 1470	Oxidizer, Poison	II	1,2	1,2	Stow 'away from' powdered metals and foodstuffs
	Lead peroxide. See Lead dioxide							
N	Lead styphnate, containing, by weight, at least 20% water or mixture of alcohol and water	1.1A	UN 0130	Explosive (1.1A)	-	-	-	
	Lead sulphate, containing more than 3% free acid	8	UN 1794	Corrosive	II	1,2	1,2	
	Life-rafts, inflatable	9	-	None	-	1,2	1,2	
	Lighter fuels, cigar and cigarette	3.2	UN 1226	Flammable Liquid	II	1,2	1	
	Lighters for cigars and cigarettes, etc., containing flammable gas	2.1	UN 1057	Flammable Gas	-	1	1	Stow 'away from' living quarters. Not permitted in nonventilated containers
	Lighters for cigars and cigarettes, etc., containing fuel	3.2	UN 1226	Flammable Liquid	II	1,2	1	
	Lighters, fuse	1.4 S	UN 0131	None. Package to be marked '1.4 S'	-	1,3	1,3	
	Liquefied non-flammable gases charged with nitrogen, carbon dioxide or air	2.2	UN 1058	Nonflammable Gas	-	1,2	1,2	
	Lithium alkyls	4.2	UN 2445	Spontaneously Combustible	I	1	1	
	Lithium aluminum hydride	4.3	UN 1410	Dangerous When Wet	I	1,2	5	
	Lithium aluminum hydride, ethereal	4.3	UN 1411	Dangerous When Wet, Flammable Liquid	I	1	5	
	Lithium amide	4.3	UN 1412	Dangerous When Wet	II	1,2	5	
	Lithium borohydride	4.3	UN 1413	Dangerous When Wet	I	1,2	5	
	Lithium hydride	4.3	UN 1414	Dangerous When Wet	I	1,2	5	
*	Lithium hydroxide monohydrate	8	UN 2680	Corrosive	II	1,2	1,2	Keep dry
*	Lithium hydroxide, solution	8	UN 2679	Corrosive	II	1,2	1,2	Glass carboys not permitted under deck on passenger vessels
	Lithium hypochlorite, dry, including mixtures containing more than 39% available chlorine (8.8% available oxygen)	5.1	UN 1471	Oxidizer	II	1,2	1,2	
	Lithium, (metal)	4.3	UN 1415	Dangerous When Wet	II	1,2	5	
	Lithium nitrate	5.1	UN 2722	Oxidizer	III	1,2	1,2	
	Lithium peroxide	5.1	UN 1472	Oxidizer	II	1,2	1,2	Keep dry
	Lithium silicon	4.3	UN 1417	Dangerous When Wet	II	1,2	1,2	
	London purple	6.1	UN 1621	Poison	II	1,2	1,2	
	Lye. See Sodium hydroxide							
	Magnesium alloys, containing more than 50% magnesium, pellets, turnings or ribbon	4.1	UN 1869	Flammable Solid	III	1,2	1,2	Stow 'away from' nonflammable gases and poisons
	Magnesium aluminum phosphide	4.3	UN 1419	Dangerous When Wet	I	1	5	
	Magnesium arsenate	6.1	UN 1622	Poison	II	1,2	1,2	
	Magnesium bromate	5.1	UN 1473	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals, 'separated from' ammonium compounds
*	Magnesium chlorate	5.1	UN 2723	Oxidizer	II	1,2	1,2	Stow 'separated from' ammonium compounds and 'away from' finely powdered metals
	Magnesium diamide	4.2	UN 2004	Spontaneously Combustible	II	1	1	
	Magnesium diphenyl	4.2	UN 2005	Spontaneously Combustible	I	1	1	
	Magnesium hydride	4.3	UN 2010	Dangerous When Wet	I	1,2	5	
	Magnesium nitrate	5.1	UN 1474	Oxidizer	III	1,2	1,2	
*	Magnesium or Magnesium alloys containing more than 50% magnesium, pellets, turnings or ribbon	4.1	UN 1869	Flammable Solid	III	1,2	1,2	Stow 'away from' liquid halogenated hydrocarbons
	Magnesium perchlorate	5.1	UN 1475	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals
	Magnesium peroxide	5.1	UN 1476	Oxidizer	II	1,2	1,2	Keep dry
	Magnesium phosphide	4.3	UN 2011	Dangerous When Wet, Poison	I	1	5	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Storage Requirements		
						(a) Cargo vessel	(b) Pas- senger vessel	(c) Other requirements
	* Magnesium powder or Magnesium alloys, powder containing more than 50% magnesium, non-pyrophoric	4.3	UN 1418	Dangerous When Wet	II	1.2	1.2	Stow 'away from' liquid halogenated hydrocarbons
	* Magnesium silicide	4.3	UN 2624	Dangerous When Wet	II	1.2	1	
	* Magnesium silicofluoride	6.1	UN 2853	St. Andrews Cross	III	1.2	1.2	Stow 'away from' acids
	* Maleic anhydride, solid or molten	8	UN 2215	None. Package to be marked 'Class 8'	III	1.2	1.2	Stow 'away from' foodstuffs
	* Malononitrile	6.1	UN 2647	Poison	II	1.3	1.3	Keep cool. Stow 'away from' living quarters
	Maneb, or maneb preparation(s) containing 60% or more maneb	4.2	UN 2210	Spontaneously Combustible	III	1.2	1.2	Stow 'away from' acids, living quarters and foodstuffs
	Manganese ethylene-bis-dithiocarbamate. See Maneb							
	* Manganese nitrate	5.1	UN 2724	Oxidizer	III	1.2	1.2	
	Manganese resinate	4.1	UN 1330	Flammable Solid	III	1.2	1.2	
N	Mannitol hexantrate, containing, by weight, at least 40% water or mixture of alcohol and water	1.1D	UN 0133	Explosive (1.1D)	--	--	--	
	Matches, fusee	4.1	UN 2254	Flammable Solid	III	1.2	1.2	
	Matches, safety	9	UN 1944	None	III	1.2	1.2	Keep dry
	Matches, strike anywhere	4.1	UN 1331	Flammable Solid	III	1.2	1	
	Matches, wax 'vesta'	4.1	UN 1945	Flammable Solid	III	1.2	1	
N	Medicines, n.o.s. to be classified and labeled according to the principle hazardous constituent	--	UN 1851		--			
	MEKP. See Ethyl methyl ketone peroxide							
	p-Menthane hydroperoxide, technical pure	5.2	UN 2125	Organic Peroxide	I	1	5	
	Mercaptans and mercaptan mixtures, (liquid), n.o.s.	3.1	UN 1228	Flammable Liquid	II	1.3	5	Keep cool
	Mercuroic acetate. See Mercury acetate							
	Mercuroic arsenate	6.1	UN 1623	Poison	II	1.2	1.2	
	Mercuroic bromide. See Mercury bromides							
	Mercuroic chloride	6.1	UN 1624	Poison	II	1.2	1.2	
	Mercuroic cyanide. See Mercury cyanide							
	Mercuroic nitrate	6.1	UN 1625	Poison	II	1.2	1.2	
	Mercuroic oxycyanide. See Mercury oxycyanide							
	Mercuroic potassium cyanide	6.1	UN 1626	Poison	I	1.2	1.2	Stow 'away from' acids
	Mercuroic sulphate	6.1	UN 1645	Poison	II	1.2	1.2	
	Mercuroic. See Mercury nucleate							
	Mercuroic acetate. See Mercury acetate							
	Mercuroic bromide. See Mercury bromides							
	Mercuroic nitrate. See Mercury acetate							
	Mercuroic sulphate	6.1	UN 1628	Poison	II	1.2	1.2	
	Mercury acetate	6.1	UN 1629	Poison	II	1.2	1.2	
	Mercury ammonium chloride	6.1	UN 1630	Poison	II	1.2	1.2	
	* Mercury based pesticides, liquid, n.o.s.	6.1	UN 2777	Poison	I	1	1	
		6.1	UN 2777	Poison	II	1.2	1	
		6.1	UN 2777	St. Andrews Cross	III	1.2	1.2	
	* Mercury based pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2777	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2777	Poison, Flammable Liquid	II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 2777	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	Segregation same as for flammable liquids
	* Mercury based pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2778	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1.2	1	
	* Mercury based pesticides, solid, n.o.s.	6.1	UN 2777	Poison	I/II	1.2	1.2	
		6.1	UN 2777	St. Andrews Cross	III	1.2	1.2	
	Mercury benzoate	6.1	UN 1631	Poison	II	1.2	1.2	
	Mercury bisulphate	6.1	UN 1633	Poison	II	1.2	1.2	
	Mercury bromides	6.1	UN 1634	Poison	II	1.2	1.2	
	* Mercury compounds, inorganic, n.o.s.	6.1	UN 2024	Poison	I/II	1.2	1.2	
		6.1	UN 2024	St. Andrews Cross	III	1.2	1.2	
	* Mercury compounds, organic, n.o.s.	6.1	UN 2025	Poison	I/II	1.2	1.2	
		6.1	UN 2025	St. Andrews Cross	III	1.2	1.2	
	* Mercury cyanide	6.1	UN 1636	Poison	II	1.2	1.2	Stow 'away from' living quarters and acids
N	Mercury fulminate, containing, by weight, at least 20% water or mixture of alcohol and water	1.1A	UN 0135	Explosive (1.1A)	--	--	--	
	Mercury gluconate	6.1	UN 1637	Poison	II	1.2	1.2	
	Mercury iodide	6.1	UN 1638	Poison	II	1.2	1.2	
	* Mercury, metal	8	UN 2809	Corrosive	III	1.2	1	Stow 'away from' living quarters and azides
	Mercury nucleate	6.1	UN 1639	Poison	II	1.2	1.2	
	Mercury oleate	6.1	UN 1640	Poison	II	1.2	1.2	
	Mercury oxide	6.1	UN 1641	Poison	II	1.2	1.2	
	Mercury oxycyanide	6.1	UN 1642	Poison	II	1.2	1.2	Stow 'away from' acids
	Mercury potassium iodide	6.1	UN 1643	Poison	II	1.2	1.2	
	Mercury salicylate	6.1	UN 1644	Poison	II	1.2	1.2	
	Mercury thiocyanate	6.1	UN 1646	Poison	II	1.2	1.2	
	Mesityl oxide	3.3	UN 1229	Flammable Liquid	II	1.2	1.2	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pas- senger vessel	
	Metal alkyls, n.o.s.	4.2	UN 2003	Spontaneously Combustible	I	1	5	Shade from radiant heat. Stow 'separated from flammable liquids or gases, oxidizers or organic peroxides
	Metalddehyde	4.1	UN 1332	Flammable Solid	III	1,2	1,2	
	Methacraldehyde	3.2	UN 2396	Flammable Liquid, Poison	II	1,3	5	Keep cool
	Methacrylic acid, <i>inhibited</i>	8	UN 2531	Corrosive	II	1	1	Keep cool. Glass carboys prohibited on pas- senger vessels
	Methyl alcohol	3.3	UN 2614	Flammable Liquid	II	1,2	1,2	
	Methane or natural gases with a high methane content, compressed	2.1	UN 1971	Flammable Gas	-	1,2	5	Stow 'away from' living quarters
	Methane or natural gases with a high methane content, refrigerated liquid	2.1	UN 1972	Flammable Gas	-	1	5	Stow 'away from' living quarters
	Methanol	3.2	UN 1230	Flammable Liquid, Poison	II	1,2	1	
	Methoxymethyl isocyanate	3.2	UN 2605	Flammable Liquid, Poison	I	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
	4-Methoxy-4-methylpentan-2-one	3.3	UN 2293	Flammable Liquid	III	1,2	1,2	
	Methyl acetate	3.2	UN 1231	Flammable Liquid	II	1,2	1	
	Methyl acetone	3.2	UN 1232	Flammable Liquid	II	1,2	1	
	Methyl acetylene and propadiene mixture, stabilized	2.1	UN 1060	Flammable Gas	-	1,2	1	Stow 'away from' living quarters
	beta-Methyl acrolein. See Crotonaldehyde, <i>inhibited</i>							
	Methyl acrylate, <i>inhibited</i>	3.2	UN 1919	Flammable Liquid	II	1,2	1	
	Methylal	3.1	UN 1234	Flammable Liquid	II	1,3	5	Keep cool
	Methyl alcohol. See Methanol							
	Methyl allyl chloride	3.1	UN 2554	Flammable Liquid	II	1,3	5	Keep cool
	Methyl aluminum sesquibromide	4.2	UN 1926	Spontaneously Combustible	I	1	1	
	Methyl aluminum sesquichloride	4.2	UN 1927	Spontaneously Combustible	I	1	1	
	Methylamine, <i>anhydrous</i>	2.1	UN 1061	Flammable Gas	-	1,2	5	Stow 'away from' living quarters
	Methylamine, <i>aqueous solution</i>	3.1	UN 1235	Flammable Liquid	II	1,3	5	Keep cool. Stow 'away from' mercury and its compounds
	Methylamyl acetate	3.3	UN 1233	Flammable Liquid	III	1,2	1,2	
	Methyl amyl ketone. See Amyl methyl ketone							
	N-Methylaniline	6.1	UN 2294	St. Andrews Cross	III	1,2	1,2	
	Methyl bromide	2.3	UN 1062	Poison Gas	-	1	5	
	Methyl bromide and chloropicrin, mixtures. See Chloropicrin and methyl bromide, mixtures							
	Methyl bromide and ethylene dibromide mixtures, liquid	6.1	UN 1647	Poison	I	1	1	Stow 'away from' living quarters
	Methyl bromoacetate	6.1	UN 2643	Poison	II	1	5	Keep cool. Stow 'away from' living quarters
	2-Methyl-1,3-butadiene. See Isoprene							
	3-Methyl butan-2-one	3.2	UN 2397	Flammable Liquid	II	1,2	1	
	2-Methyl-1-butene	3.1	UN 2459	Flammable Liquid	I	1,3	5	Keep cool
	2-Methyl-2-butene	3.1	UN 2460	Flammable Liquid	II	1,3	5	Keep cool
	Methyl-tert-butyl ether	3.2	UN 2398	Flammable Liquid	II	1,2	1	
	Methyl butyrate	3.2	UN 1237	Flammable Liquid	II	1,2	1	
	Methyl chloride	2.1	UN 1063	Flammable Gas	-	1,2	5	Stow 'away from' living quarters
	Methyl chloride and chloropicrin, mixtures. See Chloropicrin and methyl chloride, mixtures							
	Methyl chloride and methylene chloride, mixtures	2.1	UN 1912	Flammable Gas	-	1,2	5	
	Methyl chloroacetate	3.3	UN 2295	Flammable Liquid	II	1,2	1,2	
	Methyl chlorocarbonate. See Methyl chloroformate							
	Methyl chloroformate	3.2	UN 1238	Flammable Liquid, Poison, Corrosive	I	1,2	1	
	Methylchloromethyl ether	3.1	UN 1239	Flammable Liquid	II	1	5	Keep cool
	Methyl chlorosilane	3.2	UN 2534	Flammable Liquid, Corrosive	I	1,2	1	
	Methyl cyanide	3.2	UN 1648	Flammable Liquid, Poison	II	1,2	1	
	Methyl cyclohexane	3.2	UN 2296	Flammable Liquid	II	1,2	1	
	Methyl cyclohexanol	3.3	UN 2617	Flammable Liquid	III	1,2	1,2	
	Methyl cyclohexanone	3.3	UN 2297	Flammable Liquid	III	1,2	1,2	
	Methyl cyclopentane	3.1	UN 2298	Flammable Liquid	II	1,2	1	
	Methyl dichloroacetate	6.1	UN 2299	St. Andrews Cross	III	1,2	1,2	Stow 'away from' living quarters
	Methyldichlorosilane	3.2	UN 1242	Flammable Liquid, Corrosive	I	1,2	1	
	Methylene bis (phenylene isocyanate). See Diphenylmethane diiso- cyanate							
	Methylene chloride. See Dichloromethane							
	Methyl ethyl ether. See Ethyl methyl ether							
	Methyl ethyl ketone peroxide(s). See Ethyl methyl ketone peroxide							
	Methyl ethyl ketone. See Ethyl methyl ketone							
	2-Methyl-5-ethylpyridine	6.1	UN 2300	St. Andrews Cross	III	1,2	1,2	Stow 'away from' living quarters
	Methyl formate	3.1	UN 1243	Flammable Liquid	I	1,3	5	Keep cool
	2-Methylfuran	3.1	UN 2301	Flammable Liquid	II	1,3	5	Keep cool
	5-Methylhexan-2-one	3.3	UN 2302	Flammable Liquid	III	1,2	1,2	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
	Methylhydrazine	3.2	UN 1244	Flammable Liquid, Corrosive	I	1,2	1	
	Methyl iodide	6.1	UN 2644	Poison	II	1,3	1,3	Keep cool. Stow 'away from' living quarters
	Methyl isobutyl carbinol	3.3	UN 2053	Flammable Liquid	III	1,2	1,2	
	Methyl isobutyl ketone	3.2	UN 1245	Flammable Liquid	II	1,2	1	
	Methyl isocyanate <i>and solutions</i>	3.1	UN 2480	Flammable Liquid, Poison	I	1	5	Stow 'away from' living quarters and sources of heat
	Methyl isocyanate ( <i>and solutions</i> )	3.2	UN 2450	Flammable Liquid, Poison	I	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
	Methyl isopropenyl ketone, <i>Inhibited</i>	3.2	UN 1246	Flammable Liquid	II	1,2	1	
	Methyl isothiocyanate	3.2	UN 2477	Flammable Liquid, Poison	II	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
	Methylisovalerate	3.2	UN 2400	Flammable Liquid	II	1,2	1	
	Methyl magnesium bromide, <i>in ethyl ether</i>	4.2	UN 1928	Spontaneously Combustible	I	1	5	
	Methylmercaptan	2.1	UN 1054	Flammable Gas	-	1,2	1	Stow 'away from' living quarters
	Methyl methacrylate, <i>monomer, inhibited</i>	3.2	UN 1247	Flammable Liquid	II	1,2	1	
	Methylmorpholine	3.3	UN 2535	Flammable Liquid, Corrosive	II	1,2	1,2	
	Methyl orthosilicate	3.2	UN 2606	Flammable Liquid, Poison	I	1,3	5	Keep cool
	Methylpentadiene	3.1	UN 2461	Flammable Liquid	II	1,3	5	Keep cool
	Methylpentanes	3.1	UN 2462	Flammable Liquid	II	1,3	5	Keep cool
	Methylphenyldichlorosilane	3.3	UN 2437	Flammable Liquid, Corrosive	II	1,2	1,2	
	1-Methylpiperidine	3.2	UN 2399	Flammable Liquid	II	1,2	1	
	Methyl propionate	3.2	UN 1248	Flammable Liquid	II	1,2	1	
	Methyl propyl ether	3.1	UN 2612	Flammable Liquid	II	1,3	5	Keep cool
	Methyl propyl ketone	3.2	UN 1249	Flammable Liquid	II	1,2	1	
	Methyl sulphide. <i>See</i> Dimethyl sulfide							
	Methyltetrahydrofuran	3.2	UN 2536	Flammable Liquid	II	1,2	1	
	Methyl trichloroacetate	6.1	UN 2533	St. Andrews Cross	III	1,2	1,2	
	Methyltrichlorosilane	3.2	UN 1250	Flammable Liquid, Corrosive	II	1,2	1	
	alpha-Methyl valeraldehyde	3.3	UN 2367	Flammable Liquid	III	1,2	1,2	
	Methyl vinyl ketone	3.2	UN 1251	Flammable Liquid	II	1,2	1	
N	Mines, with bursting charge	1.1D	UN 0137	Explosive (1.1D)	-	-	-	
N	Mines, with bursting charge	1.2D	UN 0138	Explosive (1.2D)	-	-	-	
N	Mines, with bursting charge	1.1F	UN 0136	Explosive (1.1F)	-	-	-	
N	Mines, with bursting charge	1.2F	UN 0294	Explosive (1.2F)	-	-	-	
	Mixed acid. <i>See</i> Acid mixtures, <i>nitrating acid</i>							
	Mixed acid, spent. <i>See</i> Acid mixtures, <i>spent</i>							
	Molybdenum pentachloride	8	UN 2503	Corrosive	III	1	1	Keep dry. Glass carboys prohibited on pas- senger vessels
	Monochlorodifluoromethane. <i>See</i> Chlorodifluoromethane							
	Monochloropentafluoroethane. <i>See</i> Chloropentafluoroethane							
	Monochlorotetrafluoroethane. <i>See</i> Chlorotetrafluoroethane							
	Monochlorotrifluoromethane. <i>See</i> Chlorotrifluoromethane							
	Monoethanolamine. <i>See</i> Ethanolamine <i>and solutions thereof</i> .							
	Monoethylamine. <i>See</i> Ethylamine							
	Monomethylamine, <i>anhydrous</i> . <i>See</i> Methylamine, <i>anhydrous</i>							
	Monomethylamine, <i>aqueous solution</i> . <i>See</i> Methylamine, <i>aqueous solu- tion</i>							
	Mononitrotoluidines	6.1	UN 2660	St. Andrews Cross	III	1,2	1,2	
	Monopropylamine	3.1	UN 1277	Flammable Liquid	II	1,2	5	
	Morpholine	3.3	UN 2054	Flammable Liquid	II	1,2	1,2	
	Motor fuel anti-knock mixtures	6.1	UN 1649	Poison, Flammable Liquid (only if flashpoint below 61 deg C)	I	1	5	If flashpoint below 61 deg C segregation same as for flammable liquids. Stow 'away from' living quarters
	Motor fuel, n.o.s.	3.1	(UN 1203)	Flammable Liquid	II	1,3	5	Keep cool
	Motor spirit. <i>See</i> Gasoline							
	Muratic acid. <i>See</i> Hydrochloric acid							
	Naphtha distillate	3.2	(UN 1268)	Flammable Liquid	II	1,2	1	
	Naphthalene, crude or refined	4.1	UN 1334	Flammable Solid	III	1,2	1,2	
	Naphtha, petroleum	3.2	UN 1255	Flammable Liquid	II	1,2	1	
	Naphtha, solvent	3.2	UN 1256	Flammable Liquid	II	1,2	1	
	Naphthylamine ( <i>alpha</i> )	6.1	UN 2077	St. Andrews Cross	III	1,2	1,2	
	Naphthylamine ( <i>beta</i> )	6.1	UN 1650	Poison	II	1,2	1,2	
	alpha-Naphthylthiourea	6.1	UN 1651	Poison	II	1,2	1,2	
	Naphthylurea	6.1	UN 1652	Poison	II	1,2	1,2	
	Naphthalene, molten	4.1	UN 2304	Flammable Solid	III	1	1	Protect from sparks and open flame
	Natural gases with a high methane content. <i>See</i> Methane or natural gases, etc.							
	Natural gasoline. <i>See</i> Casingshead gasoline							

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c)
						Cargo vessel	Pass- enger vessel	Other requirements
	Neohexane. See Dimethyl butane							
	Neon, compressed	2.2	UN 1065	Nonflammable Gas	--	1,2	1,2	
	Neon, refrigerated liquid	2.2	UN 1913	Nonflammable Gas	--	1	5	
	Nickel carbonyl	3.1	UN 1259	Flammable Liquid, Poison	I	1	5	Keep cool. Prohibited on any ship carrying explosives except explosives in Division 1.4, Compatibility Group S
	Nickel catalyst, finely divided, activated or spent, wetted with, by weight, not less than 40% water or other suitable liquid	4.2	UN 1378	Spontaneously Combustible	II	1,2	1	
	Nickel cyanide	6.1	UN 1653	Poison	II	1,2	1,2	
	Nickel nitrate	5.1	UN 2725	Oxidizer	III	1,2	1,2	
	Nickel nitrite	5.1	UN 2726	Oxidizer	III	1,2	1,2	Stow 'separated from' ammonium compounds and cyanides and 'away from' foodstuffs
	Nicotine compounds, n.o.s. or Nicotine preparations, n.o.s.	6.1	UN 1655	Poison	I/II	1,2	1,2	
	Nicotine hydrochloride, or Nicotine hydrochloride solutions	6.1	UN 1655	St. Andrews Cross	III	1,2	1,2	
	Nicotine salicylate	6.1	UN 1656	Poison	II	1,2	1,2	
	Nicotine sulphate, solid or solution	6.1	UN 1657	Poison	II	1,2	1,2	
	Nicotine tartrate	6.1	UN 1658	Poison	II	1,2	1,2	
	Nitrate of soda and potash, mixture. See Sodium nitrate and potash, mixture	6.1	UN 1659	Poison	II	1,2	1,2	
	Nitrates, (inorganic), n.o.s.	5.1	UN 1477	Oxidizer	II	1,2	1,2	
	Nitrating acid. See Acid mixtures, nitrating acid							
	Nitric acid, other than red fuming, all concentrations	8	UN 2031	Corrosive	I/II	1	5	Stow 'separated from' diethylene triamine. Stow 'away from' hydrazine, fluorides, and all other corrosives except sulphuric acid and sulphur trioxide
	Nitric acid, red fuming	8	UN 2032	Corrosive, Oxidizer, Poison	I	1	5	Stow 'separated from' diethylene triamine. Stow 'away from' hydrazine, fluorides and all other corrosives except sulphuric acid and sulphur trioxide
	Nitric oxide	2.3	UN 1660	Poison Gas, Oxidizer	--	1	5	Stow 'away from' foodstuffs and living quarters
	Nitric oxide and nitrogen tetroxide, mixtures	2.3	UN 1975	Poison Gas, Oxidizer	--	1	5	Stow 'away from' foodstuffs, organic materials and living quarters
	Nitrites, inorganic, n.o.s.	5.1	UN 2627	Oxidizer	II	1,2	1,2	Stow 'separated from' ammonium compounds and cyanides and 'away from' foodstuffs
	Nitroanilines (o-, m-, p-)	6.1	UN 1661	Poison	II	1,2	1,2	
	Nitroanisoles	6.1	UN 2730	St. Andrews Cross	III	1,3	1,3	Keep cool
	Nitrobenzene	6.1	UN 1662	Poison	II	1,2	1,2	Stow 'away from' living quarters
	Nitrobenzenesulphonic acid	8	UN 2305	Corrosive	II	1,2	1,2	
	Nitrobenzol. See Nitrobenzene							
N	5-Nitrobenzotriazole	1.1D	UN 0385	Explosive (1.1D)	--	--	--	
	Nitrobenzotrifluoride	6.1	UN 2306	Poison	II	1,2	1,2	
	Nitrobromobenzenes	6.1	UN 2732	St. Andrews Cross	III	1,3	1,3	Keep cool
	Nitrocellulose, containing at least 25% alcohol, by weight, and not exceeding 12.6% nitrogen by dry weight	4.1	UN 2556	Flammable Solid	I	1	5	Shade from radiant heat, keep away from heat and open flame
	Nitrocellulose, containing at least 25%, by weight, water	4.1	UN 2555	Flammable Solid	II	1	5	Shade from radiant heat. Keep away from heat and open flame
	Nitrocellulose, containing at least 18% plasticizing substance, by weight, and not exceeding 12.6% nitrogen by dry weight	4.1	UN 2557	Flammable Solid	I	1	1	Shade from radiant heat. Keep away from heat and open flame
	Nitrocellulose, in solution in flammable liquids	3.2	UN 2059	Flammable Liquid	II	1,2	1	
		3.3	UN 2060	Flammable Liquid	II	1,2	1,2	
	Nitrocellulose, wetted with, by weight, more than 40% flammable liquids	3.2	(UN 2556)	Flammable Liquid	II	1,2	1	
		3.3	(UN 2556)	Flammable Liquid	II	1,2	1,2	
N	Nitrocellulose with less than 25% alcohol, by weight	1.1D	UN 0340	Explosive (1.1D)	--	--	--	
N	Nitrocellulose with less than 18% plasticizing substance, by weight	1.1D	UN 0341	Explosive (1.1D)	--	--	--	
N	Nitrocellulose with less than 25% water, by weight	1.1D	UN 0340	Explosive (1.1D)	--	--	--	
N	Nitrocellulose with not less than 25% alcohol, by weight	1.3C	UN 0342	Explosive (1.3C)	--	--	--	
N	Nitrocellulose with not less than 18% plasticizing substance, by weight	1.3C	UN 0343	Explosive (1.3C)	--	--	--	
	3-Nitro-4-chlorobenzotrifluoride	6.1	UN 2307	Poison	II	1,2	1,2	
	Nitrocresols	6.1	UN 2446	Poison	III	1,2	1,2	
	Nitrogen, compressed	2.2	UN 1066	Nonflammable Gas	--	1,2	1,2	
	Nitrogen dioxide, liquefied	2.3	UN 1067	Poison Gas, Oxidizer	--	1	5	Stow 'away from' foodstuffs, organic materials and living quarters
	Nitrogen, refrigerated liquid.	2.2	UN 1977	Nonflammable Gas	--	1	5	
	Nitrogen tetroxide. See Nitrogen dioxide							
	Nitrogen trifluoride	2.3	UN 2451	Poison Gas	--	1	5	Stow 'away from' living quarters and organic materials
	Nitrogen trioxide	2.3	UN 2421	Poison Gas	--	1	5	Stow 'away from' living quarters and readily combustible substances
N	Nitroglycerine, desensitized, containing, by weight, at least 40% non-volatile water-insoluble phlegmatizer	1.1D	UN 0143	Explosive (1.1D), Poison	--	--	--	
N	Nitroglycerine, spirit of, containing more than 1% but not more than 10% nitroglycerine in solution in alcohol	1.1D	UN 0144	Explosive (1.1D)	--	--	--	
	Nitroglycerin solution, up to 1% in alcohol. See Glyceryl trinitrate, solution							
N	Nitroguanidine, dry or containing, by weight, less than 20% water	1.1D	UN 0282	Explosive (1.1D)	--	--	--	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
*	Nitroguanidine, wetted, with, by weight, at least 20% water	4.1	UN 1336	Flammable Solid	I	1.2	5	
	Nitrohydrochloric acid	8	UN 1798	Corrosive	I	1	5	Stow 'away from' fluorides
	Nitromethane	3.3	UN 1261	Flammable Liquid	II	1.2	1.2	
	Nitromuramic acid. See Nitrohydrochloric acid							
	Nitronaphthalene	4.1	UN 2538	Flammable Solid	III	1.2	1.2	
	Nitrophenols (o-, m-, p-)	6.1	UN 1663	St. Andrews Cross	III	1.2	1.2	
	Nitropropanes	3.3	UN 2603	Flammable Liquid	III	1.2	1.2	
	p-Nitrosodimethylaniline	4.2	UN 1369	Spontaneously Combustible	II	1.2	5	Stow 'away from' foodstuffs
N	Nitrostarch, dry or containing, by weight, less than 20% water	1.1D	UN 0146	Explosive (1.1D)	-	-	-	
*	Nitrostarch, wetted with, by weight, at least 20% water	4.1	UN 1337	Flammable Solid	I	1	5	
	Nitrosyl chloride	2.3	UN 1069	Poison Gas, Corrosive	-	1	5	Stow 'away from' foodstuffs and living quarters
	Nitrosylsulphuric acid	8	UN 2308	Corrosive	II	1	5	Stow 'away from' organic materials
	Nitrotoluenes (o-, m-, p-)	6.1	UN 1664	Poison	II	1.2	1.2	
N	Nitro urea	1.1D	UN 0147	Explosive (1.1D)	-	-	-	
*	Nitrous oxide, compressed	2.2	UN 1070	Nonflammable Gas, Oxidizer	-	1.2	1.2	
	Nitroxylens (o-, m-, p-)	6.1	UN 1665	Poison	II	1.2	1.2	
*	Nonane, and its isomers	3.3	UN 1920	Flammable Liquid	II	1.2	1.2	
	Nonyl trichlorosilane	8	UN 1799	Corrosive	II	1	1	Keep dry
	Octadecyl trichlorosilane	8	UN 1800	Corrosive	II	1	1	Keep dry
	Octadiene	3.2	UN 2309	Flammable Liquid	III	1.2	1	
	Octafluorocyclobutane	2.2	UN 1976	Nonflammable Gas	-	1.2	1.2	
	Octane and its isomers	3.2	UN 1262	Flammable Liquid	II	1.2	1	
*	n-Octanoyl peroxide. See Di-n-octanoyl peroxide				-	-	-	
N	Octolite, dry or containing, by weight, less than 15% water	1.1D	UN 0266	Explosive (1.1D)	-	-	-	
	Octyl trichlorosilane	8	UN 1801	Corrosive	II	1	1	Keep dry
	Oil gas	2.1	UN 1071	Flammable Gas, Poison Gas	-	1	5	Stow 'away from' living quarters
	Oleum. See Sulphuric acid, fuming							
	Organic peroxides, mixture (this description must be supplemented with the name of the primary constituent of the mixture)	5.2	UN 2756	Organic Peroxide	I/II	1	5	
*	Organic peroxides, n.o.s., samples	5.2	UN 2255	Organic Peroxide	I/II	1	5	
*	Organochlorine pesticides, liquid, n.o.s.	6.1	UN 2761	Poison	I	1	1	
		6.1	UN 2761	Poison	II	1.2	1	
		6.1	UN 2761	St. Andrews Cross	III	1.2	1.2	
*	Organochlorine pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2761	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2761	Poison, Flammable Liquid	II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 2761	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	Segregation same as for flammable liquids
*	Organochlorine pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2762	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1.2	1	
*	Organochlorine pesticides, solid, n.o.s.	6.1	UN 2761	Poison	I/II	1.2	1.2	
		6.1	UN 2761	St. Andrews Cross	III	1.2	1.2	
*	Organophosphorus pesticides, liquid, n.o.s.	6.1	UN 2783	Poison	I	1	1	
		6.1	UN 2783	Poison	II	1.2	1	
		6.1	UN 2783	St. Andrews Cross	III	1.2	1.2	
*	Organophosphorus pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2783	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2783	Poison, Flammable Liquid	II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 2783	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	Segregation same as for flammable liquids
*	Organophosphorus pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2784	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1.2	1	
*	Organophosphorus pesticides, solid, n.o.s.	6.1	UN 2783	Poison	I/II	1.2	1.2	
		6.1	UN 2783	St. Andrews Cross	III	1.2	1.2	
*	Organotin compounds, n.o.s.	6.1	UN 2788	Poison	I/II	1.2	1	Stow 'away from' living quarters
		6.1	UN 2788	St. Andrews Cross	III	1.2	1	
*	Organotin pesticides, liquid, n.o.s.	6.1	UN 2786	Poison	I	1	1	
		6.1	UN 2786	Poison	II	1.2	1	
		6.1	UN 2786	St. Andrews Cross	III	1.2	1.2	
*	Organotin pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2786	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2786	Poison, Flammable Liquid	II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 2786	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	Segregation same as for flammable liquids

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identi- fication Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Pas- senger vessel	(c) Other requirements
*	Organotin pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2787	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
*	Organotin pesticides, solid, n.o.s.	6.1	UN 2786	Poison	I/II	1,2	1,2	
*	Osmium tetroxide	6.1	UN 2786	St. Andrews Cross	III	1,2	1,2	
*	Oxalates, water soluble	6.1	UN 2471	Poison	I	1,2	1	Stow 'away from' living quarters
*	Oxidizing substances, n.o.s.	6.1	UN 2449	St. Andrews Cross	III	1,2	1,2	
*	Oxygen and carbon dioxide, mixtures. See Carbon dioxide and oxygen mixtures	5.1	UN 1479	Oxidizer	II	1,2	1,2	
*	Oxygen, compressed	2.2	UN 1072	Nonflammable Gas, Oxidizer	-	1,2	1,2	
*	Oxygen difluoride	2.3	UN 2190	Poison Gas	-	1	5	Keep dry. Stow 'away from' living quarters and readily combustible substances
*	Oxygen, refrigerated liquid	2.2	UN 1073	Nonflammable Gas, Oxidizer	-	1	5	Stow 'separated from' acetylene. Do not overstow
*	Paint, enamel, lacquer, stain, shellac, varnish, polish, filler (liquid), lacquer base or thinner (not including substances containing nitrocellulose for which See Nitrocellulose.)	3.2	UN 1263	Flammable Liquid	II/III	1,2	1	
*	Paper, treated with unsaturated oils, incompletely dried	3.3	UN 1263	Flammable Liquid	II/III	1,2	1,2	
*	Paraformaldehyde	4.2	UN 1379	Spontaneously Combustible	III	1,2	1,2	
*	Paraldehyde	4.1	UN 2213	None. Package to be marked 'Class 4.1'	III	1,2	1,2	
*	Pentaborane	3.3	UN 1264	Flammable Liquid	III	1,2	1,2	
*	Pentachloroethane	4.2	UN 1380	Spontaneously Combustible, Poison	I	1	5	
*	Pentaerythritol tetranitrate, containing, by weight, at least 25% water or at least 15% phlegmatizer	6.1	UN 1669	Poison	II	1,2	1,2	
N		1.1D	UN 0150	Explosive (1.1D)	-	-	-	
*	Pentamethylheptane	3.3	UN 2286	Flammable Liquid	III	1,2	1,2	
*	2,4-Pentanedione	3.3	UN 2310	Flammable Liquid	III	1,2	1,2	
*	Pentanes	3.1	UN 1265	Flammable Liquid	I	1,3	5	Keep cool
*	1-Pentol	8	UN 2705	Corrosive	II	1,2	1	Stow 'away from' all other corrosives
N	Pentolite, dry or containing, by weight, less than 15% water	1.1D	UN 0151	Explosive (1.1D)	-	-	-	
*	Peracetic acid, maximum concentration 43% in acetic acid or in a mixture of acetic acid and water, with in either case not more than 6% hydrogen peroxide and not more than 1% sulphuric acid	5.2	UN 2131	Organic Peroxide, Corrosive	I	1	5	
*	Perchlorates, (inorganic), n.o.s.	5.1	UN 1481	Oxidizer	II	1,3	1,3	Stow 'away from' powdered metals
*	Perchloric acid, not exceeding 50%, by weight, of acid	8	UN 1802	Corrosive, Oxidizer	II	1	1	Stow 'away from' hydrazine
*	Perchlonoic acid, over 50% and not exceeding 72% of acid	5.1	UN 1873	Oxidizer, Corrosive	I	1	5	
*	Perchloroethylene. See Tetrachloroethylene							
*	Perchloromethyl mercaptan	6.1	UN 1670	Poison	I	1	5	Stow 'away from' living quarters
*	Perchloryl fluoride	2.3	(UN 1955)	Poison Gas	-	1	5	Stow 'away from' living quarters and readily combustible substances
*	Perfumery products, flammable liquid	3.2	UN 1266	Flammable Liquid	II	1,2	1	
*		3.3	UN 1266	Flammable Liquid	II	1,2	1,2	
*	Permanganates, (inorganic), n.o.s.	5.1	UN 1482	Oxidizer	II	1,2	1,2	Stow 'separated from' ammonium compounds, hydrogen peroxide and strong liquid acids
*	Peroxides, (metallic), n.o.s.	5.1	UN 1483	Oxidizer	II	1,2	1,2	
*	Pesticides, liquid, n.o.s.	6.1	UN 2902	Poison	I	1	1	
*		6.1	UN 2902	Poison	II	1,2	1	
*		6.1	UN 2902	St. Andrews Cross	III	1,2	1,2	
*	Pesticides, liquid, n.o.s. flashpoint between 23 deg C and 61 deg C	6.1	UN 2902	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
*		6.1	UN 2902	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable liquids
*		6.1	UN 2902	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
*	Pesticides, liquid, toxic, flammable, n.o.s. flashpoint below 23 deg C	3.2	UN 2903	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
*	Pesticides, solid, n.o.s.	6.1	UN 2588	Poison	I/II	1,2	1,2	
*		6.1	UN 2588	St. Andrews Cross	III	1,2	1,2	
*	Petroleum crude oil	3.1	UN 1267	Flammable Liquid	II	1,3	5	Keep cool
*		3.2	UN 1267	Flammable Liquid	II	1,2	1	
*		3.3	UN 1267	Flammable Liquid	II	1,2	1,2	
*	Petroleum distillates, n.o.s.	3.1	UN 1268	Flammable Liquid	II	1,3	5	Keep cool
*		3.2	UN 1268	Flammable Liquid	II	1,2	1	
*		3.3	UN 1268	Flammable Liquid	II	1,2	1,2	
*	Petroleum ether. See Petroleum spirit							
*	Petroleum gases, liquefied	2.1	UN 1075	Flammable Gas	-	1,2	1	Stow 'away from' living quarters
*	Petroleum oil	3.1	UN 1270	Flammable Liquid	II	1,3	5	Keep cool
*		3.2	UN 1270	Flammable Liquid	II	1,2	1	
*		3.3	UN 1270	Flammable Liquid	II	1,2	1,2	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pass- enger vessel	
•	Petroleum spirit	3.1	UN 1271	Flammable Liquid	II	1.3	5	Keep cool
		3.2	UN 1271	Flammable Liquid	II	1.2	1	
		3.3	UN 1271	Flammable Liquid	II	1.2	1.2	
	Petrol. See Gasoline							
•	Phenacyl bromide	6.1	UN 2645	Poison	II	1.3	1	Keep cool. Stow 'away from' living quarters
		6.1	UN 2311	St. Andrews Cross	III	1.2	1.2	
		6.1	UN 1671	Poison	II	1.2	1.2	
•	Phenetidines	6.1	UN 1671	Poison	II	1.2	1.2	Stow 'away from' living quarters
		6.1	UN 2821	Poison	II	1.2	1.2	
		6.1	UN 2821	Poison	II	1.2	1.2	
•	Phenol solutions	8	UN 1803	Corrosive	II	1.2	1	Metal drums only under deck
		6.1	UN 2765	Poison	I	1	1	
		6.1	UN 2765	Poison	II	1.2	1	
•	Phenolsulphonic acid, liquid	6.1	UN 2765	St. Andrews Cross	III	1.2	1.2	Segregation same as for flammable liquids
		6.1	UN 2765	Poison, Flammable Liquid	I	1	1	
		6.1	UN 2765	Poison, Flammable Liquid	II	1.2	1	
•	Phenoxy pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2765	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	Segregation same as for flammable liquids
		6.1	UN 2765	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	
		6.1	UN 2765	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	
•	Phenoxy pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2766	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 2765	Poison	I/II	1.2	1.2	
		6.1	UN 2765	St. Andrews Cross	III	1.2	1.2	
•	Phenylacetoneitrile, liquid	6.1	UN 2470	St. Andrews Cross	III	1.2	1.2	Stow 'away from' acids
		6.1	UN 2470	St. Andrews Cross	III	1.2	1.2	
		6.1	UN 2470	St. Andrews Cross	III	1.2	1.2	
•	Phenylacetoneitrile. See Benzyl cyanide, liquid	8	UN 2577	Corrosive	II	1	1	Keep dry
		6.1	UN 1672	Poison	I	1	5	
		6.1	UN 1672	Poison	I	1	5	
•	Phenylacetyl chloride	6.1	UN 1672	Poison	I	1	5	Stow 'away from' living quarters
		6.1	UN 1672	Poison	I	1	5	
		6.1	UN 1672	Poison	I	1	5	
•	Phenylcarbylamme chloride	6.1	UN 1672	Poison	I	1	5	Stow 'away from' living quarters
		6.1	UN 1672	Poison	I	1	5	
		6.1	UN 1672	Poison	I	1	5	
•	Phenylchloroformate	6.1	UN 2746	Poison, Corrosive	II	1.3	1.3	Keep cool and dry. Shade from radiant heat. Stow 'away from' living quarters
		6.1	UN 2746	Poison, Corrosive	II	1.3	1.3	
		6.1	UN 2746	Poison, Corrosive	II	1.3	1.3	
•	Phenylenediamines (o-, m-, p-)	6.1	UN 1673	St. Andrews Cross	III	1.2	1.2	Stow 'away from' living quarters
		6.1	UN 2572	Poison	II	1.2	1.2	
		6.1	UN 2572	Poison	II	1.2	1.2	
•	Phenylhydrazine	6.1	UN 2572	Poison	II	1.2	1.2	Stow 'away from' living quarters
		6.1	UN 2572	Poison	II	1.2	1.2	
		6.1	UN 2572	Poison	II	1.2	1.2	
•	Phenyl isocyanate	6.1	UN 2487	Poison, Flammable Liquid	II	1	5	Shade from radiant heat. Stow 'away from' living quarters. Segregation same as for flammable liquids
		6.1	UN 2487	Poison, Flammable Liquid	II	1	5	
		6.1	UN 2487	Poison, Flammable Liquid	II	1	5	
•	Phenyl mercaptan	3.2	UN 2337	Flammable Liquid, Poison	II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 1674	Poison	II	1.2	1.2	
		6.1	UN 1674	Poison	II	1.2	1.2	
•	Phenylmercuric acetate	6.1	UN 2026	Poison	I/II	1.2	1.2	Segregation same as for flammable liquids
		6.1	UN 2026	St. Andrews Cross	III	1.2	1.2	
		6.1	UN 2026	St. Andrews Cross	III	1.2	1.2	
•	Phenylmercuric compounds, n.o.s.	6.1	UN 1894	Poison	II	1.2	1.2	Segregation same as for flammable liquids
		6.1	UN 1894	Poison	II	1.2	1.2	
		6.1	UN 1894	Poison	II	1.2	1.2	
•	Phenylmercuric hydroxide	6.1	UN 1894	Poison	II	1.2	1.2	Segregation same as for flammable liquids
		6.1	UN 1894	Poison	II	1.2	1.2	
		6.1	UN 1894	Poison	II	1.2	1.2	
•	Phenylmercuric nitrate	6.1	UN 1895	Poison	II	1.2	1.2	Segregation same as for flammable liquids
		6.1	UN 1895	Poison	II	1.2	1.2	
		6.1	UN 1895	Poison	II	1.2	1.2	
•	Phenyl phosphorus dichloride	8	UN 2793	Corrosive	II	1.2	1	Keep dry
		8	UN 2799	Corrosive	II	1.2	1	
		8	UN 2799	Corrosive	II	1.2	1	
•	Phenyl phosphorus thiodichloride	8	UN 2799	Corrosive	II	1.2	1	Keep dry
		8	UN 2799	Corrosive	II	1.2	1	
		8	UN 2799	Corrosive	II	1.2	1	
•	Phenyl trichlorosilane	8	UN 1804	Corrosive	II	1	1	Keep dry
		6.1	UN 2767	Poison	I	1	1	
		6.1	UN 2767	Poison	II	1.2	1	
•	Phenyl urea pesticides, liquid, n.o.s.	6.1	UN 2767	St. Andrews Cross	III	1.2	1.2	Segregation same as for flammable liquids
		6.1	UN 2767	Poison, Flammable Liquid	I	1	1	
		6.1	UN 2767	Poison, Flammable Liquid	II	1.2	1	
•	Phenyl urea pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2767	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	Segregation same as for flammable liquids
		6.1	UN 2767	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	
		6.1	UN 2767	St. Andrews Cross, Flammable Liquid	III	1.2	1.2	
•	Phenyl urea pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2768	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1.2	1	Segregation same as for flammable liquids
		6.1	UN 2767	Poison	I/II	1.2	1.2	
		6.1	UN 2767	St. Andrews Cross	III	1.2	1.2	
•	Phenyl urea pesticides, solid, n.o.s.	6.1	UN 2767	Poison	I/II	1.2	1.2	Stow 'away from' sources of heat
		6.1	UN 2767	St. Andrews Cross	III	1.2	1.2	
		6.1	UN 2767	St. Andrews Cross	III	1.2	1.2	
•	o-Phosphorous acid.	8	UN 2834	Corrosive	III	1.3	1.3	Stow 'away from' living quarters
		2.3	UN 1076	Poison Gas, Corrosive	-	1	5	
		2.3	UN 1076	Poison Gas, Corrosive	-	1	5	
•	Phosgene	2.3	UN 1076	Poison Gas, Corrosive	-	1	5	Stow 'away from' living quarters
		2.3	UN 1076	Poison Gas, Corrosive	-	1	5	
		2.3	UN 1076	Poison Gas, Corrosive	-	1	5	
•	Phosphine	2.3	UN 2199	Poison Gas, Flammable Gas	-	1	5	Stow 'away from' living quarters
		2.3	UN 2199	Poison Gas, Flammable Gas	-	1	5	
		2.3	UN 2199	Poison Gas, Flammable Gas	-	1	5	
•	o-Phosphonic acid, liquid	8	UN 1805	Corrosive	III	1.2	1.2	Glass carboys in hampers prohibited under deck. Keep dry
		8	UN 1805	Corrosive	III	1.2	1.2	
		8	UN 1805	Corrosive	III	1.2	1.2	
•	o-Phosphonic acid, solid	8	UN 1805	Corrosive	III	1.2	1.2	Stow 'separated from' oxidizing substances
		8	UN 1805	Corrosive	III	1.2	1.2	
		8	UN 1805	Corrosive	III	1.2	1.2	
•	Phosphonic anhydride. See Phosphorus pentoxide	4.1	UN 1338	Flammable Solid	III	1.2	1.2	Keep dry
		4.1	UN 1339	Flammable Solid	II	1.2	1	
		4.1	UN 1339	Flammable Solid	II	1.2	1	
•	Phosphorous bromide. See Phosphorus tribromide	8	UN 2576	Corrosive	II	1	1	Keep dry
		8	UN 2576	Corrosive	II	1	1	
		8	UN 2576	Corrosive	II	1	1	
•	Phosphorous chloride. See Phosphorus trichloride	8	UN 1939	Corrosive	II	1	1	Keep cool and dry
		8	UN 1939	Corrosive	II	1	1	
		8	UN 1939	Corrosive	II	1	1	
•	Phosphorus, amorphous	8	UN 1810	Corrosive	II	1	1	Keep dry
		8	UN 1810	Corrosive	II	1	1	
		8	UN 1810	Corrosive	II	1	1	
•	Phosphorus heptasulphide, free from yellow or white phosphorus	8	UN 2691	Corrosive	II	1.3	1	Keep cool and dry
		8	UN 2691	Corrosive	II	1.3	1	
		8	UN 2691	Corrosive	II	1.3	1	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Phosphorus pentachloride	8	UN 1806	Corrosive	II	1	1	Keep dry
	Phosphorus pentafluoride	2.3	UN 2198	Poison Gas	--	1	5	Stow 'away from' living quarters
	Phosphorus pentasulphide, <i>free from yellow or white phosphorus</i>	4.1	UN 1340	Flammable Solid	II	1,2	1,2	Stow 'separated from' oxidizing substances
	Phosphorus pentoxide	8	UN 1807	Corrosive	II	1,2	1,2	Glass bottles prohibited under deck
	Phosphorus sesquisulphide, <i>free from yellow or white phosphorus</i>	4.1	UN 1341	Flammable Solid	II	1,2	1	Stow 'separated from' oxidizing substances
	Phosphorus tribromide	8	UN 1808	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Phosphorus trichloride	8	UN 1809	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Phosphorus trifluoride	2.3	(UN 1955)	Poison Gas	--	1	5	Stow 'away from' living quarters
	Phosphorus trioxide	8	UN 2578	Corrosive	III	1,3	1,3	Keep cool and dry
	Phosphorus trisulphide, <i>free from yellow or white phosphorus</i>	4.1	UN 1343	Flammable Solid	II	1,2	1	Stow 'separated from' oxidizing substances
	Phosphorus white, molten	4.2	UN 2447	Spontaneously Combustible	I	1	5	
	Phosphorus, <i>white or yellow, dry</i>	4.2	UN 1381	Spontaneously Combustible	I	1,2	5	
	Phosphorus, <i>white or yellow, in water</i>	4.2	UN 1381	Spontaneously Combustible	I	1,2	5	
N	Photo-flash powder in units	1.1G	UN 0094	Explosive (1.1G)	--	--	--	
N	Photo-flash powder in units	1.2G	UN 0096	Explosive (1.2G)	--	--	--	
N	Photo-flash powder in units	1.3G	UN 0305	Explosive (1.3G)	--	--	--	
	Phthalic anhydride, <i>solid or molten</i>	8	UN 2214	None. Package to be marked 'Class 8'	III	1,2	1,2	Stow 'away from' foodstuffs
	Phthalimide derivative pesticides, <i>liquid, n.o.s.</i>	6.1	UN 2773	Poison	I	1	1	
		6.1	UN 2773	Poison	II	1,2	1	
		6.1	UN 2773	St. Andrews Cross	III	1,2	1,2	
	Phthalimide derivative pesticides, <i>liquid, n.o.s., flashpoint between 23 deg C and 61 deg C</i>	6.1	UN 2773	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2773	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable liquids
		6.1	UN 2773	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
	Phthalimide derivative pesticides, <i>n.o.s., flashpoint below 23 deg C</i>	3.2	UN 2774	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
	Phthalimide derivative pesticides, <i>solid, n.o.s.</i>	6.1	UN 2773	Poison	I/II	1,2	1,2	
		6.1	UN 2773	St. Andrews Cross	III	1,2	1,2	
	Piccolines	3.3	UN 2313	Flammable Liquid	II	1,2	1,2	
	Picric acid, <i>wetted with, by weight, at least 10% water</i>	4.1	UN 1344	Flammable Solid	I	1	5	Stow 'away from' heavy metals and their compounds
	Picric acid, <i>wetted with, by weight, at least 30% water</i>	4.1	UN 1344	Flammable Solid	I	1,2	5	Stow 'away from' heavy metals and their compounds
	Pinane hydroperoxide. <i>See 2,6,6-Trimethyl norpinanyl hydroperoxide, technical pure</i>				--	--	--	
	alpha-Pinene	3.3	UN 2368	Flammable Liquid	III	1,2	1,2	
	Pine oil	3.3	UN 1272	Flammable Liquid	III	1,2	1,2	
	Piperazine	8	UN 2579	Corrosive	III	1,3	1,3	Keep cool and dry
	Piperidine	3.2	UN 2401	Flammable Liquid	II	1,2	1	Keep dry
	Plastics moulding materials <i>evolving flammable vapours</i>	9	UN 2211	None	III	1,2	1,2	
	Plastics, <i>(spontaneously combustible), n.o.s.</i>	4.2	UN 2006	Spontaneously Combustible	III	1	5	
	Poisonous liquids, <i>n.o.s.</i>	6.1	UN 2810	Poison	I/II	1,2	1	
		6.1	UN 2810	St. Andrews Cross	III	1,2	1,2	
	Poisonous solids, <i>n.o.s.</i>	6.1	UN 2811	Poison	I/II	1,2	1	
		6.1	UN 2811	St. Andrews Cross	III	1,2	1,2	
	Polishes. <i>See Paints, etc.</i>							
	Polishing fluid. <i>See Flammable liquid preparations, n.o.s.</i>							
	Polychlorinated biphenyls	9	UN 2315	None	II	1,2	1,2	Stow in a recoverable position. Stow 'away from' foodstuffs
	Polystyrene beads, <i>expandable, containing flammable liquid. See Plastics moulding materials</i>							
	Potassium arsenate	6.1	UN 1677	Poison	II	1,2	1,2	
	Potassium arsenite	6.1	UN 1678	Poison	II	1,2	1,2	
	Potassium bifluoride, <i>solid</i>	8	UN 1811	Corrosive	II	1,2	1,2	Keep dry
	Potassium bifluoride, <i>solution</i>	8	UN 1811	Corrosive	II	1,2	1,2	
	Potassium borohydride	4.3	UN 1870	Dangerous When Wet	I	1,2	5	
	Potassium bromate	5.1	UN 1484	Oxidizer	II	1,2	1,2	Stow 'separated from' ammonium compounds and 'away from' powdered metals
	Potassium chlorate	5.1	UN 1485	Oxidizer	II	1,2	1,2	Stow 'separated from' ammonium compounds and 'away from' powdered metals
	Potassium chlorate, <i>aqueous solution</i>	5.1	UN 2427	Oxidizer	II	1,2	1	Stow 'away from' powdered metals and 'separated from' ammonium compounds
	Potassium cuprocyanide	6.1	UN 1679	Poison	II	1,2	1,2	Stow 'away from' acids
	Potassium cyanide	6.1	UN 1680	Poison	I	1,2	1,2	Stow 'away from' acids
	Potassium fluoride	6.1	UN 1812	St. Andrews Cross	III	1,2	1,2	Stow 'away from' acids
	Potassium fluoroacetate	6.1	UN 2628	Poison	I	1,2	5	Stow 'away from' living quarters

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c) Other requirements
						Cargo vessel	Pas- senger vessel	
	Potassium hydrogen fluoride. <i>See</i> Potassium bifluoride, <i>solution</i>	8	UN 2509	Corrosive	II	1.2	1.2	Stow 'away from' strong alkalis
•	Potassium hydrogen sulphate	4.2	UN 1929	Spontaneously Combustible	II	1.2	5-	Keep dry
•	Potassium hydrosulphite	8	UN 1813	Corrosive	II	1.2	1.2	Keep dry
	Potassium hydroxide, <i>solid</i>	8	UN 1814	Corrosive	II	1.2	1.2	
	Potassium hydroxide, <i>solution</i>	8	UN 1814	Corrosive	II	1.2	1.2	
	Potassium hypochlorite, <i>solution. See</i> Hypochlorite, <i>solutions, etc.</i>	4.2	UN 2257	Spontaneously Combustible	II	1.2	5	
	Potassium metal	4.2	UN 2257	Spontaneously Combustible	II	1.2	5	
	Potassium, metal alloys	4.3	UN 1420	Dangerous When Wet	II	1.2	5	
•	Potassium metavanadate	6.1	UN 2564	Poison	II	1.2	1.2	Stow 'away from' living quarters
	Potassium nitrate	5.1	UN 1486	Oxidizer	III	1.2	1.2	
	Potassium nitrate and sodium nitrite, <i>mixture</i>	5.1	UN 1487	Oxidizer	II	1.2	1.2	Stow 'separated from' ammonium compounds and cyanides, and 'away from' foodstuffs
	Potassium nitrate bags, <i>empty. See</i> Bags, <i>empty and unwashed, etc.</i>	5.1	UN 1488	Oxidizer	II	1.2	1.2	Stow 'separated from' ammonium compounds and cyanides, and 'away from' foodstuffs
	Potassium nitrite	5.1	UN 1488	Oxidizer	II	1.2	1.2	Stow 'separated from' ammonium compounds and cyanides, and 'away from' foodstuffs
	Potassium oxide	8	UN 2033	Corrosive	II	1.2	1.2	Keep dry
	Potassium perchlorate	5.1	UN 1489	Oxidizer	II	1.2	1.2	Stow 'away from' powdered metals
	Potassium permanganate	5.1	UN 1490	Oxidizer	II	1.2	1.2	Stow 'separated from' ammonium compounds and hydrogen peroxide
	Potassium peroxide	5.1	UN 1491	Oxidizer	I	1.2	1.2	Keep dry
	Potassium persulphate	5.1	UN 1492	Oxidizer	III	1.2	1.2	
	Potassium phosphide	4.3	UN 2012	Dangerous When Wet, Poison	I	1	5	
N	Potassium salts of nitro-aromatic derivatives, <i>explosive</i>	1.3C	UN 0158	Explosive (1.3C)	--	--	--	
•	Potassium silicofluoride	6.1	UN 2655	St. Andrews Cross	III	1.2	1.2	Stow 'away from' acids
	Potassium-sodium, <i>alloy</i>	4.3	UN 1422	Dangerous When Wet	I	1.2	5	
•	Potassium sulphide, <i>anhydrous or containing less than 30% water of crystallization</i>	4.2	UN 1382	Spontaneously Combustible	II	1.2	1.2	Stow 'separated from' liquid acids
	Potassium sulphide, <i>hydrated, containing not less than 30% water of crystallization</i>	8	UN 1847	Corrosive	II	1.2	1.2	Stow 'separated from' explosives and acids
	Potassium superoxide	5.1	UN 2466	Oxidizer	I	1.2	1	Keep dry. Stow 'away from' combustible ma- terials including packaging of other cargo
N	Powder paste, <i>containing, by weight, at least 35% water</i>	1.3C	UN 0159	Explosive (1.3C)	--	--	--	
N	Powder, smokeless	1.1C	UN 0160	Explosive (1.1C)	--	--	--	
N	Powder, smokeless	1.3C	UN 0161	Explosive (1.3C)	--	--	--	
	Primers, cap type	1.4B	UN 0378	Explosive (1.4B)	--	1.3	1.3	
	Primers, cap type	1.4S	UN 0044	None. Package to be marked "1.4S"	--	1.3	1.3	
N	Primers, cap type	1.1B	UN 0377	Explosive (1.1B)	--	--	--	
	Primers, tubular	1.4G	UN 0320	Explosive (1.4G)	--	1.3	1.3	
	Primers, tubular	1.4S	UN 0376	None. Package to be marked "1.4S"	--	1.3	1.3	
N	Primers, tubular	1.3G	UN 0319	Explosive (1.3G)	--	--	--	
	Projectiles, <i>inert, with tracer</i>	1.4 S	UN 0345	None. Package to be marked "1.4 S"	--	1.3	1.3	
N	Projectiles, <i>with burster or expelling charge</i>	1.2D	UN 0346	Explosive (1.2D)	--	--	--	
N	Projectiles, <i>with burster or expelling charge</i>	1.4D	UN 0347	Explosive (1.4D)	--	--	--	
N	Projectiles, <i>with bursting charge</i>	1.1D	UN 0163	Explosive (1.1D)	--	--	--	
N	Projectiles, <i>with bursting charge</i>	1.2D	UN 0169	Explosive (1.2D)	--	--	--	
N	Projectiles, <i>with bursting charge</i>	1.4D	UN 0344	Explosive (1.4D)	--	--	--	
N	Projectiles, <i>with bursting charge</i>	1.1F	UN 0167	Explosive (1.1F)	--	--	--	
N	Projectiles, <i>with bursting charge</i>	1.2F	UN 0324	Explosive (1.2F)	--	--	--	
	Propane	2.1	UN 1978	Flammable Gas	--	1.2	1	Stow 'away from' living quarters
	Propanethiols	3.1	UN 2402	Flammable Liquid	II	1.3	5	Keep cool and dry. Stow 'away from' food- stuffs and all odor absorbing cargo.
		3.2	UN 2402	Flammable Liquid	II	1.3	1	Keep cool and dry. Stow 'away from' food- stuffs and all odor absorbing cargo
	Propanol	3.2	UN 1274	Flammable Liquid	II	1.2	1	
	Propionaldehyde	3.2	UN 1275	Flammable Liquid	II	1.2	1	
•	Propionic acid, <i>solution containing not less than 80% acid</i>	8	UN 1848	Corrosive, Flammable Liquid (only if flashpoint below 61 deg C)	III	1.2	1.2	Stow 'separated by a complete compartment or hold from' organic peroxides, and 'sepa- rated longitudinally by and intervening complete compartment or hold from' ex- plosives. If flashpoint below 61 deg C, seg- regation same as for flammable liquids
	Propionic anhydride	8	UN 2496	Corrosive	III	1.2	1.2	Keep dry. Glass carboys prohibited on pas- senger vessels
	Propionitrile	3.2	UN 2404	Flammable Liquid, Poison	II	1.3	5	Keep cool
•	Propionyl chloride	3.2	UN 1815	Flammable Liquid, Corrosive	II	1.2	1	
	n-Propyl acetate	3.2	UN 1276	Flammable Liquid	II	1.2	1	
	sec-Propyl alcohol. <i>See</i> Isopropanol							
	n-Propyl alcohol. <i>See</i> Propanol							
	Propylamine. <i>See</i> Monopropylamine							
	Propyl benzene	3.3	UN 2364	Flammable Liquid	II	1.2	1.2	
	Propyl chloride	3.1	UN 1278	Flammable Liquid	II	1.3	5	Keep cool

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	n-Propyl chloroformate	3.3	UN 2740	Flammable Liquid, Poison, Corrosive	I	1,2	1,2	
	Propylene	2.1	UN 1077	Flammable Gas	--	1,2	1	Stow 'away from' living quarters
	Propylene chlorohydrin	6.1	UN 2611	Poison, Flammable Liquid	II	1,3	1,3	Keep cool. Shade from radiant heat. Segregation same as for flammable liquids
	Propylene diamine	3.3	UN 2258	Flammable Liquid, Corrosive	II	1,2	1,2	
	Propylenediamine	3.2	UN 2258	Flammable Liquid, Corrosive	II	1,2	1	
	Propylene dichloride	3.2	UN 1279	Flammable Liquid	II	1,2	1	
	Propyleneamine, inhibited	3.2	UN 1921	Flammable Liquid	I	1,2	1	
	Propylene oxide, inhibited	3.1	UN 1280	Flammable Liquid	I	1,3	5	Keep cool
	Propyl formates	3.2	UN 1281	Flammable Liquid	II	1,2	1	
	n-Propyl isocyanate	3.2	UN 2482	Flammable Liquid, Poison	I	1	5	Keep cool. Stow 'away from' living quarters and sources of heat
	Propyl mercaptan	3.1	UN 2704	Flammable Liquid	II	1,3	5	Keep cool and dry. Stow 'away from' foodstuffs and all odor absorbing cargo
		3.2	UN 2704	Flammable Liquid	II	1,3	1	Keep cool and dry. Stow 'away from' foodstuffs and all odor absorbing cargo
	n-Propyl nitrate	3.2	UN 1865	Flammable Liquid	II	1,2	1	
	Propyl trichlorosilane	8	UN 1816	Corrosive, Flammable Liquid	II	1	1	Keep dry. Stow 'separated longitudinally by an intervening compartment or hold from' explosives. Segregation same as for flammable liquids
	Pyridine	3.2	UN 1282	Flammable Liquid, Poison	II	1,2	1	
	Pyrophoric fuel, n.o.s.	4.2	UN 1375	Spontaneously Combustible	I	1	5	Prohibited on any ship carrying explosives (except explosives in Division 1.4, Compatibility Group S)
	Pyrophoric liquids, n.o.s.	4.2	UN 2845	Spontaneously Combustible	I	1	5	Prohibited on any ship carrying explosives (except explosives in Division 1.4, Compatibility Group S)
	Pyrophoric metals, n.o.s. or Pyrophoric alloys, n.o.s.	4.2	UN 1383	Spontaneously Combustible	II	1	5	
	Pyrosulphuryl chloride	6	UN 1817	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Pyroxylin. See Nitrocellulose							
	Pyrrolidine	3.2	UN 1922	Flammable Liquid	II	1,2	1	
	Quinoline	6.1	UN 2656	St. Andrews Cross, Flammable Liquid (only if flashpoint below 61 deg C)	III	1,3	1,3	Keep cool. Shade from radiant heat. If flashpoint below 61 deg C, segregation same as for flammable liquids
	Rags, oily	4.2	UN 1856	Spontaneously Combustible	III	1,2	1,2	Keep dry
	Rare gases, mixtures	2.2	UN 1979	Nonflammable Gas	--	1,2	1,2	
	Rare gases, mixtures with nitrogen	2.2	UN 1981	Nonflammable Gas	--	1,2	1,2	
	Rare gases, mixtures with oxygen	2.2	UN 1980	Nonflammable Gas	--	1,2	1,2	
	Receptacles, small, containing flammable compressed gas, not fitted with a dispersion device, not refillable	2.1	UN 2037	Flammable Gas	--			
	Reducing liquid. See Flammable liquid preparation, n.o.s.							
N	Refrigerant gases, n.o.s.	2.1	UN 1078	Flammable Gas	--	1	1	
	Refrigerant gases, n.o.s.	2.2	UN 1078	Nonflammable Gas	--	1,2	1,2	
	Release devices, explosive	1.4 S	UN 0173	None. Package to be marked '1.4 S'	--	1,3	1,3	
	Removing liquid. See Flammable liquid preparations, n.o.s.							
	Resin solution in flammable liquid	3.2	UN 1866	Flammable Liquid	II	1,2	1	
		3.3	UN 2868	Flammable Liquid	III	1,2	1,2	
	Resorcinol	6.1	UN 2876	St. Andrews Cross	III	1,2	1,2	
	Rivets, explosive	1.4 S	UN 0174	None. Package to be marked '1.4 S'	--	1,3	1,3	
	Road asphalt, liquid, tars or oil. See Cut-backs, asphalt or bitumen							
N	Rocket motors	1.1C	UN 0280	Explosive (1.1C)	--	--	--	
N	Rocket motors	1.2C	UN 0281	Explosive (1.2C)	--	--	--	
N	Rocket motors	1.3C	UN 0186	Explosive (1.3C)	--	--	--	
N	Rocket motors, containing hypergolic liquids, with or without expelling charge	1.2L	UN 0322	Explosive (1.2L)	--	--	--	
N	Rocket motors, containing hypergolic liquids, with or without expelling charge	1.3L	UN 0250	Explosive (1.3L)	--	--	--	
*N	Rocket motors, liquid fueled	1.2J	UN 0395	Explosive (1.2J)	--	--	--	
*N	Rocket motors, liquid fueled	1.3J	UN 0396	Explosive (1.3J)	--	--	--	
N	Rockets, line throwing	1.2G	UN 0238	Explosive (1.2G)	--	--	--	
N	Rockets, line throwing	1.3G	UN 0240	Explosive (1.3G)	--	--	--	
*N	Rockets, liquid fueled, with bursting charge	1.1J	UN 0397	Explosive (1.1J)	--	--	--	
*N	Rockets, liquid fueled, with bursting charge	1.2J	UN 0398	Explosive (1.2J)	--	--	--	
N	Rockets, with bursting charge	1.1E	UN 0181	Explosive (1.1E)	--	--	--	
N	Rockets, with bursting charge	1.2E	UN 0182	Explosive (1.2E)	--	--	--	
N	Rockets, with bursting charge	1.1F	UN 0180	Explosive (1.1F)	--	--	--	
N	Rockets, with bursting charge	1.2F	UN 0295	Explosive (1.2F)	--	--	--	
N	Rockets, with inert head	1.3C	UN 0183	Explosive (1.3C)	--	--	--	
*N	Rodenticides, liquid, n.o.s.	6.1	UN 1681	Poison	I	1	1	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Pas- senger vessel	(c) Other requirements
		6.1	UN 1681	Poison	II	1,2	1	
		6.1	UN 1681	St. Andrews Cross	III	1,2	1,2	
*	Rodenticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 1681	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable Equids
		6.1	UN 1681	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable Equids
		6.1	UN 1681	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable Equids
*	Rodenticides, solid, n.o.s.	6.1	UN 1681	Poison	I/II	1,2	1,2	
	Rosin oil	6.1	UN 1681	St. Andrews Cross	III	1,2	1,2	
		3.2	UN 1286	Flammable Liquid	III	1,2	1	
		3.3	UN 1286	Flammable Liquid	III	1,2	1,2	
	R 22. See Chlorodifluoromethane.							
	R 12. See Dichlorodifluoromethane							
	Rubber scrap, powdered or granulated.	4.1	UN 1345	Flammable Solid	II	1,2	1,2	
	Rubber shoddy. See Rubber scrap							
	Rubber solution	3.2	UN 1287	Flammable Liquid	II	1,2	1	
		3.3	UN 1287	Flammable Liquid	II	1,2	1,2	
*	Rubidium hydroxide, solid	8	UN 2678	Corrosive	II	1,2	1,2	Keep dry
*	Rubidium hydroxide, solution	8	UN 2677	Corrosive	II	1,2	1,2	
	Rubidium, (metal)	4.3	UN 1423	Dangerous When Wet	I	1,2	5	
N	Samples, explosive substance, other than primary explosives	1	UN 0190	None	--	--	--	
	Sand acid. See Fluosilicic acid							
	Seed cake, containing vegetable oil, mechanically expelled seeds, containing more than 10% of oil or more than 20% of oil and moisture combined	4.2	UN 1386	None. Package to be marked 'Class 4.2'	III	1,2	5	
	Seed cake, containing vegetable oil, solvent extractions and expelled seeds, containing not more than 10% of oil and, when the amount of moisture is higher than 10%, not more than 20% of oil and moisture combined	4.2	UN 1386	None. Package to be marked 'Class 4.2'	III	1,2	1,2	
	Seed cake, containing vegetable oil, solvent extractions containing not more than 1.5% of oil and 11% of moisture	4.2	UN 2217	None. Package to be marked 'Class 4.2'	III	1,2	1,2	
*	Selenates, n.o.s. or Selenites, n.o.s.	6.1	UN 2630	Poison	I	1,2	5	Stow 'away from' living quarters
	Selenic acid	8	UN 1905	Corrosive	I	1,2	1,2	Keep dry
*	Selenium disulphide	6.1	UN 2657	Poison	II	1,2	1,2	Stow 'away from' living quarters
*	Selenium hexafluoride	2.3	UN 2194	Poison Gas	--	1	5	Stow 'away from' living quarters
*	Selenium metal powder, non-pyrophoric	6.1	UN 2658	St. Andrews Cross	III	1,2	1,2	
*	Selenium oxychloride	8	UN 2879	Corrosive, Poison	I	1,2	5	Keep dry
	Shale oil	3.2	UN 1288	Flammable Liquid	II	1,2	1	
		3.3	UN 1288	Flammable Liquid	II	1,2	1,2	
	Shellac. See Paints, etc.							
	Signal devices, hand	1.4S	UN 0373	None. Package to be marked '1.4S'	--	1,3	1,3	
	Signal devices, hand	1.4 G	UN 0191	Explosive (1.4G)	--	1,3	1,3	
N	Signals, distress, ship (other than water-activated)	1.1G	UN 0194	Explosive (1.1G)	--	--	--	
N	Signals, distress, ship (other than water-activated)	1.3G	UN 0195	Explosive (1.3G)	--	--	--	
N	Signals, railway track, explosive	1.1G	UN 0192	Explosive (1.1G)	--	--	--	
N	Signals, railway track, explosive	1.4S	UN 0193	None. Package to be marked '1.4S'	--	--	--	
N	Signals, smoke, with explosive sound unit	1.1G	UN 0196	Explosive (1.1G)	--	--	--	
N	Signals, smoke, with explosive sound unit	1.2G	UN 0313	Explosive (1.2G)	--	--	--	
	Signals, smoke, without explosive sound unit	1.4 G	UN 0197	Explosive (1.4G)	--	1,3	1,3	
	Silane	2.3	UN 2203	Poison Gas, Flammable Gas	--	1	5	Shade from radiant heat. Stow 'away from' living quarters, 'separated from' oxidizers
	Silicofluoric acid. See Fluosilicic acid							
*	Silicofluorides, n.o.s.	6.1	UN 2856	St. Andrews Cross	III	1,2	1,2	Stow 'away from' acids
	Silicon chloride. See Silicon tetrachloride							
	Silicon powder, amorphous	4.1	UN 1346	Flammable Solid	III	1,2	1,2	
	Silicon tetrachloride	8	UN 1818	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Silicon tetrafluoride	2.3	UN 1859	Poison Gas, Corrosive	--	1	5	
	Silver arsenite	6.1	UN 1683	Poison	II	1,2	1,2	
	Silver cyanide	6.1	UN 1684	Poison	II	1,2	1,2	Stow 'away from' strong liquid acids
	Silver nitrate	5.1	UN 1493	Oxidizer	II	1,2	1,2	Stow 'away from' foodstuffs
*	Silver picrate, wetted with, by weight, at least 30% water	4.1	UN 1347	Flammable Solid	I	1	5	
	Sisal, dry. See Fibre, vegetable, dry							
	Sludge acid	8	UN 1906	Corrosive	II	1,2	1	Stow 'away from' fluorides. Metal drums only under deck
	Soda lime	8	UN 1907	Corrosive	III	1,2	1,2	Keep dry
	Sodium aluminate, solution	8	UN 1819	Corrosive	II	1,2	1,2	
	Sodium amalgam	4.3	UN 1424	Dangerous When Wet	I	1,2	1,2	
	Sodium amide	4.3	UN 1425	Dangerous When Wet	II	1,2	5	
*	Sodium ammonium vanadate	6.1	UN 2863	Poison	II	1,2	1,2	Stow 'away from' living quarters
	Sodium arsenite	6.1	UN 2473	St. Andrews Cross	III	1,2	1,2	
	Sodium arsenate	6.1	UN 1685	Poison	II	1,2	1,2	
*	Sodium arsenite, aqueous solutions	6.1	UN 1686	Poison	I/II	1,2	1,2	
		6.1	UN 1686	St. Andrews Cross	III	1,2	1,2	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Sodium arsenite, solid	6.1	UN 2027	Poison	II	1,2	1,2	Stow 'away from' heavy metals and their compounds, 'separated from' acids
	Sodium azide	6.1	UN 1687	Poison	II	1,2	1,2	
	Sodium bisulphate, <i>solid</i> . See Sodium hydrogen sulphate							
	Sodium bisulphate, <i>solution</i> . See Sodium hydrogen sulphate, <i>solution</i>							
	Sodium borohydride	4.3	UN 1426	Dangerous When Wet	I	1,2	5	Stow 'away from' powdered metals, 'separated from' ammonium compounds
	Sodium bromate	5.1	UN 1494	Oxidizer	II	1,2	1,2	
	Sodium cacodylate	6.1	UN 1638	Poison	II	1,2	1,2	Stow 'away from' acids
	Sodium chlorate	5.1	UN 1437	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals, 'separated from' ammonium compounds
	Sodium chlorate, <i>aqueous solution</i>	5.1	UN 2428	Oxidizer	II	1,2	1	Stow 'away from' powdered metals and 'separated from' ammonium compounds
	Sodium chlorite	5.1	UN 1496	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals, 'separated from' ammonium compounds
	Sodium chlorite, <i>solution containing more than 5% available chlorine</i>	8	UN 1908	Corrosive	II	1,2	1	Glass carboys in hampers not permitted under deck
	Sodium chloroacetate	6.1	UN 2659	St. Andrews Cross	III	1,3	1,3	Keep cool and dry
	Sodium cuprocyanide, <i>solid</i>	6.1	UN 2316	Poison	I	1,2	1,2	Keep dry. Stow 'separated from' acids
	Sodium cuprocyanide solution	6.1	UN 2317	Poison	I	1,2	1	Stow 'away from' living quarters and 'separated from' acids
	Sodium cyanide	6.1	UN 1689	Poison	I	1,2	1,2	Stow 'away from' acids
N	Sodium dinitro-o-cresolate, <i>dry or containing, by weight, less than 15% water</i>	1.3C	UN 0234	Explosive (1.3C)	--	--	--	
	Sodium dinitro-o-cresolate, <i>wetted with, by weight, at least 15% water</i>	4.1	UN 1348	Flammable Solid, Poison	I	1,2	5	Stow 'away from' heavy metals and their compounds
	Sodium dinitro-o-cresolate, <i>wetted with, by weight, at least 10% water</i>	4.1	UN 1348	Flammable Solid, Poison	I	1	5	Stow 'away from' heavy metals and their compounds
	Sodium fluoride, <i>solid</i>	6.1	UN 1690	St. Andrews Cross	III	1,2	1,2	Stow 'away from' acids
	Sodium fluoride, <i>solution</i>	6.1	UN 1690	Poison	II	1,2	1,2	
	Sodium fluoroacetate	6.1	UN 2629	Poison	I	1,2	5	Stow 'away from' living quarters
	Sodium hydrate. See Sodium hydroxide, <i>solution</i>							
	Sodium hydride	4.3	UN 1427	Dangerous When Wet	I	1,2	5	
	Sodium hydrogen fluoride	8	UN 2439	Corrosive	II	1,3	1,3	Keep cool and dry
	Sodium hydrogen sulphate, <i>solid</i>	8	UN 1821	Corrosive	II	1,2	1,2	
	Sodium hydrogen sulphate, <i>solution</i>	8	UN 2837	Corrosive	II	1,2	1,2	
	Sodium hydrogen sulphite, <i>solution</i>	8	UN 1909	Corrosive	II	1,2	1,2	
	Sodium hydrosulphide, <i>solid</i>	4.2	UN 2318	Spontaneously Combustible	II	1,2	1,2	
	Sodium hydrosulphite	4.2	UN 1384	Spontaneously Combustible	II	1,2	1,2	New metal drums only under deck
	Sodium hydroxide, <i>solid</i>	8	UN 1823	Corrosive	II	1,2	1,2	Keep dry
	Sodium hydroxide, <i>solution</i>	8	UN 1824	Corrosive	II	1,2	1,2	
	Sodium, ( <i>metal</i> )	4.3	UN 1428	Dangerous When Wet	II	1,2	5	
	Sodium metal, <i>dispersion in organic liquids</i>	4.3	UN 1429	Dangerous When Wet	I	1,2	5	
	Sodium methylate	4.3	UN 1431	Dangerous When Wet	I	1,2	1	
	Sodium methylate, <i>solutions in alcohol</i>	3.2	UN 1289	Flammable Liquid	II	1,2	1	
		3.3	UN 1289	Flammable Liquid	II	1,2	1,2	
	Sodium monoxide	8	UN 1825	Corrosive	II	1,2	1,2	Keep dry
	Sodium nitrate	5.1	UN 1498	Oxidizer	III	1,2	1,2	
	Sodium nitrate and potash, <i>mixture</i>	5.1	UN 1478	Oxidizer	II	1,2	1,2	
	Sodium nitrate and potassium nitrate, <i>mixtures</i>	5.1	UN 1499	Oxidizer	III	1,2	1,2	
	Sodium nitrate bags, <i>empty</i> . See Bags, <i>empty and unwashed, etc.</i>							
	Sodium nitrite	5.1	UN 1500	Oxidizer	II	1,2	1,2	
	Sodium pentachlorophenate	6.1	UN 2567	Poison	II	1,2	1,2	Stow 'away from' living quarters
	Sodium percarbonates	5.1	UN 2467	Oxidizer	III	1,2	1,2	Keep dry
	Sodium perchlorate	5.1	UN 1502	Oxidizer	II	1,2	1,2	Stow 'away from' foodstuffs, 'separated from' ammonium compounds and cyanides. Paper bags prohibited on passenger vessels
	Sodium permanganate	5.1	UN 1503	Oxidizer	II	1,2	1,2	Stow 'separated from' ammonium compounds and hydrogen peroxide
	Sodium peroxide	5.1	UN 1504	Oxidizer	I	1,2	1	Keep dry. Stow 'away from' powdered metals, permanganates, and combustible packagings and cargo
	Sodium persulphate	5.1	UN 1505	Oxidizer	III	1,2	1,2	
	Sodium phenolate, <i>solid</i>	8	UN 2497	Corrosive	III	1,2	1,2	
	Sodium phosphide	4.3	UN 1432	Dangerous When Wet, Poison	I	1	5	
N	Sodium picramate, <i>dry or containing, by weight, less than 20% water</i>	1.3C	UN 0235	Explosive (1.3C)	--	--	--	
	Sodium picramate, <i>wetted with, by weight, at least 20% water</i>	4.1	UN 1349	Flammable Solid	I	1,2	5	Stow 'away from' heavy metals and their compounds
	Sodium-potassium, <i>alloy</i> . See Potassium-sodium, <i>alloy</i>							
N	Sodium salts of nitro-aromatic derivatives, <i>explosive</i>	1.3C	UN 0203	Explosive (1.3C)	--	--	--	
	Sodium silicofluoride	6.1	UN 2674	St. Andrews Cross	III	1,2	1,2	Stow 'away from' acids
	Sodium sulphide, <i>anhydrous or containing less than 30% water of crystallization</i>	4.2	UN 1385	Spontaneously Combustible	II	1,2	1,2	Stow 'separated from' acids
	Sodium sulphide, <i>hydrated, containing not less than 30% water of crystallization</i>	9	UN 1849	None	II	1,2	1,2	Stow 'separated from' explosives and acids

172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Sodium superoxide	5.1	UN 2547	Oxidizer	I	1,2	5	Keep dry. Stow 'away from' powdered metals, permanganates and combustible packaging and cargo
	Solvents, (non-toxic), n.o.s.	3.2	UN 1998	Flammable Liquid	II	1,2	1	
	Solvents, (toxic), n.o.s.	3.2	UN 1997	Flammable Liquid, Poison	II	1,2	1	
		3.3	UN 1997	Flammable Liquid, Poison	II	1,2	1,2	
N	Sounding devices, explosive	1.1E	UN 0374	Explosive (1.1E)	-	-	-	
N	Sounding devices, explosive	1.2E	UN 0375	Explosive (1.2E)	-	-	-	
N	Sounding devices, explosive	1.1F	UN 0296	Explosive (1.1F)	-	-	-	
N	Sounding devices, explosive	1.2F	UN 0204	Explosive (1.2F)	-	-	-	
	Spent mixed acid. See Acid mixtures, spent							
	Spirits of salts. See Hydrochloric acid							
	Squibs	1.4 S	UN 0206	None. Package to be marked '1.4 S'	-	1,3	1,3	
	Stains. See Paints, etc.							
	Stannic chloride, anhydrous	8	UN 1827	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Stannic chloride pentahydrate	8	UN 2440	Corrosive	III	1,2	1,2	Keep dry
	Stannic phosphides	4.3	UN 1433	Dangerous When Wet	I	1	5	
	Steel swarf. See Iron swarf							
	Stibine	2.3	(UN 1953)	Poison Gas, Flammable Gas	-	1	5	Stow 'away from' living quarters
	Straw	4.1	UN 1327	None	III	1,2	1,2	Stow 'away from' animal or vegetable oils
	Strike anywhere matches. See Matches, strike anywhere							
	Strontium, alloys, non-pyrophoric	4.3	UN 1434	Dangerous When Wet	II	1,2	5	
	Strontium arsenite	6.1	UN 1691	Poison	II	1,2	1,2	
	Strontium chlorate	5.1	UN 1506	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals, separated from ammonium compounds
	Strontium nitrate	5.1	UN 1507	Oxidizer	III	1,2	1,2	
	Strontium perchlorate	5.1	UN 1508	Oxidizer	II	1,2	1,2	Stow 'away from' powdered metals
	Strontium peroxide	5.1	UN 1509	Oxidizer	II	1,2	1,2	Keep dry
	Strontium phosphide	4.3	UN 2013	Dangerous When Wet, Poison	I	1	5	
	Strontium, powdered. See Pyrophoric metals							
	Styrene monomer, inhibited	3.3	UN 2055	Flammable Liquid	II	1,2	1,2	
N	Substances, explosive, n.o.s.	1.1L	UN 0357	Explosive (1.1L)	-	-	-	
N	Substances, explosive, n.o.s.	1.2L	UN 0358	Explosive (1.2L)	-	-	-	
N	Substances, explosive, n.o.s.	1.3L	UN 0359	Explosive (1.3L)	-	-	-	
	Substituted nitrophenol pesticides, liquid, n.o.s.	6.1	UN 2779	Poison	I	1	1	
		6.1	UN 2779	Poison	II	1,2	1	
		6.1	UN 2779	St. Andrews Cross	III	1,2	1,2	
	Substituted nitrophenol pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2779	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2779	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable liquids
		6.1	UN 2779	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
	Substituted nitrophenol pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2780	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
	Substituted nitrophenol pesticides, solid, n.o.s.	6.1	UN 2779	Poison	I/II	1,2	1,2	
		6.1	UN 2779	St. Andrews Cross	III	1,2	1,2	
	Succinic acid peroxide. See Disuccinic acid peroxide							
	Sulphides, n.o.s.	4.2	-	Spontaneously Combustible	III	1	5	
	Sulphur chlorides	8	UN 1828	Corrosive	I	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Sulphur dichloride. See Sulphur chlorides							
	Sulphur dioxide, liquefied	2.3	UN 1079	Poison Gas	-	1,2	5	Stow 'away from' living quarters
	Sulphur hexafluoride	2.2	UN 1080	Nonflammable Gas	-	1,2	1,2	
	Sulphuric acid, containing more than 51% acid	8	UN 1830	Corrosive	II	1,2	1	Stow 'away from' fluorides and all other corrosives except nitric acids, sulphur trioxide and other sulphuric acids
	Sulphuric acid, containing not more than 51% acid	8	UN 1830	Corrosive	II	1,2	1	Stow 'away from' fluorides. Glass carboys in hampers not permitted under deck
	Sulphuric acid, fuming	8	UN 1831	Corrosive	I	1,2	1	Stow 'away from' fluorides and all other corrosives except nitric acids, sulphur trioxide and other sulphuric acids
	Sulphuric acid, spent	8	UN 1832	Corrosive	II	1,2	1	Stow 'away from' fluorides. For concentrations of more than 51% acid, stow 'away from' all other corrosives except nitric acids, sulphur trioxide and other sulphuric acids
	Sulphuric and hydrofluoric acid, mixtures. See Acid mixtures, hydrofluoric and sulphuric							

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a)	(b)	(c)
						Cargo vessel	Passenger vessel	Other requirements
	Sulphuric anhydride. See Sulphur trioxide, <i>stabilized</i> Sulphur, <i>lump or powder</i>	4.1	UN 1350	Flammable Solid	III	1,2	1,2	Protect from sparks and open flame. Stow 'separated from' oxidizing substances
	Sulphur, molten	4.1	UN 2448	Flammable Solid	III	1	1	Stow 'separated from' oxidizers, 'away from' living quarters. Protect from sparks and open flame
	Sulphurous acid	8	UN 1833	Corrosive	II	1,2	1	Glass carboys in hampers not permitted under deck
	Sulphur tetrafluoride	2.3	UN 2418	Poison Gas	-	1	5	Stow 'away from' living quarters
	Sulphur trioxide, <i>stabilized</i>	8	UN 1829	Corrosive	I	1,2	1,2	Keep dry. Glass bottles not permitted under deck. Stow 'away from' other corrosives except nitric and sulphuric acids
	Sulphuryl chloride	8	UN 1834	Corrosive	I	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Sulphuryl fluoride	2.3	UN 2191	Poison Gas	-	1,2	5	Stow 'away from' living quarters
	Tars, <i>liquid</i> . See Cut-backs, <i>asphalt or bitumen</i>							
	Tear gas candles, <i>non-explosive</i>	6.1	UN 1700	Poison	II	1	5	
	Tear gas grenades, <i>non-explosive</i> . See Tear gas candles							
	Tear gas, ( <i>irritating substances, liquid or solid</i> ), n.o.s.	6.1	UN 1693	Poison	I/II	1	5	
	Tellurium hexafluoride	6.1	UN 1693	St. Andrews Cross	III	1	5	
	T.E.L. See Motor fuel anti-knock mixtures	2.3	UN 2195	Poison Gas	-	1	5	Stow 'away from' living quarters
	Terpene hydrocarbons n.o.s.	3.3	UN 2319	Flammable Liquid	III	1,2	1,2	
	Terpinolene	3.3	UN 2541	Flammable Liquid	III	1,2	1,2	
	Tetrabromoethane	6.1	UN 2504	St. Andrews Cross	III	1,2	1,2	
	1,1,2,2-Tetrachloroethane	6.1	UN 1702	Poison	II	1,2	1,2	
	Tetrachloroethylene	6.1	UN 1897	St. Andrews Cross	III	1,2	1,2	
	Tetraethyl dithiopyrophosphate, liquid or mixtures	6.1	UN 1704	Poison	I/II	1	5	
		6.1	UN 1704	St. Andrews Cross	III	1	5	
	Tetraethyl dithiopyrophosphate with gases, including solutions and mixtures thereof	2.3	UN 1703	Poison Gas	-	1	5	Stow 'away from' living quarters
	Tetraethylenepentamine	8	UN 2320	Corrosive	III	1,2	1,2	Glass carboys prohibited on passenger vessels
	Tetraethyl lead. See Motor fuel anti-knock mixtures							
	Tetraethyl pyrophosphate and compressed gas, mixture	2.3	UN 1705	Poison Gas	-	1	5	Stow 'away from' living quarters
	Tetraethyl silicate	3.3	UN 1292	Flammable Liquid	II	1,2	1,2	
	Tetrafluoroethylene, <i>inhibited</i>	2.2	UN 1031	Nonflammable Gas	-	1,2	1,2	Stow 'away from' living quarters
	Tetrafluorohydrazine	2.3	(UN 1955)	Poison Gas	-	11	5	Stow 'away from' living quarters and readily combustible substances, 'separated from' hydrogen
	Tetrafluoromethane	2.2	UN 1982	Nonflammable Gas	-	1,2	1,2	
	1,2,3,6-Tetrahydrobenzaldehyde	3.3	UN 2498	Flammable Liquid	III	1,2	1,2	
	Tetrahydrofuran	3.1	UN 2056	Flammable Liquid	II	1,3	5	Keep cool
	Tetrahydrophthalic anhydrides	8	UN 2698	None. Package to be as marked 'Class 8'	III	1,2	1,2	Keep dry
	1,2,3,6-Tetrahydropyridine	3.2	UN 2410	Flammable Liquid	II	1,2	1	
	Tetrahydrothiophene	3.2	UN 2412	Flammable Liquid	II	1,2	1	
	Tetralin hydroperoxide, <i>technical pure</i>	5.2	UN 2136	Organic Peroxide	I	1	5	
	Tetramethylammonium hydroxide	8	UN 1835	Corrosive	II	1,2	1,2	
	1,1,3,3-Tetramethyl butyl hydroperoxide, <i>technical pure</i>	5.2	UN 2160	Organic Peroxide	II	1	5	
	1,1,3,3-Tetramethyl butyl peroxy-2-ethyl hexanoate, <i>technical pure</i>	5.2	UN 2161	Organic Peroxide	I	1	5	Control temperature 20 deg C. Emergency temperature 25 deg C
	Tetramethylsilane	3.1	UN 2749	Flammable Liquid	I	1	5	Keep cool. Shade from radiant heat
N	Tetranitro-aniline	1.1D	UN 0207	Explosive (1.1D)	-	-	-	
	Tetranitromethane	5.1	UN 1510	Oxidizer	I	1	5	Shade from radiant heat. Stow 'away from' foodstuffs
	Tetrapropyl-o-titanate	3.3	UN 2413	Flammable Liquid	II	1,2	1,2	
N	Tetrazol-1-acetic acid	1.4C	UN 0407	Explosive (1.4C)	-	-	-	
	Textile waste, ( <i>wet</i> ), n.o.s.	4.2	UN 1857	Spontaneously Combustible	III	1,2	1,2	
	Thallium chlorate	5.1	UN 2573	Oxidizer, Poison	II	1,2	1,2	Stow 'separated from' ammonium compounds and foodstuffs and 'away from' finely powdered metals
	Thallium compounds, n.o.s.	6.1	UN 1707	Poison	II	1,2	1,2	
	Thallium nitrate	6.1	UN 2727	Poison	II	1,2	1,2	Stow 'away from' living quarters
	4-Thiapentenal	6.1	UN 2785	St. Andrews Cross, Flammable Liquid (only if flashpoint below 61 deg C)	III	1	5	Segregation same as for flammable liquids if flashpoint below 61 deg C. Shade from radiant heat and sunlight. Stow 'away from' living quarters, acids and bases
	Thinners. See Paints, etc							
	Thinning liquid. See Flammable liquid preparations, n.o.s							
	Thioacetic acid	3.2	UN 2436	Flammable Liquid	II	1,2	1	
	Thiocarbonyl chloride. See Thiophosgene							
	Thioglycolic acid	8	UN 1940	Corrosive	II	1,2	1,2	Glass carboys in hampers prohibited under deck
	Thionyl chloride	8	UN 1836	Corrosive	I	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Thiophene	3.2	UN 2414	Flammable Liquid	II	1,2	1	
	Thiophosgene	6.1	UN 2474	Poison	II	1,2	1	Stow 'away from' acids and living quarters

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identifi- cation Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Pas- senger vessel	(c) Other requirements
	Thiophosphoryl chloride	8	UN 1837	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on pas- senger vessels
*	Thiourea	6.1	UN 2877	St. Andrews Cross	III	1,2	1,2	
	Tin chloride, <i>fuming</i> . See Stannic chloride, <i>anhydrous</i>							
	Tinctures, <i>medicinal</i>	3.2	UN 1293	Flammable Liquid	II	1,2	1	
	Tin tetrachloride. See Stannic chloride, <i>anhydrous</i>							
	Titanium hydride	4.1	UN 1871	Flammable Solid	II	1,2	5	
*	Titanium metal powder, dry	4.2	UN 2546	Spontaneously Combustible	II	1,2	5	
*	Titanium metal powder, wetted with not less than 25% water (a visible excess of water must be present)	4.1	UN 1352	Flammable Solid	II	1,2	5	
	Titanium tetrachloride	8	UN 1838	Corrosive	II	1	1	Keep dry. Glass carboys prohibited on pas- senger vessels
*	Titanium trichloride mixtures, <i>non-pyrophoric</i>	8	UN 2869	Corrosive	II	1,2	1,2	Keep dry
*	Titanium trichloride, pyrophoric or Titanium trichloride mixtures, pyrophoric	4.2	UN 2441	Spontaneously Combustible, Corrosive	II	1,2	1,2	
	Toe puffs, <i>nitrocellulose base</i>	4.1	UN 1353	Flammable Solid	III	1	5	
	Toluene	3.2	UN 1294	Flammable Liquid	II	1,2	1	
	Toluene diisocyanate (T.D.I.)	6.1	UN 2078	Poison	II	1,3	1,3	Shade from radiant heat. Stow 'away from' living quarters and sources of heat
	Toluidines ( <i>o</i> -, <i>m</i> -, <i>p</i> -)	6.1	UN 1708	Poison	II	1,2	1,2	Stow 'away from' acids
	2,4-Toluylenediamine	6.1	UN 1709	St. Andrews Cross	III	1,2	1,2	
N	Torpedoes, with bursting charge	1.1E	UN 0329	Explosive (1.1E)	-	-	-	
N	Torpedoes, with bursting charge	1.1F	UN 0330	Explosive (1.1F)	-	-	-	
	Tracers for ammunition	1.4 G	UN 0306	Explosive (1.4G)	-	1,3	1,3	
N	Tracers for ammunition	1.3G	UN 0212	Explosive (1.3G)	-	-	-	
	Triallylamine	3.3	UN 2610	Flammable Liquid	II	1,2	1,2	
*	Triallyl borate	6.1	UN 2609	St. Andrews Cross, Flammable Liquid (only if flashpoint below 61 deg C)	III	1,3	1,3	Keep cool and dry. Shade from radiant heat. If flashpoint below 61 deg C, segregation same as for flammable liquids
*	Triazine pesticides, liquid, n.o.s.	6.1	UN 2763	Poison	I	1	1	
		6.1	UN 2763	Poison	II	1,2	1	
		6.1	UN 2763	St. Andrews Cross	III	1,2	1,2	
*	Triazine pesticides, liquid, n.o.s., flashpoint between 23 deg C and 61 deg C	6.1	UN 2763	Poison, Flammable Liquid	I	1	1	Segregation same as for flammable liquids
		6.1	UN 2763	Poison, Flammable Liquid	II	1,2	1	Segregation same as for flammable liquids
		6.1	UN 2763	St. Andrews Cross, Flammable Liquid	III	1,2	1,2	Segregation same as for flammable liquids
*	Triazine pesticides, n.o.s., flashpoint below 23 deg C	3.2	UN 2764	Flammable Liquid and Poison or St. Andrews Cross (according to toxicity)	I/II	1,2	1	
*	Triazine pesticides, solid, n.o.s.	6.1	UN 2763	Poison	I/II	1,2	1,2	
		6.1	UN 2763	St. Andrews Cross	III	1,2	1,2	
	Tributylamine	8	UN 2542	Corrosive	III	1,2	1,2	
*	Trichloroacetic acid, solid	8	UN 1839	Corrosive	II	1,2	1,2	Keep dry
	Trichloroacetic acid, solutions	8	UN 2564	Corrosive	II	1,2	1	Glass carboys in hampers prohibited under deck
	Trichloroacetyl chloride	8	UN 2442	Corrosive	II	1	5	Keep dry
*	Trichlorobenzenes, liquid	6.1	UN 2321	St. Andrews Cross	III	1,2	1,2	Stow 'away from' living quarters
*	Trichlorobutene	6.1	UN 2322	Poison	II	1,2	1,2	Shade from radiant heat. Stow 'away from' living quarters
*	1,1,1-Trichloroethane	6.1	UN 2831	St. Andrews Cross	III	1,2	1,2	
	Trichloroethylene	6.1	UN 1710	St. Andrews Cross	III	1,2	1,2	
	Trichlorosocyanuric acid, dry	5.1	UN 2468	Oxidizer	II	1,2	1,2	Shade from radiant heat. Keep dry. Stow 'separated from' nitrogen compounds
	Trichlorosilane	4.3	UN 1295	Dangerous When Wet, Flammable Liquid	I	1	5	
	Tricresylphosphate, with more than 3% <i>ortho</i> isomer	6.1	UN 2574	Poison	II	1,2	1,2	
	Triethylaluminum. See Aluminum triethyl							
	Triethylamine	3.2	UN 1296	Flammable Liquid	II	1,2	1	
*	Triethylenediamine	8	UN 2675	Corrosive	III	1,2	1,2	
	Triethylenetetramine	8	UN 2259	Corrosive	II	1,2	1	Stow 'separated from' nitric acid, 'away from' acids, copper and copper alloys and living quarters
	Triethyl phosphite	3.3	UN 2323	Flammable Liquid	III	1,2	1,2	
*	Trifluoroacetic acid	8	UN 2699	Corrosive	I	1,3	1	Keep cool. Stow 'away from' all other corro- sives
	Trifluorobromomethane. See Bromotrifluoromethane							
*	Trifluorochloroethylene, inhibited	2.1	UN 1082	Flammable Gas	-	1,2	1	Stow 'away from' living quarters
	Trifluorochloromethane. See Chlorotrifluoromethane							
	Trifluoroethane	2.1	UN 2035	Flammable Gas	-	1,2	1	Stow 'away from' living quarters
	Trifluoromethane	2.2	UN 1984	Nonflammable Gas	-	1,2	1,2	
	Triisobutyl aluminum	4.2	UN 1930	Spontaneously Combustible	I	1	1	

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Triisobutylene	3.3	UN 2324	Flammable Liquid	II	1,2	1,2	
	Triisopropyl borate	3.3	UN 2616	Flammable Liquid	II	1,2	1,2	
	Trimethylacetyl chloride	8	UN 2438	Corrosive, Flammable Liquid	II	1	5	Shade from radiant heat. Segregation same as for flammable liquids
	<i>Trimethylaluminum. See Aluminum trimethyl</i>							
	Trimethylamine, anhydrous	2.1	UN 1083	Flammable Gas, Poison Gas	-	1	5	Stow 'away from' living quarters
	Trimethylamine, aqueous solutions containing not more than 30% of trimethylamine	3.2	UN 1297	Flammable Liquid	II	1,2	1	Stow 'away from' mercury and its compounds
	1,3,5-Trimethylbenzene	3.3	UN 2325	Flammable Liquid	III	1,2	1,2	
	Trimethyl borate	3.1	UN 2416	Flammable Liquid	II	1,3	5	Keep cool
	Trimethylchlorosilane	3.2	UN 1298	Flammable Liquid, Corrosive	I	1,2	1	
	Trimethylcyclohexylamine	8	UN 2326	Corrosive	III	1,2	1,2	Glass carboys prohibited on passenger vessels
	Trimethylhexamethylene diamines	6.1	UN 2327	Poison	II	1,2	1,2	Glass carboys prohibited on passenger vessels
	Trimethylhexamethylene diisocyanate	6.1	UN 2328	Poison	II	1,2	1	
	2,6,6-Trimethyl norpinanyl hydroperoxide, technical pure	5.2	UN 2162	Organic Peroxide	I	1	5	
	Trimethyl phosphite	3.3	UN 2329	Flammable Liquid	III	1,2	1,2	
N	Trinitro-aniline	1.1D	UN 0153	Explosive (1.1D)	-	-	-	
N	Trinitroanisole	1.1D	UN 0213	Explosive (1.1D)	-	-	-	
N	Trinitrobenzene, dry or containing, by weight, less than 30% water	1.1D	UN 0214	Explosive (1.1D)	-	-	-	
N	Trinitrobenzenesulfonic acid	1.1L	UN 0386	Explosive (1.1L)	-	-	-	
	Trinitrobenzene, wetted with, by weight, at least 10% water	4.1	UN 1354	Flammable Solid	I	1	5	Stow 'away from' heavy metals and their compounds
N	Trinitrobenzoic acid, dry or containing, by weight, less than 30% water	1.1D	UN 0215	Explosive (1.1D)	-	-	-	
	Trinitrobenzoic acid, wetted with, by weight, at least 10% water	4.1	UN 1355	Flammable Solid	I	1	5	Stow 'away from' heavy metals and their compounds
N	Trinitrochlorobenzene	1.1D	UN 0155	Explosive (1.1D)	-	-	-	
N	Trinitrofluorenone	1.1D	UN 0387	Explosive (1.1D)	-	-	-	
N	Trinitrometacresol	1.1D	UN 0216	Explosive (1.1D)	-	-	-	
N	Trinitronaphthalene	1.1D	UN 0217	Explosive (1.1D)	-	-	-	
N	Trinitrophenetole	1.1D	UN 0218	Explosive (1.1D)	-	-	-	
N	Trinitrophenol, dry or containing, by weight, less than 30% water	1.1D	UN 0154	Explosive (1.1D)	-	-	-	
	<i>Trinitrophenol, wetted. See Picric acid, wetted</i>							
N	Trinitrophenylmethylnitramine	1.1D	UN 0208	Explosive (1.1D)	-	-	-	
N	Trinitroresorcinol, containing, by weight, not less than 20% water or mixture of alcohol and water	1.1D	UN 0394	Explosive (1.1D)	-	-	-	
N	Trinitroresorcinol, dry or containing, by weight, less than 20% water or mixture of alcohol and water	1.1D	UN 0219	Explosive (1.1D)	-	-	-	
N	Trinitrotoluene, dry or containing, by weight, less than 30% water	1.1D	UN 0209	Explosive (1.1D)	-	-	-	
N	Trinitrotoluene mixed with hexanitrostilbene	1.1D	UN 0388	Explosive (1.1D)	-	-	-	
N	Trinitrotoluene mixed with trinitrobenzene	1.1D	UN 0388	Explosive (1.1D)	-	-	-	
N	Trinitrotoluene mixed with trinitrobenzene and hexanitrostilbene	1.1D	UN 0389	Explosive (1.1D)	-	-	-	
	Trinitrotoluene, wetted with, by weight, at least 10% water	4.1	UN 1356	Flammable Solid	I	1	5	Stow 'away from' heavy metals and their compounds
	Tripropylaluminum	4.2	UN 2718	Spontaneously Combustible	I	1	5	
	Tripropylamine	3.3	UN 2260	Flammable Liquid, Corrosive	II	1,2	1,2	
	Tripropylene	3.2	UN 2057	Flammable Liquid	II	1,2	1	
		3.3	UN 2057	Flammable Liquid	II	1,2	1,2	
	Tris-(1-aziridinyl)phosphine oxide, solution	6.1	UN 2501	Poison	II	1,2	1,2	Stow 'away from' living quarters
N	Tritonal	1.1D	UN 0390	Explosive (1.1D)	-	-	-	
	Tungsten hexafluoride	2.3	UN 2196	Poison Gas	-	1	5	Stow 'away from' living quarters
	Turpentine	3.3	UN 1299	Flammable Liquid	III	1,2	1,2	
	Turpentine substitute	3.2	UN 1300	Flammable Liquid	II	1,2	1	
		3.3	UN 1300	Flammable Liquid	II	1,2	1,2	
	<i>U D M H. See Dimethylhydrazine, unsymmetrical</i>							
	Undecane	3.3	UN 2330	Flammable Liquid	III	1,2	1,2	
	Urea hydrogen peroxide	5.1	UN 1511	Oxidizer	III	1,2	1,2	Keep dry. Shade from radiant heat
N	Urea nitrate, dry or containing, by weight, less than 20% water	1.1D	UN 0220	Explosive (1.1D)	-	-	-	
	Urea nitrate, wetted with, by weight, at least 10% water	4.1	UN 1357	Flammable Solid	I	1,2	1,2	
	Valeraldehyde	3.2	UN 2058	Flammable Liquid	II	1,2	1	
	Valeryl chlorides	8	UN 2502	Corrosive	II	1	1	Keep dry
	Vanadium oxytrichloride	8	UN 2443	Corrosive	II	1	1	Keep dry. Stow 'away from' organic compounds
	Vanadium pentoxide, non-fused form	6.1	UN 2862	Poison	II	1,2	1,2	Stow 'away from' living quarters
	Vanadium tetrachloride	8	UN 2444	Corrosive	I	1	1	Keep dry. Glass carboys prohibited on passenger vessels
	Vanadium trichloride	8	UN 2475	Corrosive	III	1,2	1,2	Keep dry
	Vanadium trioxide, non-fused form	6.1	UN 2860	Poison	II	1,2	1,2	Stow 'away from' living quarters
	Varnish. See Paints, etc.							
	Vinyl acetate, inhibited	3.2	UN 1301	Flammable Liquid	II	1,2	1	
	Vinyl bromide, inhibited	2.1	UN 1085	Flammable Gas	-	1,2	1	Stow 'away from' living quarters
	Vinyl chloride, inhibited	2.1	UN 1086	Flammable Gas	-	1,2	1	Stow 'away from' living quarters
	Vinyl ethyl ether, inhibited	3.1	UN 1302	Flammable Liquid	I	1,3	5	Keep cool

## 172.102 Optional Hazardous Materials Table (Cont'd)

(1) Notes and Symbols	(2) Hazardous Materials Description and Proper Shipping Names	(3) IMCO Class	(4) Identification Number	(5) Label(s) required	(6) Packaging Group	(7) Vessel Stowage Requirements		
						(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Vinyl fluoride, <i>inhibited</i>	2.1	UN 1860	Flammable Gas	-	1.2	1	Stow 'away from' living quarters
	Vinyl isobutyl ether, <i>inhibited</i>	3.2	UN 1304	Flammable Liquid	II	1.2	1	
	Vinyl methyl ether, <i>inhibited</i>	2.1	UN 1057	Flammable Gas	-	1.2	1	Stow 'away from' living quarters
	Vinyl Toluenes ( <i>mixed isomers</i> ), <i>inhibited</i>	3.3	UN 2618	Flammable Liquid	III	1.2	1.2	
	Vinyl trichlorosilane, <i>inhibited</i>	3.2	UN 1305	Flammable Liquid, Corrosive	I	1.2	1	
N	Warheads, rocket, with <i>bursting or expelling charge</i>	1.4D	UN 0370	Explosive (1.4D)	-	-	-	
N	Warheads, rocket, with <i>bursting or expelling charge</i>	1.4F	UN 0371	Explosive (1.4F)	-	-	-	
N	Warheads, rocket, with <i>bursting charge</i>	1.1D	UN 0286	Explosive (1.1D)	-	-	-	
N	Warheads, rocket, with <i>bursting charge</i>	1.2D	UN 0287	Explosive (1.2D)	-	-	-	
N	Warheads, rocket, with <i>bursting charge</i>	1.1F	UN 0369	Explosive (1.1F)	-	-	-	
N	Warheads, torpedo, with <i>bursting charge</i>	1.1D	UN 0221	Explosive (1.1D)	-	-	-	
	White asbestos. <i>See</i> Asbestos, white							
	White phosphorus, <i>dry</i> . <i>See</i> Phosphorus, white or yellow, <i>dry</i>							
	White phosphorus, <i>wet</i> . <i>See</i> Phosphorus, white or yellow, in water							
	Wood alcohol. <i>See</i> Methanol							
	Wool waste, <i>wet</i>	4.2	UN 1387	Spontaneously Combustible	III	1.2	1.2	
	Xenon	2.2	UN 2036	Nonflammable Gas	-	1.2	1.2	
	Xylenes	3.2	UN 1307	Flammable Liquid	II	1.2	1	
		3.3	UN 1307	Flammable Liquid	II	1.2	1.2	
	Xylenols	6.1	UN 2261	Poison	II	1.2	1.2	
	Xylidines	6.1	UN 1711	Poison	II	1.2	1.2	Stow 'away from' acids
	Xylofs. <i>See</i> Xylenes							
	Xylyl bromide	6.1	UN 1701	Poison	II	1	5	
	Yellow phosphorus, <i>dry</i> . <i>See</i> Phosphorus, white or yellow, <i>dry</i>							
	Yellow phosphorus, <i>wet</i> . <i>See</i> Phosphorus, white or yellow, in water							
	Zinc arsenate and arsenite, <i>solid mixtures</i>	6.1	UN 1712	Poison	II	1.2	1.2	
	Zinc ashes	4.3	UN 1435	Dangerous When Wet	III	1.2	1.2	
	Zinc bromate	5.1	UN 2469	Oxidizer	III	1.2	1.2	Stow 'away from' powdered metals and 'separated from' ammonium compounds
	Zinc chlorate	5.1	UN 1513	Oxidizer	II	1.2	1.2	Stow 'away from' powdered metals, 'separated from' ammonium compounds
	Zinc chloride, <i>anhydrous</i>	8	UN 2331	Corrosive	III	1.2	1.2	Keep dry
	Zinc chloride, <i>solution</i>	8	UN 1840	Corrosive	III	1.2	1.2	
	Zinc cyanide	6.1	UN 1713	Poison	I	1.2	1.2	Stow 'away from' acids
	Zinc ethyl. <i>See</i> Diethylzinc							
	Zinc hydrosulphite	9	UN 1931	None	III	1.2	1.2	Keep dry. Stow 'away from' acids
	Zinc nitrate	5.1	UN 1514	Oxidizer	II	1.2	1.2	
	Zinc permanganate	5.1	UN 1515	Oxidizer	II	1.2	1.2	Stow 'separated from' ammonium compounds and hydrogen peroxide
	Zinc peroxide	5.1	UN 1516	Oxidizer	II	1.2	1.2	Keep dry
	Zinc phosphide	4.3	UN 1714	Dangerous When Wet, Poison	I	1	5	
	Zinc, <i>powder or dust, non-pyrophoric</i>	4.3	UN 1436	Dangerous When Wet	II	1.2	1.2	
	Zinc, <i>powder or dust, pyrophoric</i> . <i>See</i> Pyrophoric metals							
	Zinc resinate	4.1	UN 2714	Flammable Solid	III	1.2	1.2	
	Zinc silicofluoride	6.1	UN 2855	St. Andrews Cross	III	1.2	1.2	Stow 'away from' acids
	Zirconium hydride	4.1	UN 1437	Flammable Solid	II	1.2	5	
	Zirconium, <i>metal, dry, coiled wire, finished metal sheets, strip (thinner than 18 microns)</i>	4.2	UN 2009	Spontaneously Combustible	III	1	5	
	Zirconium, <i>metal, dry, finished sheets, strip or coiled wire (thinner than 254 microns but not thinner than 18 microns)</i>	4.1	UN 2858	Flammable Solid	III	1.2	1.2	
	Zirconium metal powder, <i>dry</i>	4.2	UN 2008	Spontaneously Combustible	II	1	5	
	Zirconium metal powder, <i>wetted with not less than 25% water (a visible excess of water must be present)</i>	4.1	UN 1358	Flammable Solid	II	1.2	5	
	Zirconium nitrate	5.1	UN 2728	Oxidizer	III	1.2	1.2	Shade from radiant heat
N	Zirconium picramate, <i>dry or containing, by weight, less than 20% water</i>	1.3C	UN 0236	Explosive (1.3C)	-	-	-	
	Zirconium picramate, <i>wetted with, by weight, at least 20% water</i>	5.1	UN 1517	Oxidizer	I	1	5	Stow 'away from' heavy metals and their salts
	Zirconium, <i>scrap</i>	4.2	UN 1932	Spontaneously Combustible	III	1	5	
	Zirconium, <i>suspended in flammable liquid</i>	3.1	UN 1308	Flammable Liquid	II	1	5	Keep cool
	Zirconium tetrachloride	8	UN 2503	Corrosive	III	1.2	1.2	Keep dry

**Note.**—The Materials Transportation Bureau has determined that, since this rule does not impose additional requirements and should have the net result of reducing costs and duplicative regulatory burdens, this document will not result in a "major rule" under the terms of Executive Order 12291, nor is it a "significant regulation" under DOT's regulatory policy and procedures (44 FR 11034). Furthermore, this rule does not require an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et seq.). A regulatory evaluation and an environmental assessment are available for review in the docket.

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