

ANNEX 4

Resolution MEPC 33(27)

**ADOPTION OF AMENDMENTS TO THE CODE FOR THE CONSTRUCTION
AND EQUIPMENT OF SHIPS CARRYING DANGEROUS
CHEMICALS IN BULK (BCH CODE)**

adopted on 17 March 1989

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING article 38(a) of the Convention on the International Maritime Organization concerning the function of the Committee conferred upon it by International Conventions for the Prevention and Control of Marine Pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and Article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol"), which together specify the amendment procedure of the 1978 Protocol and confers upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

BEING DESIROUS of keeping the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code) up-to-date, and compatible with the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code), as well as Appendices II and III of Annex II of MARPOL 73/78,

NOTING FURTHER resolution MEPC 32(27) by which the Committee adopted amendments to the IBC Code,

RECOGNIZING the need to bring the corresponding amendments to the BCH Code on the date on which the amendments to the IBC Code enter into force,

HAVING CONSIDERED, at its twenty-seventh session, the amendments to the BCH Code proposed by the Sub-Committee on Bulk Chemicals at its eighteenth session and circulated in accordance with article 16(2)(a) of the 1973 Convention,

1. ADOPTS in accordance with article 16(2)(d) of the 1973 Convention amendments to the BCH Code, the text of which is set out in the Annex to the present resolution;
2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on the date on which the conditions for the entry into force of the amendments to the IBC Code adopted by the Committee by resolution MEPC 32(27) are met, unless prior to that date, not less than one-third of the Parties or the Parties, the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objections to the amendments;
3. INVITES the Parties to note that in accordance with article 16(2)(g)(ii) of the 1973 Convention the amendments shall enter into force six months after their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1978 Protocol certified copies of the present resolution and the text of the amendments contained in the Annex;
5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1978 Protocol copies of the resolution and its Annex.

ANNEX

PROPOSED AMENDMENTS TO THE BCH CODE

1 Chapter 3, Section E – FIRE PROTECTION: The introductory sentence is amended to read:

"Fire-extinguishing media determined to be effective for certain products are listed in column "1" in the table of chapter VI."

and the same sentence which appears in the Explanatory Notes to chapter VI under "Fire Protection" is deleted.

2 Regulation 3.14.2: The last sentence is amended to read: "Regular protein foams should not be used".

3 Regulation 4.4 Acetone cyanohydrin

.1 The words "and lactonitrile solution (80% or less)" are added to the title.

.2 The first sentence is amended to read:

"Acetone cyanohydrin and lactonitrile solution should ...".

4 New regulation 4.22 Octyl nitrates

New regulation 4.22 Octyl nitrates is added as follows:

"4.22 Octyl nitrates, all isomers

4.22.1

The carriage temperature of the cargo should be maintained below 100°C to prevent the occurrence of a self-sustaining exothermic decomposition reaction.

4.22.2

The cargo may not be carried in independent pressure vessels permanently affixed to the vessel's deck unless:

- .1 the tanks are sufficiently insulated from fire; and
- .2 the vessel has a water deluge system for the tanks such that the cargo temperature is maintained below 100°C and the temperature rise in the tanks does not exceed 1.5°C/hour for a fire of 650°C (1200°F)."

5 Chapter VI, explanatory note for fire protection:

- .1 a footnote is added to "D: dry chemical", as follows:

"Dry chemical powder systems when used may require an additional water system for boundary cooling. This is normally provided in sufficient quantities by the standard fire main system required by regulation II-2/4 of the 1974 SOLAS Convention as amended."*

- .2 A new note is added as follows:

"Further information on the suitability of fire-fighting media listed in column "1" of chapter VI may be found in column "1" of chapter 17 in the IBC Code."*

* This amendment is subject to agreement by MSC.

6 Chapter VI, the table

The table of summary of minimum requirements are replaced by the following.

Product name	a	b	c	d	e	f	g	h	i	j	k	l	m
	UN number	Pollution category	Hazards	Ship type	Tank type	Tank vents	Tank environmental control	Electrical requirements	Gauging	Vapour detection	Fire protection	Special requirements	
Acetic acid	2789	D	S	3	2G	Cont. No		SP	R F	A		4.8.2 to 4.8.4, 4.8.6 to 4.8.8, 4.12.6, 4.17	
Acetic anhydride	1715	D	S	2	2G	Cont. No		SP	R F-T A			4.8.2 to 4.8.4, 4.8.6 to 4.8.8, 4.12.6, 4.17	
Acetone cyanohydrin	1541	A	S/P 2	2G	2G	Cont. No		St	C T	A		4.4, 4.9, 4.12.6, 4.13, 4.14, 4.17, 4.18	
Acetonitrile	1648	III	S	2	2G	Cont. No		SP	R F-T A			4.9	
Acrylamide solution (50% or less)	2074	D	S	2	2G	Open No		St	C No No			4.9.3, 4.10, 4.14.1, 4.15.1, 4.18.1	
Acrylic acid	2218	D	S	3	2G	Cont. No		SP	R F-T A			4.10, 4.12.6, 4.18.1	
Acrylonitrile	1093	B	S/P 2	2G	2G	Cont. No		SP	C F-T A			4.9, 4.10, 4.12.3, 4.13.1, 4.14, 4.17	
Adiponitrile	2205	D	S	3	2G	Cont. No		St	R T	A		4.14.1	
Alcohol (C12-C15)poly (1-3)ethoxylates		A	P	2	2G	Open No		St	O No A			4.14.1	
Alcohol (C12-C15)poly (3-11)ethoxylates		A	P	2	2G	Open No		St	O No A			4.14.1	
Alcohol (C6-C17)(secondary) poly(3-6) ethoxylates		A	P	2	2G	Open No		St	O No A			4.14.1	
Alcohol (C6-C17)(secondary) poly(7-12) ethoxylates		B	P	3	2G	Open No		St	O No A			4.14.1 5.2.5, 5.2.8	
Alkyl acrylate-vinyl pyridine copolymer in toluene	2586,	C	P	3	2G	Cont. No		SP	R F A			4.14.1	
Alkyl benzene sulphononic acid	2584	C	S/P 3	2G	2G	Open No		St	O No B			5.2.6, 5.2.7	
Alkyl benzene sulphononic acid, sodium salt solution	1098	C	P	3	2G	Open No		St	O No No			5.2.6, 5.2.7, 5.2.8	
Allyl alcohol		B	S/P 2	2G	2G	Cont. No		SP	C F-T A			4.9, 4.13.1, 4.14, 4.17	

a	b	c	d	e	f	g	h	i	j	k	l	m
Allyl chloride	1100	B	S/P 2	2G	Cont. No	SP	C F-T A	4.9, 4.13.1, 4.14, 4.17				
Aluminium chloride(30% or less)/Hydrochloric acid(20% or less)solution		D	S 3	1G	Cont. No	St	R T No	4.8, 4.17(f)				
2-(2-Aminoethoxy) ethanol	3055	D	S 3	2G	Open No	St	O No A,C,D	4.14.1				
Aminoethyl ethanalamine		(D)	S 3	2G	Open No	St	O No A	4.12.1				
N-Aminoethylpiperazine	2815	D	S 3	2G	Cont. No	St	R T A,C,D	4.12.2,4.14.1				
2-Amino-2-methyl-1-propanol (90% or less)		D	S 3	2G	Open No	St	O No A	4.12.1				
Ammonia aqueous (28% or less)	2672 (o) C	S/P 3	2G	Cont. No	SP	R T C		4.12.4, 4.12.9, 4.17 (a)				
Ammonium nitrate solution (93% or less)	2426	D	S 2	1G	Open No	St	O No No	4.8.4, 4.8.6, 4.12.10, 4.13.2, 4.14.1, 4.19				
Ammonium sulphide solution (45% or less)	2683	B	S/P 2	2G	Cont. No	SP	C F-T A,C	4.9, 4.11, 4.12.1, 4.13.1, 4.14, 4.15.1, 4.17, 4.18				
Ammonium thiocyanate (25% or less)/Ammonium thiosulphate (20% or less) solution		(C)	P 3	2G	Open No	St	O No No					
Ammonium thiosulphate solution (60% or less)		(C)	P 3	2G	Open No	St	O No No	5.2.8				
n-Amyl acetate	1104	C	P 3	2G	Cont. No	SP	R F A	4.14.1				
sec-Amyl acetate	1104	C	P 3	2G	Cont. No	SP	R F A	4.14.1				
Amyl acetate,commercial	1104	C	P 3	2G	Cont. No	SP	R F A	4.14.1				
Aniline	1547	C	S/P 2	2G	Cont. No	St	C T A	4.9, 4.13.1, 4.14				
Aviation alkylates (C8 paraffins and iso-paraffins BPT 95 - 120°C)		(C)	P 3	2G	Cont. No	SP	R F B	4.14.1				
Benzene and mixtures having 10% benzene or more	1114(s) C	S/P 3	2G	Cont. No	SP	R F-T B		4.9.1, 4.13.1, 5.2.8				

a	b	c	d	e	f	g	h	i	j	k	l	m
Benzene sulphonyl chloride	2225	D	S	3	2G	Cont. No	No	St	R	T	B,D	4.12.1, 4.14.1
Benzylacetate		C	P	3	2G	Open No	No	St	O	No	A	
Benzyl alcohol		C	P	3	2G	Open No	No	St	O	No	A	
Benzyl chloride	1738	B	S/P	2	2G	Cont. No	No	St	C	T	B	4.9, 4.10, 4.13.1, 4.14, 4.17
Butene oligomer		B	P	3	2G	Open No	No	St	O	No	A	4.14.1
n-Butyl acetate	1123	C	P	3	2G	Cont. No	No	SP	R	F	A	4.14.1
n-Butyl acrylate	2348	B	S/P	2	2G	Cont. No	No	SP	R	F-T	A	4.10, 4.18.1, 4.18.2
Butylamine (all isomers)	1125, 1214	C	S/P	2	2G	Cont. No	No	SP	R	F-T	A	4.9, 4.12.1, 4.12.2, 4.13.1, 4.14.1, 4.17
Butyl benzenes (all isomers)	2709	(A)	P	2	2G	Cont. No	No	SP	R	F	A	4.14.1
Butyl benzyl phthalate		A	P	2	2G	Open No	No	St	O	No	A	4.14.1
n-Butyl butyrate		(C)	P	3	2G	Cont. No	No	SP	R	F	A	4.14.1
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture		D	S	3	2G	Cont. No	No	St	R	No	A,C,D	4.10, 4.18.1, 4.18.2
1,2-Butylene oxide	3022	C	S/P	3	2G	Cont. Inert	Inert	SP	R	F	A,C	4.7.1, 4.7.2, 4.7.4, 4.7.5, 4.7.8 to 4.7.11, 4.7.13, 4.7.19, 4.7.21, 4.14.1
n-Butyl ether	1149	C	S/P	3	2G	Cont. Inert	Inert	SP	R	F-T	A,D	4.2.7,4.9
Butyl methacrylate		D	S	3	2G	Cont. No	No	SP	R	F-T	A,D	4.10, 4.18.1, 4.18.2
n-Butyraldehyde	1129	B	S/P	3	2G	Cont. No	No	SP	O	F-T	A	4.14.1, 4.15.1
Butyric acid	2820	D	S	3	2G	Cont. No	No	St	R	No	A	4.8.2 to 4.8.4, 4.8.6 to 4.8.8, 4.12.6
Calcium alkyl salicylate		C	P	3	2G	Open No	No	St	O	No	A	5.2.6, 5.2.7

a	b	c	d	e	f	g	h	i	j	k	l	m
Calcium hypochlorite solution (15% or less)		C	S/P 3	2G	Cont. No	St	R No No	4.12.5, 4.15.1				
Calcium hypochlorite solution (more than 15%)		B	S/P 3	2G	Cont. No	St	R No No	4.12.5, 4.15.1				
Calcium naphthenate in mineral oil		A	P 3	2G	Open No	St	O No A	4.14.1				
Camphor oil	1130	B	S/P 2	2G	Cont. No	SP	O F B	4.14.1				
Carbolic oil		A	S/P 2	2G	Cont. No	SP	C F-T A	4.9, 4.14				
Carbon disulphide	1131	B	S/P 2	1G	Cont. Inert	use	C F-T C	4.1, 4.9, 4.14, 4.17				
						NONE						
Carbon tetrachloride	1846	B	S/P 3	2G	Cont. No	St	C T No	4.9, 4.13.1, 4.14.1, 4.17				
Cashew nut shell oil (untreated)		D	S 3	2G	Cont. No	St	R T B					
Cetyl/Eicosyl methacrylate mixture		III	S 3	2G	Open No	St	O No A,C,D	4.10, 4.18.1, 4.18.2				
Chlorinated paraffins (C10-C13)		A	P 1	2G	Open No	St	O No A	4.14				
Chloroacetic acid (80% or less)	1750	C	S/P 2	2G	Cont. No	St	C No No	4.8.2, 4.8.4, 4.8.6, 4.8.7, 4.8.8, 4.9.3, 4.12.6, (ALUMINUM NOT PERMITTED), 4.14, 5.2.8				
Chlorobenzene	1134	B	S/P 2	2G	Cont. No	SP	R F-T B	4.14.1				
Chloroform	1888	B	S/P 3	2G	Cont. No	St	R T No	4.9, 4.14.1, 4.17				
Chlorohydrins (crude)		(D)	S 2	2G	Cont. No	SP	C F-T A	4.9, 4.14				
o-Chloronitrobenzene	1578	B	S/P 2	2G	Cont. No	St	C T B,C,D	4.9, 4.13, 4.14, 5.2.5, 5.2.8, 5A.2.2				
2- or 3- Chloropropionic acid	2511 (k)(C)	(C)	S/P 3	2G	Open No	St	O No A	4.8.2 to 4.8.4, 4.8.6 to 4.8.8, 4.12.6, 5.2.6 to 5.2.8				

a	b	c	d	e	f	g	h	i	j	k	l	m
Chlorosulphonic acid	1754	C	S/P 1	2G	Cont. No	SP	C T	No				4.8.2 to 4.8.8, 4.9, 4.14, 4.15.2, 4.17
m-Chlorotoluene	2238	B	S/P 3	2G	Cont. No	SP	R F-T	B,C				4.14.1
o-Chlorotoluene	2238	A	S/P 3	2G	Cont. No	SP	R F-T	B,C				4.14.1
p-Chlorotoluene	2238	B	S/P 2	2G	Cont. No	SP	R F-T	B,C				4.14.1, 5.2.8
Chlorotoluenes (all isomers)	2238	A	S/P 2	2G	Cont. No	SP	R F-T	B,C				4.14.1
Coal tar		A	S/P 2*	2G	Cont. No	St	R No	B,D				4.14.1
Coal tar naphtha solvent		B	S/P 3	2G	Cont. No	SP	R F-T	A,D				4.14.1
Coal tar pitch (molten)		D	S 3	1G	Cont. No	St	R No	B,D				4.14.1
Coal tar pitch (molten)		C	P 3	2G	Open No	St	O No	A				5.2.6, 5.2.7, 5.2.8
Cocunut oil fatty acid		A	S/P 2	2G	Open No	St	O No	B,D				4.14.1
Creosote (coal tar)		A	S/P 2	2G	Open No	St	O No	B,D				4.14.1
Creosote (wood)		A	S/P 2	2G	Open No	St	O No	B				4.14.1
Creosols (all isomers)	2076	A	S/P 2	2G	Open No	St	O No	No				4.12.1
Cresylic acid, sodium salt solution		A	S/P 2	2G	Open No	St	O No	No				4.9, 4.13.1, 4.14.1, 4.15.1, 4.17
Crotonaldehyde	1143	B	S/P 2	2G	Cont. No	SP	R F-T	A				4.14.1
Cycloheptane	2241	(C)	P 3	2G	Cont. No	SP	R F	A				4.14.1
Cyclohexane	1145	C	P 3	2G	Cont. No	SP	R F	A				4.14.1, 5.2.8
Cyclohexanol		C	P 3	2G	Open No	St	O No	A				5.2.6, 5.2.8
Cyclohexanone	1915	D	S 3	2G	Cont. No	SP	R F-T	A				4.12.5
Cyclohexyl acetate	2243	(B)	P 3	2G	Cont. No	SP	R F	A				4.14.1
Cyclohexylamine	2357	C	S/P 3	2G	Cont. No	SP	R F-T	A,D				4.12.1, 4.12.2
1,3-Cyclopentadiene dimer (molten)		B	P 2	2G	Cont. No	SP	R F	A				4.14.1, 5.2.5, 5.2.8, 5A.2.2
Cyclopentane	1146	(C)	P 3	2G	Cont. No	SP	R F	A				4.14.1
Cyclopentene	2246	(B)	P 3	2G	Cont. No	SP	R F	A				4.14.1

*For ships constructed before the date of entry into force of the present amendments which are engaged solely on voyages from, to or between ports or terminals within the State the flag of which the ship is entitled to fly, the ship-type requirement applies ten years after entry into force of the amendments.

For ships constructed before the date of entry into force of the present amendments, which are engaged on voyages between ports or terminals within States other than the State the flag of which the ship is entitled to fly, the ship-type requirement applies five years after the entry into force of the amendments, provided that the ship satisfies all the following conditions:

- 1 the ship has been regularly engaged in the trade of coal tar for at least five years before the date of entry into force of the present amendments;
- 2 the ship is solely engaged on restricted voyages as determined by the Administration;
- 3 the Certificate of Fitness is endorsed to the effect that the ship is solely engaged in such restricted voyages, with the expiry date of the period of grace; and
- 4 the five year period of grace is agreed among the Governments concerned.

a	b	c	d	e	f	g	h	i	j	k	l	m
Dichloroethyl ether	1916	B	S/P 2	2G	Cont.	No	No	SP	R F-T	A		4.12.5, 4.14.1
2,2-Dichloroisopropyl ether	2490	C	S/P 2	2G	Cont.	No	No	St	R T	B,C,D		4.9, 4.12.5, 4.13.1, 4.14
Dichloromethane	1593	D	S	3	2G	Cont.	No	St	R T	No		
2,4-Dichlorophenol	2021	A	S/P 2	2G	Cont.	Dry		St	R T	B,C,D		4.12.1, 4.14.1
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution		A	S/P 3	2G	Open	No		St	O No	No		4.12.1, 4.14.1
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution (70% or less)		A	S/P 3	2G	Open	No		St	O No	No		4.12.1, 4.14.1
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution		A	S/P 3	2G	Open	No		St	O No	No		4.12.1, 4.14.1
1,2-Dichloropropane	1279	B	S/P 2	2G	Cont.	No		SP	R F-T	B		4.9, 4.14.1
1,3-Dichloropropane		B	S/P 2	2G	Cont.	No		SP	R F-T	B		4.9, 4.14.1
1,3-Dichloropropene	2047	B	S/P 2	2G	Cont.	No		SP	C F-T	B		4.9, 4.13, 4.14, 4.17
Dichloropropene/Dichloropropane mixtures		B	S/P 2	2G	Cont.	No		SP	C F-T	B,C,D		4.9, 4.13, 4.14, 4.17
2,2-Dichloropropionic acid		D	S	3	2G	Cont.	Dry	St	R No	A		4.8.2, 4.8.4, 4.8.6 to 4.8.8, 4.12.6(z)
Diethanolamine		III	S	3	2G	Open	No	St	O No	A		4.12.2
Diethylamine	1154	C	S/P 3	2G	Cont.	No		SP	R F-T	A		4.9, 4.12.1, 4.17
Diethylaminoethanol	2686	C	S/P 3	2G	Cont.	No		SP	R F-T	A,C		4.12.1, 4.12.2
Diethylbenzene	2049	C	P	3	2G	Cont.	No	SP	R F	A		4.14.1
Diethylene glycol methyl ether		C	P	3	2G	Open	No	St	O No	A		
Diethylenetriamine	2079	D	S	3	2G	Open.	No	St	O No	A		4.12.2
Diethyl ether	1155	III	S	2	1G	Cont.	Inert	SP	C F-T	A		4.2, 4.11, 4.12.9, 4.14, 4.17
Di-(2-ethylhexyl) phosphoric acid	1902	C	S/P 3	2G	Open	No		St	O No	B,C,D		4.12.2

a	b	c	d	e	f	g	h	i	j	k	l	m
Diethyl phthalate	1594	C	P	3	2G	Open	No	St	O	No	A	4.12.3, 4.14.1
Diethyl sulphate		(B)	S/P	2	2G	Cont.	No	St	C	T	A,D	4.14.1, 5.2.5
Diglycidyl ether of bisphenol A		B	P	3	2G	Open	No	St	O	No	A	4.14.1, 5.2.5
Diglycidyl ether of bisphenol F		B	P	3	2G	Open	No	St	O	No	A	4.14.1
Di-n-hexyl adipate		B	P	3	2G	Open	No	St	O	No	A	4.9.3, 4.12.1, 4.14.1
Diisobutylamine	2361	(C)	S/P	2	2G	Cont.	No	SP	R	F-T	B,D	4.14.1
Diisobutylene	2050	B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, 5.2.5
Diisobutyl phthalate		B	P	3	2G	Open	No	St	O	No	A	4.12.2, 5.2.6 to 5.2.8
Diisopropanolamine		C	S/P	3	2G	Open	No	St	O	No	A	4.9, 4.12.2, 4.14, 4.17
Diisopropylamine	1158	C	S/P	2	2G	Cont.	No	SP	C	F-T	A	4.14.1
Diisopropylbenzene (all isomers)		A	P	2	2G	Open	No	St	O	No	A	4.9.1, 4.12.4, 4.13.1
N,N-Dimethylacetamide solution (40% or less)		D	S	3	2G	Cont.	No	St	R	T	B	4.14.1, 5.2.8
Dimethyl adipate		B	P	3	2G	Open	No	St	O	No	A	4.9, 4.12.1, 4.17
Dimethylamine solution (45% or less)	1160	C	S/P	3	2G	Cont.	No	SP	R	F-T	C,D	4.9, 4.12.1, 4.13.1, 4.14, 4.17
Dimethylamine solution (greater than 45% but not greater than 55%)	1160	C	S/P	2	2G	Cont.	No	SP	C	F-T	A,C,D	4.9, 4.11, 4.12.1, 4.13.1, 4.14, 4.17
Dimethylamine solution (greater than 55% but not greater than 65%)		C	S/P	2	2G	Cont.	No	SP	C	F-T	A,C	4.9, 4.12.1, 4.13.1, 4.14.1
N,N-Dimethylcyclohexylamine	2264	C	S/P	2	2G	Cont.	No	SP	R	F-T	A,C	4.12.2
Dimethylethanolamine	2051	D	S	3	2G	Cont.	No	SP	R	F-T	A,D	
Dimethylformamide	2265	D	S	3	2G	Cont.	No	SP	R	F-T	A,D	
Dimethyl glutarate		C	P	3	2G	Open	No	St	O	No	A	4.9.1
Dimethyl hydrogen phosphite		S	S	3	2G	Cont.	No	St	R	T	A,D	5.2.7, 5.2.8
Dimethyl octanoic acid		(C)	P	3	2G	Open	No	St	O	No	A	
Dimethyl phthalate		C	P	3	2G	Open	No	St	O	No	A	

a	b	c	d	e	f	g	h	i	j	k	l	m
Diisopropanolamine		C	S/P 3	2G	Open	No	St	O No	A			4.12.2, 5.2.6 to 5.2.8
Diisopropylamine	1158	C	S/P 2	2G	Cont.	No	SP	C F-T	A			4.9, 4.12.2, 4.14, 4.17
Diisopropylbenzene (all isomers)		A	P 2	2G	Open	No	St	O No	A			4.14.1
N,N-Dimethylacetamide solution (40% or less)		D	S 3	2G	Cont.	No	St	R T	B			4.9.1, 4.12.4, 4.13.1
Dimethyl adipate		B	P 3	2G	Open	No	St	O No	A			4.14.1, 5.2.8
Dimethylamine solution (45% or less)	1160	C	S/P 3	2G	Cont.	No	SP	R F-T	C,D			4.9, 4.12.1, 4.17
Dimethylamine solution (greater than 45% but not greater than 55%)	1160	C	S/P 2	2G	Cont.	No	SP	C F-T	A,C,D			4.9, 4.12.1, 4.13.1, 4.14, 4.17
Dimethylamine solution (greater than 55% but not greater than 65%)	1160	C	S/P 2	2G	Cont.	No	SP	C F-T	A,C,D			4.9, 4.11, 4.12.1, 4.13.1, 4.14, 4.17
N,N-Dimethylcyclohexylamine	2264	C	S/P 2	2G	Cont.	No	SP	R F-T	A,C			4.9, 4.12.1, 4.13.1, 4.14.1
Dimethylethanolamine	2051	D	S 3	2G	Cont.	No	SP	R F-T	A,D			4.12.2
Dimethylformamide	2265	D	S 3	2G	Cont.	No	SP	R F-T	A,D			
Dimethyl glutarate		C	P 3	2G	Open	No	St	O No	A			
Dimethyl hydrogen phosphite		(C)	S 3	2G	Cont.	No	St	R T	A,D			4.9.1
Dimethyl octanoic acid		C	P 3	2G	Open	No	St	O No	A			5.2.7, 5.2.8
Dimethyl phthalate		C	P 3	2G	Open	No	St	O No	A			
Dimethyl succinate		C	P 3	2G	Open	No	St	O No	A			5.2.8
Dinitrotoluene (molten)	1600	B	S/P 2	2G	Cont.	No	St	C T	A			4.9, 4.13.1, 4.14, 5.2.5, 5.2.8, 5A.2.2(m)
1,4-Dioxane	1165	D	S 2	2G	Cont.	No	SP	C F-T	A			4.9, 4.14

(1)

a	b	c	d	e	f	g	h	i	j	k	l	m
Ethyl amyl ketone	1036	C	P	3	2G	Cont. No	No	SP	R F	A	4.14.1	
Ethylamine		(C)	S/P	2	1G	Cont. No	No	SP	C F-T	C,D	4.9, 4.11, 4.12.2, 4.17	
Ethylamine solutions (72% or less)	2270	(C)	S/P	2	2G	Cont. No	No	SP	C F-T	A,C	4.9, 4.11, 4.12.1, 4.13.1, 4.14, 4.17	
Ethylbenzene	1175	C	P	3	2G	Cont. No	No	SP	R F	A	4.14.1	
N-Ethylbutylamine		(C)	S/P	3	2G	Cont. No	No	SP	R F-T	A	4.9.3, 4.12.1, 4.14.1	
Ethyl butyrate	1180	C	P	3	2G	Cont. No	No	SP	R F	A	4.14.1	
Ethylcyclohexane		(C)	P	3	2G	Cont. No	No	SP	R F	A	4.14.1	
N-Ethylcyclohexylamine		D	S	3	2G	Cont. No	No	SP	R F-T	A,C	4.12.1, 4.14.1	
Ethylene chlorohydrin	1135	C	S/P	2	2G	Cont. No	No	SP	C F-T	D	4.9, 4.13.1, 4.14, 4.17	
Ethylene cyanohydrin		(D)	S	3	2G	Open No	No	St	O No	A		
Ethylenediamine	1604	C	S/P	2	2G	Cont. No	No	SP	R F-T	A	4.12.2, 5.2.8	
Ethylene dibromide	1605	B	S/P	2	2G	Cont. No	No	St	C T	No	4.9, 4.14.1, 4.17, 5.2.8	
Ethylene dichloride	1184	B	S/P	2	2G	Cont. No	No	SP	R F-T	B	4.12.4, 4.14	
Ethylene glycol butyl ether acetate		(C)	P	3	2G	Open No	No	St	O No	A		
Ethylene glycol diacetate		C	P	3	2G	Open No	No	St	O No	A		
Ethylene oxide/Propylene oxide mixture with an	2983	D	S	2	1G	Cont. Inert		SP	C F-T	A,C	4.7, 4.9, 4.11, 4.14	
Ethylene oxide content of not more than 30% in weight												
2-Ethylhexyl acrylate		B	S/P	3	2G	Open No	No	St	O No	A	4.10, 4.14.1, 4.18.1, 4.18.2	
2-Ethylhexylamine	2276	B	S/P	2	2G	Cont. No	No	SP	R F-T	A	4.9, 4.12.2, 4.14.1	

a	b	c	d	e	f	g	h	i	j	k	l	m
Ethylidene norbornene		B	S/P 3	3	2G	Cont. No		SP	R	F-T	B,C,D	4.9.1, 4.12.4, 4.14.1, 4.15.1
Ethyl methacrylate	2277	(D)	S	3	2G	Cont. No		SP	R	F-T	B,D	4.10, 4.18.1, 4.18.2
o-Ethylphenol		(A)	S/P 3	3	2G	Open No		St	O	No	B	4.14.1
2-Ethyl-3-propyl- acrolein		(B)	S/P 3	3	2G	Cont. No		SP	R	F-T	A	4.14.1, 5.2.8
Ethyltoluene		(B)	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Ferric chloride solutions	2582	C	S/P 3	3	2G	Open No		St	O	No	No	4.8, 4.14.1, 5.2.8
Ferric nitrate/Nitric acid solution		C	S/P 2	2	2G	Cont. No		St	R	T	No	4.8, 4.14, 4.17
Formaldehyde solutions(45% or less)	1198 (d) 2209	C	S/P 3	3	2G	Cont. No		SP	R	F-T	A	4.15.1, 4.17(e), 5.2.8
Formic acid	1779	D	S	3	2G	Cont. No		SP	R	T(t)	A	4.8.2 to 4.8.4, 4.8.6 to 4.8.8, 4.12.7, 4.17
Fumaric adduct of rosin, water dispersion		B	P	3	2G	Open No		St	O	No	No	4.14.1, 5.2.5
Furfural	1199	C	S/P 3	3	2G	Cont. No		SP	R	F-T	A	4.15.1
Furfuryl alcohol	2874	C	P	3	2G	Open No		St	O	No	A	
Glutaraldehyde solutions (50% or less)		D	S	3	2G	Open No		St	O	No	No	4.15.1
Glycidyl ester of C10 trialkylacetic acid		B	P	3	2G	Open No		St	O	No	A	4.14.1
Heptane (all isomers)	1206	(C)	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Heptanol (all isomers)(q)		C	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Heptene (all isomers)		C	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Heptyl acetate		(B)	P	3	2G	Open No		St	O	No	A	4.14.1
Hexamethylenediamine solution	1783	C	S/P 3	3	2G	Cont. No		St	R	T	A	4.12.2, 4.14.1, 5.2.8
Hexamethyleneimine	2493	C	S/P 2	2	2G	Cont. No		SP	R	F-T	A,C	4.12.1, 4.12.2
Hexane (all isomers)	1208	(C)	P	3	2G	Cont. No		SP	R	F	A	4.14.1

a	b	c	d	e	f	g	h	i	j	k	l	m
Hexene (all isomers)		(C)	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Hexyl acetate	1233	B	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Hydrochloric acid	1789	D	S	3	1G	Cont. No		St	R	T	No	4.8, 4.17(f)
Hydrogen peroxide solutions (over 60% but not over 70%)	2015	C	S/P	2	2G	Cont. No		St	C	No	No	4.14.1, 4.20.1 to 4.20.14
2-Hydroxyethyl acrylate		B	S/P	2	2G	Cont. No		St	C	T	A	4.9, 4.10, 4.14.1, 4.18.1, 4.18.2
Hydrogen peroxide solutions (over 8% but not over 60%)	2014, 2984	C	S/P	3	2G	Cont. No		St	C	No	No	4.13, 4.14.1, 4.20.15 to 4.20.27
Isoamyl acetate	1104	C	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Isobutyl acetate	1213	C	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Isobutyl acrylate	2527	B	S/P	2	2G	Cont. No		SP	R	F-T	A	4.10, 4.14.1, 4.18.1, 4.18.2
Isobutyraldehyde	2045	C	S/P	3	2G	Cont. No		SP	O	F-T	A	4.15.1
Isophoronediamine	2289	D	S	3	2G	Cont. No		St	R	T	A	4.12.2
Isophorone diisocyanate	2290	B	S/P	2	2G	Cont. Dry		St	C	T	C, D (c)	4.9, 4.12.5, 4.13.1, 4.14.1, 4.15.2
Isoprene	1218	C	S/P	3	2G	Cont. No		SP	R	F	B	4.10, 4.11, 4.18.1, 4.18.2
Isopropanolamine		C	S/P	3	2G	Open No		St	O	F-T	A	4.12.2, 5.2.7, 5.2.8
Isopropylamine	1221	C	S/P	2	2G	Cont. No		SP	C	F-T	C, D	4.9, 4.11, 4.12.2, 4.14, 4.17
Isopropylbenzene	1918	B	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Isopropylcyclohexane		(C)	P	3	2G	Cont. No		SP	R	F	A	4.14.1, 5.2.6, 5.2.7
Isopropyl ether	1159	D	S	3	2G	Cont. Inert		SP	R	F	A	4.2.7, 4.10.3, 4.14.1

a	b	c	d	e	f	g	h	i	j	k	l	m
Isovaleraldehyde	2058	C	S/P 3	2G	Cont.	Inert	SP	R F-T A	C T	A, C, D	4.2.7, 4.15.1	
Lactonitrile solution (80% or less)		B	S/P 2	1G	Cont.	No	St				4.4, 4.9, 4.12.6, 4.13, 4.14, 4.17, 4.18, 5.2.5	
Lauric acid	2215	B	P 3	2G	Open	No	St	O No A			5.2.5, 5.2.8, 5A.2.2	
Maleic anhydride		D	S 3	2G	Cont.	No	St	R No A, C(g)				
Mercaptobenzothiazol, sodium salt solution		B	S/P 3	2G	Open	No	St	O No No			4.12.1, 4.14.1, 5.2.8	
Mesityl oxide	1229	D	S 3	2G	Cont.	No	SP	R F-T A			4.14.1	
Metam sodium solution		A	S/P 3	2G	Open	No	St	O No No			4.12.1, 4.14.1	
Methacrylic acid	2531	D	S 3	2G	Cont.	No	St	R T A			4.10, 4.12.6, 4.18.1	
Methacrylonitrile	3079	(B)	S/P 2	2G	Cont.	No	SP	C F-T A			4.9, 4.10, 4.12.4, 4.13.1, 4.14, 4.17	
Methyl acrylate	1919	B	S/P 2	2G	Cont.	No	SP	R F-T B			4.10, 4.14.1, 4.17, 4.18.1, 4.18.2	
Methylamine solutions (42% or less)	1235	C	S/P 2	2G	Cont.	No	SP	C F-T A, C, D			4.9, 4.12.1, 4.13.1, 4.14, 4.17	
Methylamyl acetate	1233	(C)	P 3	2G	Cont.	No	SP	R F A			4.14.1	
Methylamyl alcohol	2053	(C)	P 3	2G	Cont.	No	SP	R F A			4.14.1	
Methyl amyl ketone	1110	(C)	P 3	2G	Cont.	No	SP	R F A			4.14.1	
Methyl butyrate	1237	(C)	P 3	2G	Cont.	No	SP	R F A			4.14.1	
Methylcyclohexane	2296	(C)	P 3	2G	Cont.	No	SP	R F A			4.14.1	
Methylcyclopentadiene dimer		(B)	P 3	2G	Cont.	No	SP	R F B			4.14.1	
2-Methyl-6-ethyl aniline	2300	(B)	S/P 3	2G	Open	No	St	O No B, C, D			4.12.4, 4.14.1	
2-Methyl-5-ethyl pyridine		(B)	S/P 3	2G	Open	No	St	O No D				
Methyl formate	1243	D	S 2	2G	Cont.	No	SP	R F-T A			4.9, 4.11, 4.14, 4.17	

a	b	c	d	e	f	g	h	i	j	k	l	m
Noxious liquid, N.F, (1) n.o.s. (trade name, contains ...) S.T.1, Cat.A*	A	P	1	2G	Open	No	St	O	No	A	4.14	
Noxious liquid, F, (2) n.o.s. (trade name, contains ...) S.T.1, Cat.A*	A	P	1	2G	Cont.	No	SP	R	F	A	4.14	
Noxious liquid, N.F, (3) n.o.s. (trade name, contains ...) S.T.2, Cat.A*	A	P	2	2G	Open	No	St	O	No	A	4.14.1	
Noxious liquid, F, (4) n.o.s. (trade name, contains ...) S.T.2, Cat.A*	A	P	2	2G	Cont.	No	SP	R	F	A	4.14.1	
Noxious liquid, N.F, (5) n.o.s. (trade name, contains ...) S.T.2, Cat.B*	B	P	2	2G	Open	No	St	O	No	A	4.14.1, [5.2.5, 5.2.8]**	
Noxious liquid, N.F, (6) n.o.s. (trade name, contains ...) S.T.2, Cat.B*, mp 15°C+	B	P	2	2G	Open	No	St	O	No	A	4.14.1, [5.2.5]**, 5.2.8, 5A.2.2	
Noxious liquid, F, (7) n.o.s. (trade name, contains ...) S.T.2, Cat.B*	B	P	2	2G	Cont.	No	SP	R	F	A	4.14.1, [5.2.5, 5.2.8]**	
Noxious liquid, F, (8) n.o.s. (trade name, contains ...) S.T.2, Cat.B*, mp 15°C+	B	P	2	2G	Cont.	No	SP	R	F	A	4.14.1, [5.2.5]**, 5.2.8, 5A.2.2	
Noxious liquid, N.F, (9) n.o.s. (trade name, contains ...) S.T.3, Cat.A*	A	P	3	2G	Open	No	St	O	No	A	4.14.1	
Noxious liquid, F, (10) n.o.s. (trade name, contains ...) S.T.3, Cat.A*	A	P	3	2G	Cont.	No	SP	R	F	A	4.14.1	
Noxious liquid, N.F, (11) n.o.s. (trade name, contains ...) S.T.3, Cat.B*	B	P	3	2G	Open	No	St	O	No	A	[5.2.5, 5.2.8]**	
Noxious liquid, N.F, (12) n.o.s. (trade name, contains ...) S.T.3, Cat.B*, mp 15°C+	B	P	3	2G	Open	No	St	O	No	A	[5.2.5]**, 5.2.8, 5A.2.2	
Noxious liquid, F, (13) n.o.s. (trade name, contains ...) S.T.3, Cat.B*	B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, [5.2.5, 5.2.8]**	

* In case of a specific n.o.s. cargo assessed as falling within this n.o.s. group that is carried on a ship, this entry, including the cargo's trade name and one or two principle components, should be provided in the shipping document. Abbreviations used mean:

N.F: Flashpoint exceeding 60°C (closed cup test) S.T: Ship type
 F: Flashpoint not exceeding 60°C (closed cup test) Cat.: Pollution category
 n.o.s.: Not otherwise specified m.p.: Melting point

a	b	c	d	e	f	g	h	i	j	k	l	m
Noxious liquid, F, (14) n.o.s. (trade name, contains ...) S.T.3, Cat.B*, mp 15°C+		B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, [5.2.5]**, 5.2.8, 5A.2.2
Noxious liquid, N.F, (15) n.o.s. (trade name, contains ...) S.T.3, Cat.C*		C	P	3	2G	Open	No	St	O	No	A	[5.2.6 to 5.2.8]**
Noxious liquid, F, (16) n.o.s. (trade name, contains ...) S.T.3, Cat.C*		C	P	3	2G	Cont.	No	SP	R	F	A	[5.2.6 to 5.2.8]**
Octane (all isomers)	1262	(C)	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Octanol (all isomers)		C	P	3	2G	Open	No	St	O	No	A	
Octene (all isomers)		B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Octyl aldehydes	1191	(B)	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, 5.2.8
Octyl nitrates (all isomers)		A	S/P	2	2G	Open	No	St	O	No	B	4.14.1, 4.18, 4.22
Olefin mixtures (C5-C7)		C	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Olefin mixtures (C5-C15)		B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
alpha-Olefins (C6-C18) mixtures		B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, 5.2.5, 5.2.8
Oleum	1831	C	S/P	2	2G	Cont.	No	St	C	T	No	4.8.2 to 4.8.8, 4.9.1, 4.13.1, 4.14, 4.15.2, 4.17, 5.2.6, 5.2.7
Palm nut oil fatty acid		(C)	P	3	2G	Open	No	St	O	No	B	5.2.6 to 5.2.8
Paraldehyde	1264	C	S/P	3	2G	Cont.	No	SP	R	F	A	5.2.8
Pentachloroethane	1669	B	S/P	2	2G	Cont.	No	St	R	T	No	4.9, 4.13.1, 4.14.1
1,3-Pentadiene		C	S/P	3	2G	Cont.	No	SP	R	F-T	B	4.10, 4.18
Pentane (all isomers)	1265	(C)	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Pentene (all isomers)		C	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Perchloroethylene	1897	B	S/P	3	2G	Cont.	No	St	R	T	No	4.9.1, 4.9.2, 4.14.1
Phenol	2312	B	S/P	2	2G	Cont.	No	St	C	T	A	4.9, 4.14, 5.2.5, 5.2.8, 5A.2.2

* See footnote on page 19.

** For high viscosity or high melting point cargoes.

a	b	c	d	e	f	g	h	i	j	k	l	m
Noxious liquid, N.F, (9) n.o.s. (tradenname ...,contains ...) S.T.3, Cat.A*	A	P	3	2G	Open	No	St	O	No	A		
Noxious liquid, F, (10) n.o.s. (tradenname ...,contains ...) S.T.3, Cat.A*	A	P	3	2G	Cont.	No	SP	R	F	A	4.14.1	
Noxious liquid, N.F, (11) n.o.s. (tradenname ...,contains ...) S.T.3, Cat.B*	B	P	3	2G	Open	No	St	O	No	A	[5.2.5, 5.2.8]**	
Noxious liquid, N.F, (12) n.o.s. (tradenname ...,contains ...) S.T.3, Cat.B*, mp 15°C+	B	P	3	2G	Open	No	St	O	No	A	[5.2.5]**, 5.2.8, 5A.2.2	
Noxious liquid, F, (13) n.o.s. (tradenname ...,contains ...) S.T.3, Cat.B*	B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, [5.2.5, 5.2.8]**	
Noxious liquid, F, (14) n.o.s. (tradenname ...,contains ...) S.T.3, Cat.B*, mp 15°C+	B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, [5.2.5]**, 5.2.8, 5A.2.2	
Noxious liquid, N.F, (15) n.o.s. (tradenname ...,contains ...) S.T.3, Cat.C*	C	P	3	2G	Open	No	St	O	No	A	[5.2.6 to 5.2.8]**	
Noxious liquid, F, (16) n.o.s. (tradenname ...,contains ...) S.T.3, Cat.C*	C	P	3	2G	Cont.	No	SP	R	F	A	[5.2.6 to 5.2.8]**	
Octane (all isomers)	(C)	P	3	2G	Cont.	No	SP	R	F	A	4.14.1	
Octanol (all isomers)	C	P	3	2G	Open	No	St	O	No	A		
Octene (all isomers)	B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1	
Octyl aldehydes	(B)	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, 5.2.8	
Octyl nitrates (all isomers)	A	S/P	2	2G	Open	No	St	O	No	B	4.14.1, 4.18, 4.22	
Olefin mixtures (C5-C7)	C	P	3	2G	Cont.	No	SP	R	F	A	4.14.1	
Olefin mixtures (C5-C15)	B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1	
alpha-Olefins (C6-C18) mixtures	B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1, 5.2.5, 5.2.8	
Oleum	C	S/P	2	2G	Cont.	No	St	C	T	No	4.8.2 to 4.8.8, 4.9.1, 4.13.1, 4.14, 4.15.2, 4.17, 5.2.6, 5.2.7	

* See footnote on page 20

** For high viscosity or high melting point cargoes

a	b	c	d	e	f	g	h	i	j	k	l	m
Palm nut oil fatty acid		(C)	P	3	2G	Open	No	St	O	No	B	5.2.6 to 5.2.8
Paraldehyde	1264	C	S/P	3	2G	Cont.	No	SP	R	F	A	5.2.8
Pentachloroethane	1669	B	S/P	2	2G	Cont.	No	St	R	T	No	4.9, 4.13.1, 4.14.1
1,3-Pentadiene		C	S/P	3	2G	Cont.	No	SP	R	F-T	B	4.10, 4.18
Pentane (all isomers)	1265	(C)	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Pentene (all isomers)		C	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Perchloroethylene	1897	B	S/P	3	2G	Cont.	No	St	R	T	No	4.9.1, 4.9.2, 4.14.1
Phenol	2312	B	S/P	2	2G	Cont.	No	St	C	T	A	4.9, 4.14, 5.2.5, 5.2.8, 5A.2.2
1-Phenyl-1-xylyl ethane		C	P	3	2G	Open	No	St	O	No	B	4.8.1 to 4.8.4,
Phosphoric acid	1805	D	S	3	2G	Open	No	St	O	No	No	4.8.6 to 4.8.8
Phosphorus, yellow or white	1381, 2447	A	S/P	1	1G	Cont.	Pad+(vent or inert)	St	C	No	C	4.5, 4.14, 4.17
Phthalic anhydride (molten)	2214	C	S/P	3	2G	Cont.	No	St	R	No	D	5.2.6 to 5.2.8
Pinene	2368	B	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Polyethylene polyamines	2734i, 2735	(C)	S/P	3	2G	Open	No	St	O	No	A	4.12.2, 5.2.8
Polyferric sulphate solution		(C)	S/P	3	2G	Open	No	St	O	No	A	4.12.10
Polymethylene polyphenyl isocyanate	2206(i) 2207	D	S	2	2G	Cont.	Dry	St	C	T	b	4.9, 4.12.5, 4.14.1, 4.15.2
Potassium hydroxide solution	1814	C	S/P	3	2G	Open	No	St	O	No	No	4.12.1, COPPER, BRASS AND BRONZE MAY BE USED, 5.2.8
n-Propanolamine		C	S/P	3	2G	Open	No	St	O	No	A, D	4.12.2, 5.2.8
beta-Propiolactone		D	S	2	2G	Cont.	No	St	R	T	A	

a	b	c	d	e	f	g	h	i	j	k	l	m
Propionaldehyde	1275	D	S	3	2G	Cont. No	No	SP	R	F-T	A	4.13.1, 4.15.1, 4.17
Propionic acid	1848	D	S	3	2G	Cont. No	No	SP	R	F	A	4.8.2 to 4.8.8, 4.12.6, 4.17
Propionic anhydride	2496	C	S/P	3	2G	Cont. No	No	St	R	T	A	4.12.6
Propionitrile	2404	C	S/P	2	1G	Cont. No	No	SP	C	F-T	A,D	4.9, 4.13, 4.14, 4.17
n-Propylamine	1277	C	S/P	2	2G	Cont. Inert	Inert	SP	C	F-T	C,D	4.9, 4.12.2, 4.14, 4.17
n-Propylbenzene		(C)	P	3	2G	Cont. No	No	St	R	F	A	4.14.1
Propylene dimer		(C)	P	3	2G	Cont. No	No	SP	R	F	A	4.14.1
Propylene oxide	1280	D	S	2	2G	Cont. Inert	Inert	SP	C	F-T	A,C	4.7, 4.9.1, 4.11, 4.14
Propylene tetramer	2850	B	P	3	2G	Cont. No	No	SP	R	F	A	4.14.1
Propylene trimer	2057	B	P	3	2G	Cont. No	No	SP	R	F	A	4.14.1
Pyridine	1282	D	S	3	2G	Cont. No	No	SP	R	F	A	4.12.4, 4.14.1
Rosin		B	P	3	2G	Open No	No	St	O	No	A	4.14.1, 5.2.5, 5.2.8, 5A.2.2
Rosin soap (Disproportionated) solution		B	P	3	2G	Open No	No	St	O	No	A	4.14.1
Sodium borohydride (15% or less)/Sodium hydroxide solution		C	S/P	3	2G	Open No	No	St	O	No	No	4.12.1, 5.2.6
Sodium chlorate solution (50% or less)		III	S	3	2G	Open No	No	St	O	No	No	4.14.1, 4.15.1, 4.21
Sodium dichromate solution (70% or less)		C	S/P	2	2G	Open No	No	St	C	No	No	4.9.3, 4.12.2, 4.14
Sodium hydrogen sulphite solution (35% or less)	2693	D	S	3	2G	Open No	No	St	O	No	No	
Sodium hydrosulphide solution (45% or less)	2949	B	S/P	3	2G	Cont. Vent or Pad (gas)	Vent or Pad (gas)	St	R	T	No	4.14.1, 4.15.1, 5.2.8
Sodium hydrosulphide/Ammonium sulphide solution		B	S/P	2	2G	Cont. No	No	SP	C	F-T	A,C	4.9, 4.11, 4.12.1, 4.13.1, 4.14, 4.15.1, 4.17, 4.18

a	b	c	d	e	f	g	h	i	j	k	l	m
Sodium hydroxide solution	1824	D	S	3	2G	Open	No	St	O	No	No	4.12.1 Copper brass bronze may be used
Sodium hypochlorite solution (15% or less)	1791	C	S/P	3	2G	Cont.	No	St	R	No	No	4.12.5, 4.15.1
Sodium nitrite solution	1500	B	S/P	2	2G	Open	No	St	O	No	No	4.9.3(a), 4.9.3(b), 4.14, 4.15.1
Sodium thiocyanate (56% or less) solution	2055	(B)	P	3	2G	Open	No	St	O	No	No	4.14.1
Styrene monomer		B	S/P	3	2G	Cont.	No	SP	O	F	B	4.10, 4.12.4, 4.14.1, 4.18.1, 4.18.2
Sulphur (molten)	2448	III	S	3	1G	Open	Vent or Pad(gas)	SP	O	F-T	No	4.3
Sulphuric acid	1830	C	S/P	3	2G	Open	No	St	O	No	No	4.8, 4.15.2, 5.2.7, 5.2.8
Sulphuric acid, spent	1832	C	S/P	3	2G	Open	No	St	O	No	No	4.8, 4.15.2, 5.2.7, 5.2.8
Tall oil (crude and distilled)		B	P	3	2G	Open	No	St	O	No	A	4.14.1, 5.2.5, 5.2.8, 5A.2.2
Tall oil fatty acid (resin acids less than 20%)		(C)	P	3	2G	Open	No	St	O	No	A	5.2.6 to 5.2.8
Tall oil soap (disproportionated) solution		B	P	3	2G	Open	No	St	O	No	A	4.14.1, 5.2.5, 5.2.8
Tetrachloroethane	1702	B	S/P	3	2G	Cont.	No	St	R	T	No	4.9, 4.13.1, 4.14.1
Tetraethylene pentamine	2320	D	S	3	2G	Open	No	St	O	No	A	4.12.1
Tetrahydrofuran	2056	D	S	3	2G	Cont.	No	SP	R	F-T	A,D	
Tetrahydronaphthalene		C	P	3	2G	Open	No	St	O	No	A	
1,2,3,5-Tetramethylbenzene		(C)	P	3	2G	Open	No	St	O	No	A	
Toluene	1294	C	P	3	2G	Cont.	No	SP	R	F	A	4.14.1
Toluenediamine	1709	C	S/P	2	2G	Cont.	No	St	C	T	B,C,D	4.9, 4.12.1, 4.13.1, 4.14, 4.17, 5.2.6, 5.2.8

a	b	c	d	e	f	g	h	i	j	k	l	m
Toluene diisocyanate	2078	C	S/P	2	2G	Cont. Dry		St	C	F-T	C, D	4.9, 4.12.4, 4.13.4.14, 4.15.2, 4.175.2.8
o-Toluidine	1708	C	S/P	2	2G	Cont. No		St	C	T	A, C	4.9, 4.13.1, 4.14
Tributyl phosphate		B	P	3	2G	Open No		St	O	No	A	4.14.1
1,2,4-Trichlorobenzene	2321	B	S/P	2	2G	Cont. No		St	R	T	C	4.14.1, 5.2.8, 5A.2.2
1,1,1-Trichloroethane	2831	B	P	3	2G	Open No		St	O	No	A	4.14.1
1,1,2-Trichloroethane		B	S/P	3	2G	Cont. No		St	R	T	No	4.9.1, 4.14.1
Trichloroethylene	1710	B	S/P	3	2G	Cont. No		St	R	T	No	4.9, 4.13.1, 4.14.4.15.1
1,2,3-Trichloropropane		B	S/P	2	2G	Cont. No		St	C	T	B, C, D	4.9, 4.13.1, 4.14
1,1,2-Trichloro-1,2,2-Trifluoroethane		C	P	3	2G	Open No		St	O	No	No	
Tricresyl phosphate (containing less than 1% ortho-isomer)		A	P	2	2G	Open No		St	O	No	A	4.14.1
Tricresyl phosphate (containing 1% or more ortho-isomer)	2574(j)	A	S/P	1	2G	Cont. No		St	C	No	B	4.9.3, 4.14
Triethanolamine		D	S	3	2G	Open No		St	O	No	A	4.12.1
Triethylamine	1296	C	S/P	2	2G	Cont. No		SP	R	F-T	B	4.9, 4.12.2, 4.17
Triethylbenzene		A	P	2	2G	Open No		St	O	No	A	4.14.1
Triethylenetetramine	2259	D	S	3	2G	Open No		St	O	No	A	4.12.1
Triethyl phosphite	2323	D	S	3	2G	Cont. No		SP	R	F-T	A, D	4.9.1
Trimethylacetic acid		D	S	3	2G	Cont. No		St	R	No	A, C	4.8.2 to 4.8.8, 4.12.6
Trimethylbenzenes(all isomers)		B	P	3	2G	Cont. No		SP	R	F	A	4.14.1
Trimethylhexamethylene diamine (2,2,4-and-2,4,4-isomers)	2327	D	S	3	2G	Open No		St	O	No	A, C	4.12.1, 4.14.1

a	b	c	d	e	f	g	h	i	j	k	l	m
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-isomers)	2328	B	S/P 2	2G	Cont. Dry	Cont. Dry		St	C T	A, C	(c)	4.9, 4.13.1, 4.14.1, 4.15.2
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate	2329	C	P 3	2G	Open No	Open No		St	O No	A		
Trimethyl phosphite			S 3	2G	Cont. No	Cont. No		SP	R F-T	A, D		4.9.1, 4.14.1, 4.15.2
Trixylyl phosphate	1299	A	P 1	2G	Open No	Open No		St	O No	A		4.14
Turpentine		B	P 3	2G	Cont. No	Cont. No		SP	R F	A		4.14.1
Undecanoic acid		(C)	P 3	2G	Open No	Open No		St	O No	A		5.2.6 to 5.2.8
1-Undecene		B	P 3	2G	Open No	Open No		St	O No	A		4.14.1
Undecyl alcohol		B	P 3	2G	Open No	Open No		St	O No	A		5.2.8, 5A.2.2(r)
Urea/Ammonium nitrate solution (containing aqua ammonia)		C	S/P 3	2G	Cont. No	Cont. No		SP	R T	A		4.12.4, 4.12.9
n-Valeraldehyde	2058	D	S 3	2G	Cont. Inert	Cont. Inert		SP	R F-T	A		4.2.7, 4.15.1
Vinyl acetate	1301	C	S/P 3	2G	Cont. No	Cont. No		SP	O F	A		4.10, 4.18.1, 4.18.2
Vinyl ethyl ether	1302	C	S/P 2	1G	Cont. Inert	Cont. Inert		SP	C F-T	A		4.2, 4.10, 4.11, 4.12.8, 4.14, 4.17, 4.18.1, 4.18.2
Vinylidene chloride	1303	B	S/P 2	2G	Cont. Inert	Cont. Inert		SP	R F-T	B		4.10, 4.11, 4.12.5, 4.14.1, 4.17, 4.18.1, 4.18.2
Vinyl neodecanoate		B	S/P 3	2G	Open No	Open No		St	O No	B		4.18.1, 4.18.2
Vinyl toluene	2618	A	S/P 3	2G	Cont. No	Cont. No		SP	R F	D		4.10, 4.12.1, 4.14.1, 4.18.1, 4.18.2

a	b	c	d	e	f	g	h	i	j	k	l	m
White spirit, low (15-20%) aromatic	1300	(B)	P	2	2G	Cont. No		SP	R F	A		4.14.1
Xylenes	1307	C	P	3	2G	Cont. No		SP	R F	A		4.14.1, 5.2.8(u)
Xylenol	2261	B	S/P	3	2G	Open No		St	O No	B		4.14.1, 5.2.8, 5A.2.2

7 Footnotes for the BCH Code:

- a Provision 4.17 applies to Ammonia aqueous, 28% or less but not below 10%.

Ammonia aqueous 28% or less

- b If the product to be carried contains flammable solvents such that the flashpoint does not exceed 60°C c.c., then special electrical systems and a flammable vapour detector should be provided.

Diphenylmethane diisocyanate
Polymethylene polyphenyl isocyanate

- c Although water is suitable for extinguishing open-air fires involving chemicals to which this footnote applies, water should not be allowed to contaminate closed tanks containing these chemicals because of the risk of hazardous gas generation.

Diphenylmethane diisocyanate
Isophorone diisocyanate
Polymethylene polyphenyl isocyanate
Toluene diisocyanate
Trimethylhexamethylene diisocyanate (2,2,4- & 2,4,4-isomers)

- d UN number 1198 only applies if flashpoint is below 60°C c.c.

Formaldehyde solution (45% or less)

- e Provision 4.17 applies to Formaldehyde solutions 45% or less, but not below 5%.

Formaldehyde solutions (45% or less)

- f Provision 4.17 applies to Hydrochloric acid not below 10%.

Aluminum chloride (30% or less)/Hydrochloric acid (20% or less) solution
Hydrochloric acid

- g Dry chemical cannot be used because of the possibility of an explosion.

Maleic anhydride

- h UN number 2032 assigned to Red fuming nitric acid.

Nitric acid (70% and over)

- i UN number depends on boiling point of substance.
Polyethylene polyamines
Polymethylene polyphenyl isocyanate
- j UN number assigned to this substance containing more than 3% of ortho-isomer.
Tricresyl phosphate (containing 1% or more ortho-isomer)
- k UN number only applies to 2-Chloropropionic acid.
2- or 3- Chloropropionic acid
- l Dinitrotoluene should not be carried in deck tanks.
Dinitrotoluene (molten)
- m Temperature sensors should be used to monitor the cargo pump temperature to detect overheating due to pump failures.
Dinitrotoluene (molten)
- n Dry chemical should not be used as a fire-fighting medium.
Nitropropane (60%)/Nitroethane (40%) mixture
- o UN number 2672 refers to 10-35% Ammonium solution.
Ammonia aqueous (28% or less)
- p Applies to n-Decyl alcohol only.
Decyl alcohol (all isomers)
- q Requirements are based on those isomers having a flashpoint of 60°C c.c., and therefore the requirements based on flammability would not apply to such isomers.
Heptanol (all isomers)
- r Provision 5A.2.2 applies to 1-Undecyl alcohol only.
Undecyl alcohol
- s UN number 1114 applies to Benzene.
Benzene and mixtures having 10% benzene or more
- t Confined space should be tested for both Formic acid vapours and Carbon monoxide gas, a decomposition product.
Formic acid

- u Applies to p-Xylene only.

Xylenes

- v Applies to p-isomer and mixtures containing p-isomer viscosity of which is 25 mPa.S at 20°C.

Dichlorobenzenes (all isomers)

- w Applies to p-isomer and mixtures containing p-isomer melting point of which is 0°C and above.

Dichlorobenzenes (all isomers)

- x Applies to p-isomer and mixtures containing p-isomer melting point of which is 15°C and above.

Dichlorobenzenes (all isomers)

- y Applies only to products with melting point above 15°C.

Nonyl phenol poly(4-12)ethoxylates

- 8 Chapter VII of the BCH Code should be replaced by the following:

CHAPTER VII – LIST OF CHEMICALS TO WHICH THE CODE DOES NOT APPLY

1 The following are products which are not considered to come within the scope of the Code. This list may be used as a guide in considering bulk carriage of products whose hazards have not yet been evaluated.

2 Although the products listed in this chapter fall outside the scope of the Code, the attention of Administrations is drawn to the fact that some safety precautions may be needed for their safe transportation. Accordingly, Administrations should prescribe appropriate safety requirements.

EXPLANATORY NOTES

- Product name
(column a) In some cases, the product names may not be identical with the names given in previous issues of the BCH Code or the IBC Code (for explanation see index of chemicals).
- UN number
(column b) The number relating to each product shown in the recommendations proposed by the United Nations Committee of Experts on the Transport of Dangerous Goods. UN numbers, where available, are given for information only.
- Pollution category
(column c) The letter D means the pollution category assigned to each product under Annex II of MARPOL 73/78. "III" means the product was evaluated and found to fall outside the categories A, B, C or D.

Pollution category in brackets indicates that the product is provisionally categorized and that further data are necessary to complete the evaluation of their pollution hazards. Until the hazard evaluation is completed, the pollution category assigned is used.

a	b	c
Product name	UN number	Pollution Category for operational discharge (regulation 3 of Annex II)
Acetone	1090	III
Alcohols (C ₁₃ and above)	-	III
Alcoholic beverages, n.o.s.	3065	III
Alkyl (C ₉ -C ₁₇) benzenes	-	(D)
Aluminium sulphate solution	-	D
Aminoethyldiethanolamine/ Aminoethylethanolamine solution	-	III
2-Amino-2-hydroxymethyl- 1,3-propanediol solution (40% or less)	-	III
Ammonium sulphate solution	-	D
n-Amyl alcohol	1105	D
sec-Amyl alcohol	1105	D

a	b	c
tert-Amyl alcohol	1105	III
Amyl alcohol, primary	1105	D
Animal and fish oils, n.o.s. including Cod liver oil, Sperm oil	-	D
Apple juice	-	III
Behenyl alcohol		III
Benzene tricarboxylic acid, trioctyl ester	-	III
Brake fluid base mix: (Poly (2-8) alkylene (C ₂ -C ₃) glycols/ Polyalkylene (C ₂ -C ₁₀) glycols monoalkyl (C ₁ -C ₄) ethers and their borate esters) <u>1/</u>	-	D
sec-Butyl acetate	1123	D
n-Butyl alcohol	1120	III
sec-Butyl alcohol	1120	III
tert-Butyl alcohol	1120	III
Butylene glycol	-	D
gamma-Butyrolactone	-	D

1/ Use "Brake fluid base mix" as a proper name on the shipping document.

a	b	c
Butyl stearate	—	III
Calcium carbonate slurry	—	III
Calcium hydroxide slurry	—	D
Calcium nitrate/Magnesium nitrate/ Potassium chloride solution		III
epsilon-Caprolactam (molten or aqueous solutions)	—	D
Cetyl/Stearyl alcohol		III
Chlorinated paraffins (C ₁₄ -C ₁₇) (with 52% chlorine)		III
Choline chloride solutions	—	D
Clay slurry		III
Coal slurry		III
Coconut oil fatty acid methyl ester		D
Decahydronaphthalene	1147	(D)
Decylbenzene	—	D
Dextrose solution	—	III

a	b	c
Diacetone alcohol	1148	D
Dialkyl(C ₇ -C ₁₃) phthalates	-	D
Diethylene glycol	-	III
Diethylene glycol butyl ether	-	III
Diethylene glycol butyl ether acetate	-	(D)
Diethylene glycol dibutyl ether	-	D
Diethylene glycol diethyl ether	-	III
Diethylene glycol ethyl ether	-	III
Diethylene glycol ethyl ether acetate	-	(D)
Diethylene glycol methyl ether acetate	-	(D)
Diethylenetriamine pentaacetic acid, pentasodium salt solution	-	III
Di(2-ethylhexyl)adipate	-	D
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution	-	D

a	b	c
Diheptyl phthalate	-	III
Dihexyl phthalate	-	III
Diisobutyl ketone	1157	D
Diisodecyl phthalate	-	D
Diisononyl adipate	-	D
Diisooctyl phthalate	-	III
Diisopropyl naphthalene	-	D
2,2-Dimethylpropane-1,3-diol	-	(D)
Dinonyl phthalate	-	D
Dioctyl phthalate	-	III
Dipropylene glycol	-	III
Dipropylene glycol methyl ether	-	(D)
Ditridecyl phthalate	-	D
Diundecyl phthalate	-	D
Dodecane (all isomers)	-	III

a	b	c
Dodecenyl succinic acid, dipotassium salt solution	--	(D)
Dodecyl benzene	--	III
Drilling brines: Calcium bromide solution Calcium chloride solution Sodium chloride solution	--	III
2-Ethoxyethanol	1171	D
Ethyl acetate	1173	D
Ethyl acetoacetate	--	(D)
Ethyl alcohol	1170	III
Ethylene carbonate	--	III
Ethylenediamine tetraacetic acid, tetrasodium salt solution	--	D
Ethylene glycol	--	D
Ethylene glycol acetate	--	(D)
Ethylene glycol butyl ether	2369	III
Ethylene glycol isopropyl ether	--	D
Ethylene glycol methyl butyl ether	--	D

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a	b	c
Ethylene glycol methyl ether	1188	D
Ethylene glycol methyl ether acetate	1189	D
Ethylene glycol phenyl ether	--	D
Ethylene glycol phenyl ether/ Diethylene glycol phenyl ether mixture	--	D
Ethylene glycol tert-butyl ether	--	III
2-Ethylhexanoic acid	--	D
Ethylene/Vinyl acetate copolymer (emulsion)	--	III
Ethyl propionate	1195	D
Fatty acid (saturated C ₁₃ and above)	--	III
Ferric hydroxyethylene diamine triacetic acid, trisodium salt solution	--	D
Formamide	--	D
Glucose solution	--	III
Glycerin	--	III
Glycerol polyalkoxylate	--	III

a	b	c
Glyceryl triacetate	—	(III)
Glycine, sodium salt solution	—	III
Glyoxal solution (40% or less)	—	D
n-Heptanoic acid	—	D
Hexamethylenediamine adipate solution (50% or less)	—	D
Hexamethylene glycol	—	III
Hexamethylenetetramine solutions	—	D
Hexanoic acid	—	D
Hexanol	2282	D
Hexylene glycol	—	III
N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution	—	D
Isoamyl alcohol	1105	D
Isobutyl alcohol	1212	III
Isobutyl formate	2393	D
Isophorone	—	D

a	b	c
Isopropyl acetate	1220	III
Isopropyl alcohol	1219	III
Kaolin slurry	--	III
Lactic acid	--	D
Lard	--	III
Latex:		
Styrene-butadiene rubber		
Carboxylated styrene-butadiene copolymer	--	III
Lignin sulphonic acid, sodium salt solution	--	III
Magnesium chloride solution	--	III
Magnesium hydroxide slurry	--	III
3-Methoxy-1-butanol	--	III
3-Methoxybutyl acetate	--	D
Methyl acetate	1231	III
Methyl acetoacetate	--	D
Methyl alcohol	1230	III

a	b	c
Methyl butenol	-	(D)
Methyl tert-butyl ether	2398	D
Methyl butyl ketone	-	D
Methyl butynol	-	D
Methyl ethyl ketone	1193	III
Methyl isobutyl ketone	1245	D
3-Methyl-3-methoxy butanol	-	III
3-Methyl-3-methoxy butyl acetate	-	III
Molasses	-	III
Naphthalene sulphonic acid- formaldehyde copolymer, sodium salt solution	-	D
Nitrilotriacetic acid, trisodium salt solution	-	D
Nonanoic acid (all isomers)	-	D
Nonyl methacrylate monomer	-	(D)

a	b	c
Noxious liquid, n.o.s. (17) (trade name containing) Cat. D ^{1/}	-	D
Non-noxious liquid, n.o.s. (18) (trade name containing) Appendix III ^{1/}	-	III
Octanoic acid (all isomers)	-	D
Octyl decyl adipate	-	III
Oleic acid	-	D
n-Octyl acetate	1262	D
Olefins (C ₁₃ and above, all isomers)	-	III
alpha-Olefins (C ₁₃ -C ₁₈)	-	III
Palm oil fatty acid methyl ester	-	D
Palm stearin	-	D
n-Paraffins (C ₁₀ -C ₂₀)	-	III

^{1/} In case of a specific n.o.s. (not otherwise specified) cargo assessed as falling within this n.o.s. group that is carried on a ship, this entry, including the cargo's trade name and one or two principle components, should be provided in the shipping document.

a	b	c
Paraffin wax	—	III
Pentaethylenehexamine	—	D
Pentanoic acid	—	D
Petrolatum	—	(III)
Polyaluminium chloride solution	—	III
Polybutene	—	III
Polyethylene glycol	—	III
Polyethylene glycol dimethyl ether	—	III
Polypropylene glycol	—	D
Polypropylene glycol methyl ether	—	III
Polysiloxane	—	III
n-Propyl acetate	1276	D
n-Propyl alcohol	1274	III
Propylene-butylene copolymer	—	III
Propylene glycol	—	III
Propylene glycol ethyl ether	—	(D)

a	b	c
Propylene glycol methyl ether	-	(D)
Propylene glycol monoalkyl ether	-	(D)
Sodium aluminosilicate slurry	-	III
Sodium carbonate solution	-	D
Sodium silicate solution	-	D
Sorbitol solutions	-	III
Sulpholane	-	D
Tallow	-	D
Tallow fatty acid	-	(D)
Tetraethylene glycol	-	III
Tridecane	-	III
Tridecanoic acid	-	(III)
Triethylene glycol	-	III
Triethylene glycol butyl ether	-	III
Triethylene glycol ethyl ether	-	(D)
Triethylene glycol methyl ether	-	(D)

a	b	c
Triisopropanolamine	—	III
Trimethylol propane polyethoxylate	—	D
Trippropylene glycol	—	III
Trippropylene glycol methyl ether	—	(D)
Urea/Ammonium mono- and di-hydrogen phosphate/Potassium chloride solution	—	(D)
Urea/Ammonium nitrate solution	—	D
Urea/Ammonium phosphate solution	—	D
Urea formaldehyde resin solution	—	III
Urea solution	—	III
Vegetable oil, n.o.s. including: Castor oil, Camphor oil, Coconut oil, Corn oil, Groundnut oil, Linseed oil, Olive oil, Palm nut oil, Palm oil, Rape seed oil, Rice bran oil, Safflower oil, Sesame oil, Soya bean oil, Sunflower oil, Tung oil	—	D
Vegetable protein solution (hydrolysed)	—	III
Water	—	III
