SUBCHAPTER O—CERTAIN BULK DANGEROUS CARGOES

PART 150—COMPATIBILITY OF CARGOES

Sec.

AUTHORITY: 46 U.S.C. 3306, 3703; DHS Delegation No. 00170.1, Revision No. 01.3.

SOURCE: CGD 75–59, 45 FR 70263, Oct. 23, 1980, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to part 150 appear by USCG–2012–0832, 77 FR 59783, Oct. 1, 2012.

§ 150.105 OMB control numbers assigned pursuant to the Paperwork Reduction Act.

(a) *Purpose.* This section collects and displays the control numbers assigned to information collection and recordkeeping requirements in this subchapter by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). The Coast Guard intends that this section comply with the requirements of 44 U.S.C. 3507(f) which requires that agencies display a current control number assigned by the Director of the OMB for each approved agency information collection requirement.

(b) *Display.*

46 CFR part or section where identified or described	Current OMB control No.
§ 150.01–15	1625–0007
§ 153.5	1625–0007
§ 153.905	1625–0094
§ 153.910	1625–0094
§ 153.968	1625–0094
Part 154	1625–0029
§ 154.12	1625–0007

[49 FR 38121, Sept. 27, 1984, as amended by CGD 77–069, 52 FR 31626, Aug. 21, 1987; USCG–2004–18884, 69 FR 58349, Sept. 30, 2004]

§ 150.110 Applicability.

This subpart prescribes rules for identifying incompatible hazardous materials and rules for carrying these materials in bulk as cargo in permanently attached tanks or in tanks that are loaded or discharged while aboard the vessel. The rules apply to all vessels that carry liquid dangerous cargoes in bulk that are subject to 46 U.S.C. Chapter 37.

[CGD 95–028, 62 FR 51209, Sept. 30, 1997]

§ 150.115 Definitions.

As used in this subpart: *Hazardous material* means:

(a) A flammable liquid as defined in § 30.10–22 or a combustible liquid as defined in § 30.10–15 of this chapter;

(b) A material listed in Table 151.05, Table 1 of part 153, or Table 4 of part 154 of this chapter; or

(c) A liquid, liquefied gas, or compressed gas listed in 49 CFR 172.101.

Person in charge means the master of a self-propelled vessel, or the person in charge of a barge.

§ 150.120 Definition of incompatible cargoes.

Except as described in § 150.150, a cargo of hazardous material is incompatible with another cargo listed in Table 1 if the chemical groups of the two cargoes have an ''X'' where their columns intersect in Figure 1 and are not shown as exceptions in Appendix I. (See also § 150.140.)

[CGD 83–047, 50 FR 33038, Aug. 16, 1985, as amended at USCG–2013–0423, 85 FR 21674, Apr. 17, 2020]

§ 150.130 Loading a cargo on vessels carrying cargoes with which it is incompatible.

Except as described in § 150.160, the person in charge of a vessel shall ensure that the containment system for a cargo that is a hazardous material meets the following requirements:

(a) The containment system must separate the hazardous material or its residue from any cargo in table 1 with which it is incompatible by two barriers such as formed by a:

(1) Cofferdam;

(2) Empty tank;

(3) Void space;

(4) Cargo handling space;

(5) Tank containing a compatible cargo; or

(6) Piping tunnel.

(b) In this subpart, isolation across a cruciform joint is equivalent to isolation by two barriers.

(c) The containment system for the hazardous material must not have a piping or venting system that connects to a containment system carrying a cargo with which the hazardous material is incompatible. Any such piping or venting system must have been separated from the containment system carrying the incompatible cargo by:

(1) Removing a valve or spool piece and blanking off the exposed pipe ends, or

(2) Installing two spectacle flanges in series with a means of detecting leakage into the pipe between the spectacle flanges.

[CGD 75–59, 45 FR 70263, Oct. 23, 1980, as amended at USCG–2013–0423, 85 FR 21674, Apr. 17, 2020]

§ 150.140 Cargoes not listed in Table 1 or 2.

A cargo of hazardous material not listed in Table I or II must be handled as if incompatible with all other cargoes until the Commandant CG–ENG–5) (Telephone 202–372–1420) assigns the hazardous material to a compatibility group. (Table I lists cargoes alphabetically while Table II lists cargoes by compatibility group).

[CGD 83–047, 50 FR 33038, Aug. 16, 1985, CGD 86–100, 52 FR 21037, June 4, 1987; CGD 95–072, 60 FR 50465, Sept. 29, 19955; CGD 96–041, 61 FR 50731, Sept. 27, 1996; USCG–2006–25697, 71 FR 55746, Sept. 25, 2006; USCG;–2013–0423, 85 FR 21674, Apr. 17, 2020]

§ 150.150 Exceptions to the compatibility chart.

The Commandant (CG–ENG–5) authorizes, on a case by case basis, exceptions to the rules in this subpart under the following conditions:

(a) When two cargoes shown to be incompatible in Figure 1 meet the standards for a compatible pair in Appendix III, or

(b) When two cargoes shown to be compatible in Figure 1 meet the standards for an incompatible pair in Appendix III.

Appendix I contains cargoes which have been found to be exceptions to Figure 1, the Compatibility Chart.

[CGD 83–047, 50 FR 33038, Aug. 16, 1985, as amended at CGD 95–072, 60 FR 50465, Sept. 29, 1995; CGD 96–041, 61 FR 50731, Sept. 27, 1996]

§ 150.160 Carrying a cargo as an exception to the compatibility chart.

The Operator of a vessel having on board a cargo carried as an exception under § 150.150 but not listed in Appendix I, Exceptions to the Chart, shall make sure that:

(a) The Commandant (CG–ENG–5) has authorized by letter or message the cargo pair as an exception to the compatibility chart; and

(b) A copy of the letter or message is on the vessel.

[CGD 75–59, 45 FR 70263, Oct. 23, 1980, as amended by CGD 82–063b, 48 FR 4781, Feb. 3, 1983; CGD 83–047, 50 FR 33038, Aug. 16, 1985; CGD 95–072, 60 FR 50465, Sept. 29, 19955; CGD 96–041, 61 FR 50731, Sept. 27, 1996]

§ 150.170 Right of appeal.

Any person directly affected by a decision or action taken under this part, by or on behalf of the Coast Guard, may appeal therefrom in accordance with subpart 1.03 of this chapter.

[CGD 88–033, 54 FR 50381, Dec. 6, 1989]

FIGURE 1 TO PART 150—COMPATIBILITY CHART

Figure 1 - Compatibility chart

CARGO COMPATIBILITY / CARGO GROUPS	1. NON-OXIDIZING MINERAL ACIDS	2. SULFURIC ACID	3. NITRIC ACID	4. ORGANIC ACIDS	5. CAUSTICS	6. AMMONIA	7. ALIPHATIC AMINES	8. ALKANOLAMINES	9. AROMATIC AMINES	10. AMIDES	11. ORGANIC ANHYDRIDES	12. ISOCYANATES	13. VINYL ACETATE	14. ACRYLATES	15. SUBSTITUTED ALLYLS	16. ALKYLENE OXIDES	17. EPICHLOROHYDRIN	18. KETONES	19. ALDEHYDES	20. ALCOHOLS, GLYCOLS	21. PHENOLS, CRESOLS	22. CAPROLACTAM SOLUTION	
1. NON-OXIDIZING MINERAL ACIDS		X			X	X	X	X	X	X	X	X	X			X	X						1
2. SULFURIC ACID	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		2
3. NITRIC ACID		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		3
4. ORGANIC ACIDS		X			X	X	X	X				X				X	X						4
5. CAUSTICS	X	X	X	X							X	X				X	X		X	X	X	X	5
6. AMMONIA	X	X	X	X						X	X	X	X			X	X		X				6
7. ALIPHATIC AMINES	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	7
8. ALKANOLAMINES	X	X	X	X							X	X	X	X	X	X	X		X				8
9. AROMATIC AMINES	X	X	X								X	X							X				9
10. AMIDES	X	X	X			X						X									X		10
11. ORGANIC ANHYDRIDES	X	X	X		X	X	X	X	X											X		X	11
12. ISOCYANATES	X	X	X	X	X	X	X	X	X	X										X		X	12
13. VINYL ACETATE	X	X	X			X	X	X															13
14. ACRYLATES		X	X				X	X															14
15. SUBSTITUTED ALLYLS		X	X				X	X															15
16. ALKYLENE OXIDES	X	X	X	X	X	X	X	X															16
17. EPICHLOROHYDRIN	X	X	X	X	X	X	X	X															17
18. KETONES		X	X				X																18
19. ALDEHYDES		X	X		X	X	X	X	X														19
20. ALCOHOLS, GLYCOLS		X	X		X		X					X											20
21. PHENOLS, CRESOLS		X	X		X		X			X													21
22. CAPROLACTAM SOLUTION		X			X		X					X											22
30. OLEFINS		X	X																				30
31. PARAFFINS																							31
32. AROMATIC HYDROCARBONS			X																				32
33. MISCELLANEOUS HYDROCARBON MIXTURES			X																				33
34. ESTERS		X	X																				34
35. VINYL HALIDES			X																			X	35
36. HALOGENATED HYDROCARBONS																							36
37. NITRILES		X																					37
38. CARBON DISULFIDE							X	X															38
39. SULFOLANE																							39
40. GLYCOL ETHERS		X										X											40
41. ETHERS		X	X																				41
42. NITROCOMPOUNDS					X	X	X	X	X														42
43. MISCELLANEOUS WATER SOLUTIONS		X										X											43
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Acetaldehyde	19		75–07–0	AAD	
Acetic acid	4	2	64–19–7	AAC	
Acetic anhydride	11	2	108–24–7	ACA	
Acetochlor	10		34256–82–1	ACG	
Acetone	18	2	67–64–1	ACT	
Acetone cyanohydrin	0	1, 2	75–86–5	ACY	
Acetonitrile	37		75–05–8	ATN	
Acetonitrile (low purity grade)	37	3	75–05–8	AIL	
Acetophenone	18		98–86–2	ACP	
Acid oil mixture from soyabean, corn (maize) and sunflower oil refining, see Oil, misc.: Acid mixture from soyabean, corn (maize), and sunflower oil refining.		3			AOM
Acrolein	19	2	107–02–8	ARL	
Acrylamide solution (50% or less)	10	3	79–06–1	AAM	AAO

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Acrylic acid	4	2	79–10–7	ACR	
Acrylic acid/ethenesulfonic (alternately ethenesulphonic) acid copolymer with phosphonate groups, sodium salt solution.	30	3		APG	
Acrylonitrile	15	2	107–13–1	ACN	
Acrylonitrile-Styrene copolymer dispersion in Polyether polyol.	20		9003–54–7	ALE	
Adiponitrile	37		111–69–3	ADN	
Alachlor technical (90% or more)	33	3	15972–60–8	ALH	ALI
Alcohol (C12–C13, branched and linear) poly (4–8) propoxy sulfates (alternately sulphates), sodium salt 25–30% solution.	41	3		ABL	
Alcohol (C9–C11) poly (2.5–9) ethoxylates.	20	3	*68439–46–3	AET	ALY/APV/APW
Alcohol (C10–C18) poly (7) ethoxylates.	20		85422–93–1	ALE	ALY/APV/APW
Alcohol (C6–C17) (secondary) poly (3–6) ethoxylates.	20	3	*84133–50–6	AEA	AEB
Alcohol (C6–C17) (secondary) poly (7–12) ethoxylates.	20	3	*84133–50–6	AEB	AEA
Alcohol (C12–C16) poly (1–6) ethoxylates.	20	3	*68551–12–2	AED	AET/ALY/APW
Alcohol (C12–C16) poly (7–19) ethoxylates.	20	3	*68551–12–2	APV	AET/ALY/APV
Alcohol (C12–C16) poly (20+) ethoxylates.	20	3	*68551–12–2	APW	AET/ALY
Alcohol (C12–C15) poly (. . .) ethoxylate, see Alcohol (C12–C16) poly (. . .) ethoxylate.			*68131–39–2		
Alcohol polyethoxylates	20		*68439–50–9		AEA/AEB/AED/AET/APV/APW
Alcohol polyethoxylates, secondary	20		*84133–50–6		AEA/AEB
Alcoholic beverages, n.o.s.	20	3	64–17–5	ABV	
Alcohols (C12+), primary, linear	20	3	*112–53–8	ASY	ALR/AYK/AYL
Alcohols (C8–C11), primary, linear, and essentially linear.	20		*111–87–5	ALR	AYK/AYL
Alcohols (C12–C13), primary, linear, and essentially linear.	20	3	*112–53–8	AYK	ALR/ASY/AYL
Alcohols (C14–C18), primary, linear, and essentially linear.	20	3	*112–72–1	AYL	ALR/ASY/AYK
Alcohols (C13+)	20		*112–70–9	ALY	ASY/AYK
Including:					
Cetyl alcohol (Hexadecanol).	20		36653–82–4		
Oleyl alcohol (Octadecenol).	20		112–92–5		
Pentadecanol	20		629–76–5		
Tallow alcohol	20		99561–04–3		
Tetradecanol	20		112–72–1		
Tridecanol	20		112–70–9		
Alkanes (C10–C26), linear and branched (flash point >60 °C).	31	3	*124–18–5	ABD	
Alkanes (C10–C26), linear and branched (flash point ≤ 60 °C).	31	3	*124–18–5	ABE	
Alkanes (C6–C9)	31		*110–54–3	ALK	
Including:					
Heptanes	31		142–82–5		

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Hexanes	31		110–54–3		
Nonanes	31		111–84–2		
Octanes	31		111–65–9		
iso- & cyclo-Alkanes (C10–C11)	31		*34464–38–5	AKI	
iso- & cyclo-Alkanes (C12+)	31		*31807–55–3	AKJ	
n-Alkanes (C9–C11)	31	3	*111–84–2		
n-Alkanes (C10+) (all isomers)	31		*124–18–5	ALV	ALJ
Including:					
Decanes	31		124–18–5		
Dodecanes	31		112–40–3		
Heptadecanes	31		629–78–7		
n-Paraffins (C10–C20).	31		*124–18–5	PFN	ALJ
Tridecanes	31		629–50–5		
Undecanes	31		1120–21–4		
Alkane (C14–C17) sulfonic (alternately *sulphonic*) *acid, sodium salt solutions, see* Sodium alkyl (C14–C17) sulfonates (alternately sulphonates) (60–65% solution).			85711–69–9	AKA	SAA (AKE/SSU)
Alkaryl polyethers (C9–C20)	41			AKP	
Alkenoic acid, polyhydroxy ester borated.	0	1, 3		AAY	
Alkenyl (C11+) amide	10			AKM	
Alkenyl (C8+) amine, Alkenyl (C12+) acid ester mixture.	34			AAA	
Alkenyl (C16–C20) succinic anhydride.	11		*32072–96–1	AAH	
Alkyl acrylate-Vinyl pyridine copolymer in Toluene.	32			AAP	
Alkyl amine (C17+)	7		*4200–95–7	AKY	
Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomers).	34		78–31–9	ADP	
Alkylated (C4–C9) hindered phenols.	21	3	*98–54–4	AYO	
Alkyl (C3–C4) benzenes	32		*103–65–1	AKC	
Including:					
Butylbenzenes	32	3	104–51–8		
Cumene	32		98–82–8		
Propylbenzenes	32		103–65–1		
Alkyl (C5–C8) benzenes.	32		*538–68–1	AKD	
Including:					
Amylbenzenes	32		538–68–1		
Heptylbenzenes	32		2132–85–6		
Hexylbenzenes	32		1077–16–3		
Octylbenzenes	32		2189–60–8		
Alkyl (C9+) benzenes	32		*1081–77–2	AKB	
Including:					
Decylbenzenes	32		104–72–3		
Dodecylbenzenes	32		29986–57–0		
Nonylbenzenes	32		1081–77–2		
Tetradecylbenzenes.	32		1459–10–5		
Tetrapropylbenzenes.	32		635–11–0		
Tridecylbenzenes	32		123–02–4		
Undecylbenzenes	32		6742–54–7		
Alkyl benzene distillation bottoms	0	1, 3		ABB	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Alkylbenzene mixtures (containing at least 50% of Toluene).	32	3	*108–88–3	AZT	
Alkylbenzenes mixtures (containing naphthalene).	20	.....	.....	ALB	AZT
Alkylbenzene, Alkylindane, Alkylindene mixture (each C12–C17).	32	.....	.....	AIH	
Alkyl (C11–C17) benzene sulfonic (alternately sulphonic) acid.	0	1, 3	*50854–94–9	ABN	ABS/ABQ
Alkylbenzene sulfonic (alternately sulphonic) acid (less than 4%).	0	1, 2	*104–15–4	ABQ	ABS/ABN
Alkylbenzene sulfonic (alternately sulphonic) acid, sodium salt solution.	33	.....	*657–84–1	ABT	
Alkyl/cyclo (C4–C5) alcohols	20	.....	.....	AAL	
Alkyl (C12+) dimethylamine	7	3	*112–18–5	ADM	
Alkyl dithiocarbamate (C19–C35) ...	34	3	.....	ADB	
Alkyl dithiothiadiazole (C6–C24)	33	.....	.....	ADT	
Alkyl ester copolymer (C4–C20)	34	.....	.....	AES	AEQ
Alkyl ester copolymer in mineral oil	34	.....	.....	AEQ	AES
Alkyl (C7–C9) nitrates	34	2	*20633–12–9	AKN	ONE
Alkyl (C7–C11) phenol poly (4–12) ethoxylate.	40	.....	.....	APN	NPE
Alkyl (C10–C15, C12 rich) phenol poly (4–12) ethoxylate.	40	.....	.....	APX	APN
Alkyl (C4–C9) phenols	21	.....	*1638–22–8	AYI	BLT/BTP/NNP/OPH
Alkylphenols (C10–C18, C12 rich)	21	.....	.....	ALP	AYI/DOL
Alkyl phenol sulfide (alternately *sulphide*) (*C8–C40*), *see* Alkyl (C8–C40) phenol sulfide (alternately *sulphide*).	.....	.....	.....		AKS
Alkyl (C8–C40) phenol sulfide (alternately sulphide).	34	.....	.....	AKS	
Alkyl (C9–C15) phenyl propoxylate	40	.....	*9064–15–7	AXL	
Alkyl (C8–C9) phenylamine in aromatic solvents.	9	.....	.....	ALP	
n-Alkyl phthalates, see individual phthalates.	.....	.....	.....	AYS	
Alkyl polyglucoside solution, see individual polyglucoside solutions.	.....	.....	.....	AGD	AGL/AGM/AGN/AGO/AGP
Alkyl (C8–C10) polyglucoside solution (65% or less).	43	3	*29836–26–8	AGL	AGD/AGM/AGN/AGO/AGP
Alkyl (C8–C10)/(C12–C14): (40% or less/60% or more) polyglucoside solution (55% or less).	43	3	*29836–26–8	AGN	AGD/AGL AGM/AGO/AGP
Alkyl (C8–C10)/(C12–C14): (50%/50%) polyglucoside solution (55% or less).	43	3	*29836–26–8	AGO	AGD/AGL/AGN/AGP
Alkyl (C8–C10)/(C12–C14): (60% or more/40% or less) polyglucoside solution (55% or less).	43	3	*29836–26–8	AGP	AGD/AGL/AGM/AGN/AGO
Alkyl (C12–C14) polyglucoside solution (55% or less).	43	3	*59122–55–3	AGM	AGD/AGL/AGN/AGO/AGP
Alkyl (C12–C16) propoxyamine ethoxylates.	8	3	.....	AXE	LPE

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Alkyl (C10–C20), saturated and unsaturated phosphite.	34	.....	.....	AKL	
Alkyl succinic anhydride	11	.....	*4100–80–5	AUA	
Alkyl sulfonic (alternately sulphonic) acid ester of phenol.	34	.....	91082–17–6	AKH	
Alkyl toluene	32	.....	*95–47–6	AYL	AUS
Alkyl (C18+) toluenes	32	3	*94135–42–9	AUS	AYL
Alkyl (C18–C28) toluenesulfonic (alternately toluenesulphonic) acid.	0	1, 3	*3386–32–1	AUU	
Alkyl (C18–C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, borated.	34	3	.....	AUB	
Alkyl (C18–C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, high overbase.	33	3	.....	AUC	
Alkyl (C18–C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, low overbase.	33	3	.....	AUL	
Allyl alcohol	15	2	107–18–6	ALA	
Allyl chloride	15	.....	107–05–1	ALC	
Aluminum (alternately, *Aluminium*) chloride/*Hydrochloric acid solution,* see ''Aluminum (alternately, Aluminium) chloride/Hydrogen chloride solution''.	.....	1	.....	AHS	AHG
Aluminum (alternately Aluminium) chloride/Hydrogen chloride solution.	0	1, 3	.....	AHG	AHS
Aluminum (alternately Aluminium) hydroxide/sodium hydroxide/sodium carbonate solution (40% or less).	5	3	.....	AHN	
Aluminum sulfate (alternately Aluminium sulphate) solution.	43	2	10043–01–3	ASX	ALM
Amine C–6, morpholine process residue.	9	.....	.....	AOI	
Aminoethyldiethanolamine/ Aminoethylethanolamine solution.	8	.....	.....	ADY	
2-(2-Aminoethoxy) ethanol	8	.....	929–06–6	AEX	
Aminoethylethanolamine	8	.....	111–41–1	AEE	
N-Aminoethylpiperazine	7	.....	140–31–8	AEP	
2-Amino-2-hydroxymethyl-1,3-propanediol solution.	43	.....	77–86–1	AHL	
2-Amino-2-methyl-1-propanol	8	.....	124–68–5	APZ	APQ/APR
Ammonia, anhydrous	6	.....	7664–41–7	AMA	
Ammonia, aqueous (28% or less Ammonia), see Ammonium hydroxide.	.....	.....	1336–21–6		AMH
Ammonium bisulfite (alternately bisulphite) solution (70% or less).	43	2	10192–30–0	ABX	ASU
Ammonium chloride solution (less than 25%).	43	3	12125–02–9	AIS	AMC
Ammonium hydrogen phosphate solution.	0	1	7783–28–0	AMI	
Ammonium hydroxide (28% or less Ammonia).	6	.....	1336–21–6	AMH	
Ammonium lignosulfonate (alternately *lignosulphonate*) *solution, see also* Lignin liquor.	.....	.....	8061–53–8	ALG	LNL

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Ammonium nitrate solution (45% or less).	0	1	6484–52–2	AND	AMN/ANR/ ANW
Ammonium nitrate solution (93% or less).	0	1	6484–52–2	ANW	AMN/AND/ ANR
Ammonium nitrate/Urea solution (containing Ammonia), see Urea/ Ammonium nitrate solution (containing 1% or more Ammonia).	.....	.....	.....		UAS (ANU/ UAT/UAU/ UAV)
Ammonium nitrate/Urea solution (not containing Ammonia), see Urea/Ammonium nitrate solution (containing less than 1% Ammonia).	.....	.....	.....		UAU (ANU/ UAS/UAT/ UAV)
Ammonium phosphate/Urea solution, see Urea/Ammonium phosphate solution.	.....	.....	.....		UAP (APP/ URE)
Ammonium polyphosphate solution	43	.....	68333–79–9	AMO	
Ammonium sulfate (alternately sulphate) solution.	43	.....	7783–20–2	ASW	AME/AMS
Ammonium sulfate (alternately sulphate) solution (20% or less).	43	.....	7783–20–2	AME	AMS/ASW
Ammonium sulfide (alternately sulphide) solution (45% or less).	5	3	12135–76–1	ASS	ASF
Ammonium thiocyanate/Ammonium thiosulfate (alternately thiosulphate) solution.	0	1	.....	ACV	ACS
Ammonium thiosulfate (alternately thiosulphate) solution (60% or less).	43	3	7783–18–8	ATV	ATF
Amyl acetate (all isomers)	34	3	628–63–7	AEC	IAT/AML/ AAS/AYA
Amyl acid phosphate	34	.....	12789–46–7	AIA	
Amyl alcohol, primary	20	3	71–41–0	APM	AAI/AAL/ AAN/ APM/IAA
n-Amyl alcohol	20	3	71–41–0	AAN	AAI/AAL/ APM/ASE/ IAA
sec-Amyl alcohol	20	3	584–02–1	ASE	AAI/AAL/ AAN/ APM/IAA
tert-Amyl alcohol	20	3	75–85–4	AAL	AAI/APM/ ASE/IAA
tert-Amyl ethyl ether	41	.....	919–94–8	AER	
tert-Amyl methyl ether	41	.....	994–05–8	AYE	
Amyl methyl ketone, see Methyl amyl ketone.	.....	.....	110–43–0	AMJ	MAK (AMK)
Amylene, see Pentene (all isomers)	.....	.....	109–67–1	AMW	PTX (AMX/ AMZ/PTE)
tert-Amylenes, see Pentene (all isomers).	.....	.....	513–35–9	AMZ	PTX (AMW)
Aniline	9	.....	62–53–3	ANL	
Animal and Fish oils, n.o.s.	34	.....	.....	AFN	
Including:					
Cod liver oil	34	.....	8001–69–2		
Lanolin	34	.....	8006–54–0		
Neatsfoot oil	34	.....	8002–64–0		
Pilchard oil	34				
Sperm oil	34	.....	8002–24–2		
Animal and Fish acid oils and distillates, n.o.s..	34	.....	.....	AFA	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Including:					
Animal acid oil	34				
Fish acid oil	34				
Lard acid oil	34				
Mixed acid oil	34				
Mixed general acid oil.	34				
Mixed hard acid oil.	34				
Mixed soft acid oil.	34				
Anthracene oil (Coal tar fraction), see Coal tar.	.....	.....	65996–91–0	AHO	COR
Apple juice	43	.....	.....	APJ	
Argon, liquefied	0	1	7440–37–1	ARG	
Aryl polyolefin (C11–C50)	30	.....	.....	AYF	
Asphalt	33	.....	8052–42–4	ASP	ACU
Asphalt blending stocks, roofers flux.	33	.....	.....	ARF	
Asphalt blending stocks, straight run residue.	33	.....	.....	ASR	
Asphalt emulsion	33	.....	.....	ASQ	
Asphalt, Kerosene, and other components.	33	.....	.....	AKO	
Aviation alkylates (C8 paraffins and isoparaffins BPT 95–120 °C).	33	3	111–65–9	AVA	GAK/GAV
Barium long-chain (C11–C50) alkaryl sulfonate (alternately sulphonate).	34	.....	.....	BCA	
Barium long-chain alkyl (C8–C14) phenate sulfide (alternately sulphide).	34	.....	.....	BCH	
Behenyl alcohol	20	.....	661–19–8	BHY	
Benzene	32	2	71–43–2	BNZ	BHA/BHB/PYG
Benzene and mixtures having 10% Benzene or more.	32	.....	.....	BHB	BHA/BNZ/PYG
Benzene hydrocarbon mixtures (containing Acetylenes) (having 10% Benzene or more).	32	.....	.....	BHA	BHB/BNZ/PYG
Benzene/Toluene/Xylene mixtures (having 10% Benzene or more).	32	.....	.....	BTX	BHB/BNZ/PYG/TOL/XLX/XLM/XLO/XLP
Benzenesulfonyl (alternately Benzenesulphonyl) chloride.	0	1, 2	98–09–9	BSC	
Benzenetricarboxylic acid, trioctyl ester.	34	.....	89–04–3	BCE	
Benzyl acetate	34	.....	140–11–4	BZE	
Benzyl alcohol	21	.....	100–51–6	BAL	
Benzyl chloride	36	.....	100–44–7	BCL	
Bio-fuel blends of Diesel/gas oil and Alkanes (C10–C26), linear and branched with a flash point >60 °C (>25% but <99% by volume).	33	3	.....	BIF	BIG/BIH/BII/BIJ/BIK

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Bio-fuel blends of Diesel/gas oil and Alkanes (C10–C26), linear and branched with a flash point ≤60 °C (>25% but <99% by volume).	33	3		BIG	BIF/BIH/BII/BIJ/BIK
Bio-fuel blends of Diesel/gas oil and FAME (>25% but <99% by volume).	34	3		BIH	BIF/BIG/BII/BIJ/BIK
Bio-fuel blends of Diesel/gas oil and vegetable oil (>25% but <99% by volume).	34	3		BII	BIF/BIG/BIH/BIJ/BIK
Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume).	20	2, 3		BIJ	BIF/BIG/BIH/BII/BIK
Bis (2-ethylhexyl) terephthalate	34		6422–86–2	DHH	
Boronated Calcium sulfonate (alternately sulphonate).	34			BCU	
Brake fluid base mix: Poly (2–8) alkylene (C2–C3) glycols/ Polyalkylene (C2–C10) glycols monoalkyl (C1–C4) ethers and their borate esters.	20	3		BFY	
Brominated Epoxy Resin in Acetone.	16			BER	
Bromochloromethane	36		74–97–5	BCM	
Butadiene (all isomers)	30		106–99–0	BDI	
Butadiene/Butylene mixtures (containing Acetylenes).	30			BBM	BBX/BDI/BTN/IBL
Butane (all isomers)	31		106–97–8	BMX	IBT/BUT
Butane/Propane mixture	31			BUP	LPG
1,4-Butanediol, see Butylene glycol			110–63–4	BDO	BUG
2-Butanone, see Methyl ethyl ketone.		2	78–93–3		MEK
Butene oligomer	30			BOL	
Butene, see Butylenes (all isomers)			106–98–9		BUT/IBL
2-Butoxyethanol (58%)/ Hyperbranched polyesteramide (42%) (mixture).	20				
Butyl acetate (all isomers)	34	3	123–86–4	BAX	BCN/BTA/BYA/IBA
Butyl acrylate (all isomers)	14	3	141–32–2	BAR	BAI/BTC
Butyl alcohol (all isomers)	20	2, 3	71–36–3	BAY	BAN/BAS/BAT/IAL
Butyl alcohol (*iso-, n-, sec-, tert-*), *see* Butyl alcohol (all isomers).		2	71–36–3		BAN/BAS/BAT/BAY/IAL
Butylamine (all isomers)	7	3	109–73–9	BTY	BAM/BTL/BUA/IAM
Butylbenzene (*all isomers*), *see* Alkyl (C3–C4) benzenes.		3	104–51–8	BBE	AKC
Butyl benzyl phthalate	34		85–68–7	BPH	
Butyl butyrate (all isomers)	34	3	109–21–7	BBA	BIB/BUB
Butylene glycol	20	2	107–88–0	BUG	BDO
1,2-Butylene oxide	16		106–88–7	BTO	
Butylenes (all isomers)	30		106–98–9	BTN	IBL
n-Butyl ether	41	3	142–96–1	BTE	
n*-Butyl ether	41		142–96–1	BTE	
iso-Butyl formate, see Isobutyl formate.		3	542–55–2	BFI	BFN/BFO
n-Butyl formate	34		592–84–7	BFN	BFI/BFO
Butyl heptyl ketone	18		19780–10–0	BHK	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Butyl methacrylate	14		97–88–1	BMH	BMI/BMN
Butyl methacrylate, Decyl methacrylate, Cetyl-Eicosyl methacrylate mixture, see Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture.		3			DER (BMH/BMI/BMN/CEM)
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture.	14	3		DER	BMH/BMI/BMN/CEM
Butyl methyl ketone, see Methyl butyl ketone.		2	591–78–6		MBJ (MBK/MIK)
Butyl phenol, Formaldehyde resin in Xylene.	32				
n-Butyl propionate	34		209–669–5	BPN	
Butyl stearate	34		123–95–5	BST	
Butyl toluene	32		1595–05–7	BUE	
Butyraldehyde (all isomers)	19	3	123–72–8	BAE	BAD/BTR
Butyric acid	4		107–92–6	BRA	IBR
gamma-Butyrolactone	0	1, 2	96–48–0	BLA	
C9 Resinfeed (DSM)	32	2		CNR	
Calcium alkaryl sulfonate (alternately *sulphonate*) (C11–C50), *see* Calcium long-chain alkaryl sulfonate (alternately sulphonate) (C11–C50).		3		CAE	CAY
Calcium alkyl (C9) phenol sulfide (alternately sulphide), polyolefin phosphorosulfide (alternately phosphorosulphide) mixture.	34			CPX	
Calcium alkyl (C10–C28) salicylate	34	3		CAJ	
Calcium bromide solution, see Drilling brines.			7789–41–5	CBI	DRB
Calcium alkyl salicylate, see Calcium long-chain alkyl salicylate (C13+), Calcium long-chain alkyl (C18–C28) salicylate, or Calcium alkyl (C10–C28) salicylate.	34				CAJ/CAK/CAZ
Calcium bromide solution, see Drilling brines.			7789–41–5	CBI	DRB
Calcium bromide/Zinc bromide solution, see Drilling brine (containing Zinc salts).					DZB
Calcium carbonate slurry	34		471–34–1	CSR	
Calcium chloride solution, see Drilling brines.			10043–52–4	CCS	CLC
Calcium hydroxide slurry	5		1305–62–0	COH	CAH
Calcium hypochlorite solution (15% or less).	5	3	7778–54–3	CHU	CHY/CHZ
Calcium hypochlorite solution (more than 15%).	5	3	7778–54–3	CHZ	CHU/CHY
Calcium lignosulfonate (alternately *lignosulphonate*) solution, *see* also Lignin liquor.			8061–52–7	CLL	LNL
Calcium long-chain alkaryl sulfonate (alternately sulphonate) (C11–C50).	34		722503–69–7	CAY	
Calcium long-chain alkyl (C8–C40) *phenate, see* Calcium long-chain alkyl (C5–C10) phenate or Calcium long-chain alkyl (C11–C40) phenate.				CAQ	CAU/CAV (CAN/CAW)

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Calcium long-chain alkyl (C5–C10) phenate.	34	3	.....	CAU	CAN/CAQ/ CAV/CAW
Calcium long-chain alkyl (C5–C20) phenate.	34	.....	.....	CAV	CAN/CAQ/ CAU/CAW
Calcium long-chain alkyl (C11–C40) phenate.	34	3	.....	CAW	CAN/CAQ/ CAU/CAV
Calcium long-chain alkyl phenate sulfide (alternately sulphide) (C8–C40).	34	.....	.....	CPI	
Calcium long-chain alkyl phenolic amine (C8–C40).	9	.....	.....	CPQ	
Calcium long-chain alkyl (C18–C28) salicylate.	34	3	.....	CAJ	
Calcium long-chain alkyl salicylate (C13+).	34	.....	.....	CAK	CAJ/CAZ
Calcium nitrate solutions (50% or less).	34	3	10124–37–5	CNU	CNT
Calcium nitrate/Magnesium nitrate/ Potassium chloride solution.	34	.....	.....	CLM	CNT/CNU/ MGN/ MGO/ PCS/PCU/ PSD
Calcium salts of fatty acids	34	.....	85251–71–4	CFF	
Calcium stearate	34	.....	1592–23–0	CSE	
Calcium sulfonate (alternately sulphonate)/Calcium carbonate/ Hydrocarbon solvent mixture.	33	.....	.....	CSH	
Camelina oil, see Oil, misc.: Camelina.	.....	3	68956–68–3	CEL	
Camphor oil (light)	18	.....	8008–51–3	CPO	
Canola oil, see Oil, edible: Rapeseed (low erucic acid containing less than 4% free fatty acids).	.....	.....	120962–03–0		ORO (ORP)
Caprolactam solution, see epsilon-Caprolactam (molten or aqueous solutions).	.....	.....	105–60–2	CLS	
epsilon-Caprolactam (molten or aqueous solutions).	22	3	105–60–2	CLU	CLS
Caramel solutions	43	.....	8028–89–5	CML	
Carbolic oil	21	.....	108–95–2	CBO	
Carbon dioxide (high purity)	0	1	124–38–9	CDH	CDO/CDQ
Carbon dioxide (reclaimed quality)	0	1	124–38–9	CDQ	CDH/CDO
Carbon dioxide, liquefied	0	1	124–38–9	CDO	CDH/CDQ
Carbon disulfide (alternately disulphide).	38	.....	75–15–0	CBB	
Carbon tetrachloride	36	2	56–23–5	CBT	CBU
Cashew nut shell oil (untreated), see Oil, misc.: Cashew nut shell (untreated).	.....	.....	8007–24–7		OCN
Castor oil, see Oil, edible: Castor	34	.....	8001–79–4		OCA (VEO).
Catoxid feedstock	36	2	.....	CXF	
Caustic potash solution	5	2	1310–58–3	CPS	
Caustic soda solution	5	2	1310–73–2	CSS	
Cesium formate solution	43	3	3495–36–1	CSM	
Cetyl alcohol (Hexadecanol), see Alcohols (C13+).	.....	.....	36653–82–4		ALY (ASY/ AYL)
Cetyl alcohol, see Alcohols (C13+)	20	.....	36653–82–4		ALY (ASY/ AYL)
Cetyl/Eicosyl methacrylate mixture	14	1	.....	CEM	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Cetyl/Stearyl alcohol, see Alcohols (C13+).	.....	.....	.....		ALY (ASY/AYL)
Chlorinated paraffins (C10–C13)	36	.....	*1002–69–3	CLH	CLG/CLJ/CLQ
Chlorinated paraffins (C14–C17) (with 50% Chlorine or more, and less than 1% C13 or shorter chains).	36	3	.....	CLJ	CLG/CLH/CLQ
Chlorinated paraffins (C14–C17) (with 52% Chlorine).	36	.....	.....	CLQ	CLG/CLH/CLJ
Chlorinated paraffins (C18+) with any level of chlorine.	36	.....	*3386–33–2	CLG	CLH/CLJ
Chlorine	0	1	7782–50–5	CLX	
Chloroacetic acid (80% or less)	4	3	79–11–8	CHM	CHL/MCA
Chlorobenzene	36	2	108–90–7	CRB	
Chlorodifluoromethane, see Monochlorodifluoromethane.	.....	.....	75–45–6	MCF	
2-Chloro-4-ethylamino-6-isopropylamino-5-triazine solution.	0	1	287476–17–9	CET	
1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one.	18	2	66346–01–8	CDP	
2- or 3-Chloropropionic acid	4	.....	29617–66–1 or 107–94–8	CPM	CLA/CLP
Chloroform	36	.....	67–66–3	CRF	
Chlorohydrins (crude)	17	3	*107–07–3	CHD	
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution.	9	.....	.....	CDM	
o-Chloronitrobenzene	42	.....	88–73–3	CNO	CNP
Chlorosulfonic (alternately Chlorosulphonic) acid.	0	1	7790–94–5	CSA	
m-Chlorotoluene	36	3	108–41–8	CTM	CHI/CRN/CTO
o-Chlorotoluene	36	3	95–49–8	CTO	CHI/CRN/CTM
p-Chlorotoluene	36	3	106–43–4	CRN	CHI/CTM/CTO
Chlorotoluenes (mixed isomers)	36	3	25168–05–2	CHI	CRN/CTM/CTO
Choline chloride solutions	20	.....	67–48–1	CCO	
Citric acid (70% or less)	4	3	77–92–9	CIS	CIT
Clay slurry	43	.....	1332–58–7	CLY	
Coal slurry	43	.....	125612–26–2	COG	COA
Coal tar	33	.....	8007–45–2	COR	OCT
Coal tar crude bases	33	.....	65996–84–1	CTB	
Coal tar distillate, see Naphtha: Coal tar solvent.	.....	.....	65996–91–0	CDL	NCT (CTU)
Coal tar naphtha solvent, see Naphtha: Coal tar solvent.	.....	.....	65996–91–0		NCT (CDL/CTU)
Coal tar pitch (molten)	33	3	65996–93–2	CTP	
Coal tar, high temperature	33	.....	65996–89–6	CHH	
Cobalt naphthenate in solvent naphtha.	34	.....	61789–51–3	CNS	
Cocoa butter, see Oil, edible: Cocoa butter.	.....	.....	8002–31–1		OCB (VEO)
Coconut oil, see Oil, edible: Coconut.	.....	2	8001–31–8		OCC (VEO)
Coconut oil, fatty acid, see Oil, misc.: Coconut fatty acid.	.....	2	61788–47–4		CFA
Coconut oil, fatty acid methyl ester, see Oil, misc.: Coconut fatty acid methyl ester.	.....	3	61788–59–8		OCM

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Copper salt of long-chain (C17+) alkanoic acid.	34			CUS	CFT
Copper salt of long-chain (C3–C16) fatty acid.	34		*3112–74–1	CFT	CUS
Corn oil, see Oil, edible: Corn			8001–30–7		OCO (VEO)
Corn syrup	43		8029–43–4	CSY	
Cottonseed oil, see Oil, edible: Cottonseed.			8001–29–4		OCS (VEO)
Cottonseed oil, fatty acid, see Oil, misc.: Cottonseed oil, fatty acid.			68308–51–0	CFY	
Creosote	21	2		CCW	CCT/CWD
Creosote (coal tar)	21	2, 3	8001–58–9	CCT	CCW
Creosote (wood tar)	21	2, 3	8021–39–4	CWD	CCT/CCW
Cresol/Phenol/Xylenol mixture	21			CXX	
Cresols (all isomers)	21	3	1319–77–3	CRS	CFO/CFP/CRL/CRO/CSC/CSO
Cresols with 5% or more Phenol, see Phenol.				CFP	PHN (CFO/CRL/CRO/CRS/CSO)
Cresols with less than 5% Phenol, see Cresols (all isomers).				CFO	CRS (CFP/CRL/CRO/CSO)
Cresylate spent caustic, see Cresylic acid, sodium salt solution.		2		CSC	CYD
Cresylic acid	21		1319–77–3	CRY	
Cresylic acid, dephenolized	21		1319–77–3	CAD	CRY/CYN
Cresylic acid tar	21			CRX	
Cresylic acid with 5% or more phenol.	21			CYN	CAD/CRY
Cresylic acid, sodium salt solution	5	2	34689–46–8	CYD	CSC
Crotonaldehyde	19	2	123–73–9	CTA	
Crude Isononylaldehyde, see Isononyldehyde (crude).			5435–64–3		INC
Crude Isopropanol	20		67–63–0		IPB (IPA/PAL)
Crude Piperazine, see Piperazine (crude).			110–85–0		PZC (PPZ/PIZ)
Cumene, see Alkyl (C3–C4) benzenes.			98–82–8	CUM	AKD (PBY/PBZ)
1,5,9-Cyclododecatriene	30		4904–61–4	CYT	
Cycloheptane	31		291–64–5	CYE	
Cyclohexane	31		110–82–7	CHX	
Cyclohexane-1,2-dicarboxylic acid, diisononyl ester.	34		166412–78–8	CDE	
Cyclohexane oxidation products, sodium salts solution.	43			CYS	
Cyclohexanol	20		108–93–0	CHN	
Cyclohexanone	18	2	108–94–1	CCH	
Cyclohexanone/Cyclohexanol mixtures.	18	2		CYX	
Cyclohexyl acetate	34		622–45–7	CYC	
Cyclopentadiene/Styrene/Benzene mixture.	30			CSB	
1,3-Cyclopentadiene dimer (molten)	30	3	7313–32–8	CPD	DPT/DPV
Cyclopentane	31		287–92–3	CYP	
Cyclopentene	30		142–29–0	CPE	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
p-Cymene	32		99–87–6	CMP	
Decahydronaphthalene	33		91–17–8	DHN	
Decaldehyde	19		112–31–2	DAY	IDA/DAL
iso-Decaldehyde, see Isodecaldehyde.			3085–26–5		
n-Decaldehyde	19		3085–26–5		
Decane (all isomers), see n-Alkanes (C10+) (all isomers).			124–18–5	DCC	ALV (ALJ)
Decanoic acid	4		334–48–5	DCO	NEA
Decene	30		872–05–9	DCE	
Decyl acetate	34		112–17–4	DYA	
Decyl acrylate	14		2156–96–9	DAT	IAI/DAR
Decyl alcohol (all isomers)	20	2, 3	85566–12–7	DAX	ISA/DAN
Decyl/Dodecyl/Tetradecyl alcohol mixture.	20	3	*112–30–1	DYO	DAN/DAX/DDN/ISA
Decylbenzene, see Alkyl (C9+) benzenes.			104–72–3	DBZ	AKB
Decyloxytetrahydrothiophene dioxide.	0	1	18760–44–6	DHT	
Detergent alkylate	32		68442–97–7	DKY	AKB/DBZ/DDB/TDB/TRB/UDB
Dextrose solution, see Glucose solution.			50–99–7	DTS	GLU
Diacetone alcohol	20	2	123–42–2	DAA	
Dialkyl (C10–C14) benzenes, see Alkyl (C9+) benzenes.			*55191–38–3	DAB	AKB
Dialkyl (C8–C9) diphenylamines	9		*101–67–7	DAQ	
Dialkyl (C7–C13) phthalates	34		*3648–21–3	DAH	
Including:					
Di-(2-ethylhexyl) phthalate.	34		117–81–7		
Diheptyl phthalate	34		3648–21–3		
Dihexyl phthalate	34		84–75–3		
Diisooctyl phthalate.	34		131–20–4		
Diisodecyl phthalate.	34		89–16–7		
Diisononyl phthalate.	34		28553–12–0		
Dinonyl phthalate	34		84–76–4		
Dioctyl phthalate	34		117–84–0		
Ditridecyl phthalate.	34		119–06–2		
Diundecyl phthalate.	34		3648–20–2		
Dialkyl (C9–C10) phthalates, see Dialkyl (C7–C13) phthalates.			*84–76–4	DLK	DLH (DAP/DHL/DHP/DID/DIE/DIF/DIN/DIO/DIT/DOP/DPA/DTP/DUP)
Dialkyl thiophosphates sodium salts solution.	34	3	*26377–29–7	DYH	
2,6-Diaminohexanoic acid phosphonate mixed salts solution.	21			DBT	
Dibromomethane	36		74–95–3	DBH	
Dibutyl carbinol, see Nonyl alcohol (all isomers).			623–93–8		NNS (DBC/NNI/NNN)

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Dibutyl hydrogen phosphonate	34		107–66–4	DHD	
Dibutyl phthalate	34		84–74–2	DPA	DIT
Dibutyl terephthalate	34	3	1962–75–0	DYE	
Dibutylamine	7		111–92–2	DBA	
Dibutylphenol (all isomers)	21			DBT	
Dibutylphenols	21		26967–68–0	DBT	
Di-tert-butylphenol	21		128–39–2	DBF	DBT/DBV/DBW
2,4-Di-tert-butylphenol	21		96–76–4	DBV	DBF/DBT/DBW
2,6-Di-tert-butylphenol	21	3	128–39–2	DBW	DBF/DBT/DBV
Dichlorobenzene (all isomers)	36	3	25321–22–6	DBX	DBM/DBO/DBP
3,4-Dichloro-1-butene	36		760–23–6	DCD	DCB
Dichlorodifluoromethane	36		75–71–8	DCF	
1,1-Dichloroethane	36		75–34–3	DCH	
Dichloroethyl ether	41	3	111–44–4	DYR	DEE
1,6-Dichlorohexane	36		2163–00–0	DHX	
2,2′-Dichloroisopropyl ether	41		63283–80–7	DCI	
Dichloromethane	36	2	75–09–2	DCM	
2,4-Dichlorophenol	21		120–83–2	DCP	
2,4-Dichlorophenoxyacetic acid/Diethanolamine salt solution.	43		5742–19–8	DDE	
2,4-Dichlorophenoxyacetic acid/Dimethylamine salt solution (70% or less).	0	1, 2, 3	2008–39–1	DDA	DAD/DSX
2,4-Dichlorophenoxyacetic acid/Triisopropanolamine salt solution.	43	2	34075–45–1	DTI	
1,1-Dichloropropane	36		78–99–9	DPB	DPC/DPL/DPP/DPX
1,2-Dichloropropane	36	2, 3	78–87–5	DPP	DPB/DPC/DPL/DPX
1,3-Dichloropropane	36		142–28–9	DPC	DPB/DPL/DPP/DPX
Dichloropropene (all isomers)	15		26952–23–8	DCW	DPF/DPU
1,3-Dichloropropene	15		542–75–6		DCW/DPF
Dichloropropene/Dichloropropane mixtures.	15		8003–19–8	DMX	DCW/DPB/DPC/DPL/DPP/DPU/DPX
2,2-Dichloropropionic acid	4		75–99–0	DCN	
Dicyclopentadiene, Resin Grade, 81–89%.	30	3	77–73–6	DPV	CPD/DPT
Dicyclopentadiene, see 1,3-Cyclopentadiene dimer (molten).			77–73–6	DPT	CPD (DPV)
Diethanolamine	8	2	111–42–2	DEA	
Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution.			5742–19–8	DZZ	DDE
Diethylamine	7		109–89–7	DEN	
Diethylaminoethanol	8		100–37–8	DAE	
2,6-Diethylaniline	9		579–66–8	DMN	DIY
Diethylbenzene	32		25340–17–4	DEB	
Diethylene glycol	40	2	111–46–6	DEG	
Diethylene glycol butyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.			112–34–5	DME	PAG

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Diethylene glycol butyl ether acetate, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether acetate.	.....	.....	124–17–4	DEM	PAF
Diethylene glycol dibenzoate	34	.....	120–55–8	DGZ	
Diethylene glycol dibutyl ether	40	.....	112–73–2	DIG	
Diethylene glycol diethyl ether	40	.....	112–36–7	DGS	
Diethylene glycol ethyl ether, see Poly (2–8) alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	111–90–0	DGE	PAG
Diethylene glycol ethyl ether acetate, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether acetate.	.....	.....	112–15–2	DGA	PAF
Diethylene glycol n-hexyl ether, see Poly (2–8) alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	112–59–4	DHE	PAG
Diethylene glycol methyl ether, see Poly (2–8) alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	111–77–3	DGM	PAG
Diethylene glycol methyl ether acetate, see Poly (2–8) alkylene glycol monoalkyl (C1–C6) ether acetate.	.....	.....	629–38–9	DGR	PAF
Diethylene glycol phenyl ether	40	.....	104–68–7	DGP	
Diethylene glycol phthalate	34	.....	2202–98–4	DGL	
Diethylene glycol propyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	6881–94–3	DGO	PAG
Diethylenetriamine	7	2	111–40–0	DET	
Diethylenetriaminepentaacetic acid, pentasodium salt solution.	43	.....	140–01–2	DYS	
Diethylethanolamine, see Diethylaminoethanol.	.....	.....	100–37–8		DAE
Diethyl ether	8	.....	60–29–7	EET	
Diethyl hexanol, see Decyl alcohol (all isomers).	.....	.....	19398–78–8		DAX
Di-(2-ethylhexyl) adipate	34	.....	103–23–1	DEH	
Di-(2-ethylhexyl) phosphoric acid	1	.....	298–07–7	DEP	
Di-(2-ethylhexyl) phthalate, see Dialkyl (C7–C13) phthalate.	.....	.....	117–81–7	DIE	DAH
Di-(2-ethylhexyl) terephthalate	34	.....	6422–86–2	DHH	
Diethyl phthalate	34	.....	84–66–2	DPH	
Diethyl sulfate (alternately sulphate)	34	.....	64–67–5	DSU	
Diglycidyl ether of Bisphenol A	16	.....	1675–54–3	BDE	
Diglycidyl ether of Bisphenol F	16	.....	2095–03–6	DGF	
Diheptyl phthalate, see Dialkyl (C7–C13) phthalate.	.....	.....	3648–21–3	DHP	DAH
Di-n-hexyl adipate	34	.....	110–33–8	DHA	
Dihexyl phthalate, see Dialkyl (C7–C13) phthalate.	.....	.....	84–75–3	DHL	
Diisobutyl carbinol, see Nonyl alcohol (all isomers).	.....	.....	108–82–7	DBC	NNS
Diisobutyl ketone	18	.....	108–83–8	DIK	
Diisobutyl phthalate	34	.....	84–69–5	DIT	DPA
Diisobutylamine	7	.....	110–96–3	DBU	
Diisobutylene	30	.....	25167–70–8	DBL	
Diisodecyl phthalate, see Dialkyl (C7–C13) phthalates.	.....	.....	26761–40–0	DID	DAH
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution.	5	.....	73347–80–5	DDH	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Diisononyl adipate	34		33703–08–1	DNY	
Diisononyl phthalate, see Dialkyl (C7–C13) phthalates.		2	28553–12–0	DIN	DAH
Diisooctyl phthalate, see Dialkyl (C7–C13) phthalate.			27554–26–3	DIO	DAH/(DIE/DOP)
Diisopropanolamine	8		110–97–4	DIP	
Diisopropylamine	7		108–18–9	DIA	DNA
Diisopropylbenzene (all isomers)	32		25321–09–9	DIX	
Diisopropylnaphthalene	32		24157–81–1	DII	
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution.	5		73347–80–5	DDH	
N,N-Dimethylacetamide	10		127–19–5	DAC	DLS
N,N-Dimethylacetamide solution (40% or less).	10	3	127–19–5	DLS	DAL
Dimethyl adipate	34		627–93–0	DLA	
Dimethylamine	7		124–40–3	DMA	DMC/DMG/DMY
Dimethylamine salt of 4-Chloro-2-methylphenoxyacetic acid solution, see 4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution.			2039–46–5		CDM
Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (70% or less).			2008–39–1	DAD	DDA (DSX)
Dimethylamine solution (45% or less).	7	3	124–40–3	DMG	DMA/DMC/DMY
Dimethylamine solution (greater than 45% but not greater than 55%).	7	3	124–40–3	DMY	DMA/DMC/DMG
Dimethylamine solution (greater than 55% but not greater than 65%).	7	3	124–40–3	DMC	DMA/DMG/DMY
2,6-Dimethylaniline	9		87–62–7	DMM	DDL
Dimethylbenzene, see Xylenes		2	1330–20–7		XLX/XLM/XLO/XLP
Dimethylcyclicsiloxane hydrolyzate	34		*541–05–9	DXZ	
N,N-Dimethylcyclohexylamine	7		98–94–2	DXN	
Dimethyl disulfide (alternately disulphide).	0	1, 2, 3	624–92–0	DSK	
Dimethyldodecylamine, see N,N-Dimethyldodecylamine.	7		112–18–5		DDY
N,N-Dimethyldodecylamine	7		112–18–5	DDY	
Dimethylethanolamine	8		108–01–0	DMB	
Dimethyl ether	41		115–10–6	DIM	
Dimethylformamide	10	2	68–12–2	DMF	
Dimethyl furan	41		625–86–5	DFU	
Dimethyl glutarate	34		1119–40–0	DGT	
Dimethyl hydrogen phosphite	34	2	868–85–9	DPI	
Dimethyl naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution.	34	2	27178–87–6	DNS	
Dimethyl octanoic acid	4		29662–90–6	DMO	
Dimethyl phthalate	34		131–11–3	DTL	
Dimethylpolysiloxane, see Polydimethylsiloxane.			9016–00–6	DMP	
2,2-Dimethylpropane-1,3-diol (molten or solution).	20	3	126–30–7	DDI	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Dimethyl succinate	34		106–65–0	DSE	
Dinitrotoluene (molten)	42	3	121–14–2	DNM	DNL/DNU/DTT
Dinonyl phthalate, see Dialkyl (C7–C13) phthalates.			84–76–4	DIF	DAH
Dioctyl phthalate, see Dialkyl (C7–C13) phthalates.			117–84–0	DOP	DAH (DIE/DIO)
1,4-Dioxane	41		123–91–1	DOX	
Dipentene	30		138–86–3	DPN	
Diphenyl	32		92–52–4	DIL	
Diphenylamine (molten)	9		122–39–4	DAG	DAM
Diphenylamine, reaction product with 2,2,4-trimethylpentene.	9		68921–45–9	DAK	
Diphenylamines, alkylated	9		68921–45–9	DAJ	
Diphenyl/Diphenyl ether mixtures	33		8004–13–5	DDO	
Diphenyl ether	41		101–84–8	DPE	
Diphenyl ether/Biphenyl ether mixture, see Diphenyl/Diphenyl ether mixture.			8004–13–5		DDO
Diphenyl ether/Diphenyl phenyl ether mixture.	41		8004–13–5	DOB	
Diphenylmethane diisocyanate	12	2	101–68–8	DPM	
Diphenyl oxide, see Diphenyl ether			101–84–8		DPE
Diphenylol propane-Epichlorohydrin resins.	0	1	25068–38–6	DPR	
Di-n-propylamine	7		142–84–7	DNA	DIA
Dipropylene glycol	40		25265–71–8	DPG	
Dipropylene glycol butyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.			29911–28–2	DBG	PAG
Dipropylene glycol dibenzoate	34		94–51–9	DGY	
Dipropylene glycol methyl ether, see Poly(2–8)alkylene glycol monoalkyl (C1–C6) ether.			34590–94–8	DPY	PAG
Distillates, flashed feed stocks	33		8002–05–9	DFF	
Distillates, straight run	33		68814–87–9	DSR	
Di-tert-butyl phenol	21			DBF	DBT/DBV/DBW
2,4-Di-tert-butyl phenol	21		96–76–4	DBV	DBF/DBT/DBW
2,6-Di-tert-butyl phenol	21		128–39–2	DBW	DBF/DBT/DBV
Dithiocarbamate ester (C7–C35)	34			DHO	
Ditridecyl adipate	34		16958–92–2	DTY	
Ditridecyl phthalate, see Dialkyl (C7–C13) phthalate.			119–06–2	DTP	DAH
Diundecyl phthalate, see Dialkyl (C7–C13) phthalates.			3648–20–2	DUP	DAH
Dodecane (all isomers), see n-Alkanes (C10+) (all isomers).			13475–82–6	DOF	ALV (ALJ/DOC)
tert-Dodecanethiol	20	2	25103–58–6	DDL	LRM
Dodecene (all isomers)	30	3	25378–22–7	DOZ	DDC/DOD
1-Dodecene, see Dodecene (all isomers).	30			DDC	DOZ
Dodecanol (all isomers), see Dodecyl alcohol (all isomers).		2	112–53–8	DDN	LAL
2-Dodecenylsuccinic acid, dipotassium salt solution.	34		57195–28–5	DSP	
Dodecyl alcohol (all isomers)	20	2	112–53–8	DDN	ASK/ASY/LAL

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Dodecylamine/Tetradecylamine mixture.	7	2	*124–22–1	DTA	
Dodecylbenzene, see Alkyl (C9+) benzenes.	.....	.....	123–01–3	DDB	AKB
Dodecylbenzenesulfonic (alternately Dedecylbenzenesulphonic) acid.	0	1, 2	27176–87–0	DSA	
Dodecyldimethylamine/ Tetradecyldimethylamine mixture.	7	.....	*112–18–5	DOT	
Dodecyl diphenyl ether disulfonate (alternately disulphonate) solution.	43	.....	25167–32–2	DTA	
Dodecyl hydroxypropyl sulfide (alternately sulphide).	0	1	67124–09–8	DOH	
n-Dodecyl mercaptan	21	.....	112–55–0	DBT	
Dodecyl methacrylate	14	.....	142–90–5	DDM	
Dodecyl/Octadecyl methacrylate mixture.	14	.....	*142–90–5	DOM	DDM
Dodecyl/Pentadecyl methacrylate mixture.	14	.....	*142–90–5	DDP	
Dodecyl phenol	21	.....	27193–86–8	DOL	
Dodecyl xylene	32	.....	66697–27–6	DXY	
Drilling brines (containing Calcium, Potassium or Sodium salts).	43	.....	.....	DRL	DRB/DRS
Drilling brines (containing Zinc salts).	43	.....	.....	DZB	DRB
Drilling brines, including: Calcium bromide solution, Calcium chloride solution and Sodium chloride solution.	43	3	.....		DRS/DRL
Drilling mud (low toxicity) (*if flammable or combustible*).	33	.....	.....	DRO	DRM/DRN/ DRP
Drilling mud (low toxicity) (*if non-flammable or non-combustible*).	43	.....	.....	DRP	DRM/DRN/ DRO
Epichlorohydrin	17	.....	106–89–8	EPC	
Epoxy resin	16	.....	.....	EPN	
ETBE, see Ethyl tert-butyl ether	.....	.....	637–92–3		EBE
Ethane	31	.....	74–84–0	ETH	
Ethanolamine	8	.....	141–43–5	MEA	
2-Ethoxyethanol, see Ethylene glycol monoalkyl ethers.	.....	.....	110–80–5	EEO	EGC (EGE)
2-Ethoxyethyl acetate	34	2	111–15–9	EEA	EGA
Ethoxylated alkyloxy alkyl amine	8	.....	68155–39–5	ELM	
Ethoxylated alcohols, C11–C15, see alcohol polyethoxylates.	.....	.....	9002–92–0		AEA/AEB/ AED/AET/ APV/ APW/APX
Ethoxylated long-chain (C16+) alkyloxyalkylamine.	8	.....	.....	ELA	
Ethoxylated tallow alkyl amine	7	.....	61791–26–2	TAY	TAG/TAR
Ethoxylated tallow alkyl amine, glycol mixture.	7	.....	.....	TAG	TAR/TAY
Ethoxylated tallow amine (≤ 95%)	7	3	61791–26–2	TAR	TAG/TAY
Ethoxy triglycol, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	112–50–5	ETG	PAG (ETR/ TGE)
Ethoxy triglycol (crude)	40	.....	112–50–5	ETR	
Ethyl acetate	34	2	141–78–6	ETA	
Ethyl acetoacetate	34	.....	141–97–9	EAA	
Ethyl acrylate	14	2	140–88–5	EAC	
Ethyl alcohol	20	2	64–17–5	EAL	
Ethylamine	7	2	75–04–7	EAM	EAN/EAO

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Ethylamine solution (72% or less) ..	7	3	75–04–7	EAN	EAM/EAO
Ethyl amyl ketone	18	.....	106–68–3	EAK	ELK
Ethylbenzene	32	.....	100–41–4	ETB	
Ethyl butanol	20	.....	97–95–0	EBT	
N-Ethylbutylamine	7	.....	13360–63–9	EBA	
Ethyl tert-butyl ether	41	2	637–92–3	EBE	
Ethyl butyrate	34	.....	105–54–4	EBR	
Ethyl chloride	36	.....	75–00–3	ECL	
Ethyl cyclohexane	31	.....	1678–91–7	ECY	
N-Ethylcyclohexylamine	7	.....	5459–93–8	ECC	
2-Ethyl-2-(2,4-dichlorophenoxy) acetate.	34	.....	533–23–3	EDY	
2-Ethyl-2-(2,4-dichlorophenoxy) propionate.	34	.....	58048–39–8	EDP	
S-Ethyl dipropylthiocarbamate	34	3	759–94–4	ECB	
Ethylene	30	.....	74–85–1	ETL	
Ethyleneamine EA 1302	7	2	593–67–9	EMX	
Ethylene carbonate	34	.....	96–49–1	ECR	
Ethylene chlorohydrin	20	.....	107–07–3	ECH	
Ethylene cyanohydrin	20	2	109–78–4	ETC	
Ethylenediamine	7	2	107–15–3	EDA	EMX
Ethylenediaminetetraacetic acid/ tetrasodium salt solution.	43	.....	64–02–8	EDS	
Ethylene dibromide	36	.....	106–93–4	EDB	
Ethylene dichloride	36	2	107–06–2	EDC	
Ethylene glycol	20	2	107–21–1	EGL	EAG
Ethylene glycol acetate	34	.....	542–59–6	EGO	
Ethylene glycol butyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	111–76–2	EGM	EGC
Ethylene glycol tert-butyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	7580–85–0	EGG	EGC
Ethylene glycol butyl ether acetate	34	.....	112–07–2	EMA	
Ethylene glycol diacetate	34	.....	111–55–7	EGY	
Ethylene glycol dibutyl ether	40	.....	112–48–1	EGB	
Ethylene glycol ethyl ether, see Ethyl glycol monoalkyl ethers.	.....	.....	110–80–5	EGE	EGC/EEO
Ethylene glycol ethyl ether acetate, see 2-Ethoxyethyl acetate.	.....	2	111–15–9	EGA	EEA
Ethylene glycol hexyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	112–25–4	EGH	EGC
Ethylene glycol isobutyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	224–658–5		EGC (EGG/ EGM)
Ethylene glycol isopropyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	109–59–1	EGI	EGC
Ethylene glycol methyl butyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	13343–98–1	EMB	EGC
Ethylene glycol methyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	109–86–4	EME	EGC
Ethylene glycol methyl ether acetate.	34	.....	110–49–6	EGT	
Ethylene glycol monoalkyl ethers ...	40	2	.....	EGC	
Including:					
Ethylene glycol butyl ether.	40	.....	111–76–2		
Ethylene glycol tert-butyl ether.	40	.....	7580–85–0		
Ethylene glycol ethyl ether.	40	.....	111–15–9		
Ethylene glycol hexyl ether.	40	.....	112–25–4		

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Ethylene glycol isobutyl ether.	40	.....	224–658–5		
Ethylene glycol isopropyl ether.	40	.....	109–59–1		
Ethylene glycol methyl ether.	40	.....	109–86–4		
Ethylene glycol methyl butyl ether.	40	.....	13343–98–1		
Ethylene glycol propyl ether.	40	.....	2807–30–9		
Ethylene glycol phenyl ether	40	.....	122–99–6	EPE	
Ethylene glycol phenyl ether/ Diethylene glycol phenyl ether mixture.	40	.....	122–99–6/104 68 7	EDX	
Ethylene glycol propyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	2807–30–9	EGP	EGC/EGI/ EGN
Ethylene glycol n-propyl ether, see Ethylene glycol monoalkyl ethers.	.....	.....	2807–30–9	EGN	EGC (EGI/ EGP)
Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture.	20	.....	.....	EBX	
Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture.	20	.....	.....	ESX	
Ethylene oxide	0	1	75–21–8	EOX	
Ethylene oxide/Propylene oxide mixture.	16	.....	75–21–8/75–56–9	EPF	EPM
Ethylene oxide/Propylene oxide mixture with an Ethylene oxide content not more than 30% by mass.	16	3	75–21–8/75–56–9	EPM	EPF
Ethylene-Propylene copolymer (in liquid mixtures).	31	.....	9010–79–1	EPY	
Ethylene-Vinyl acetate copolymer (emulsion).	43	.....	24937–78–8	ECV	
Ethyl ether, see Diethyl ether	.....	.....	60–29–7		EET
Ethyl-3-ethoxypropionate	34	.....	763–69–9	EEP	
2-Ethylhexaldehyde, see Octyl aldehydes.	.....	.....	123–05–7	EHA	OAL (OLX)
2-Ethylhexanoic acid, see Octanoic acid (all isomers).	.....	.....	149–57–5	EHO	OAY (OAA)
2-Ethylhexanol, see Octanol	.....	.....	104–76–7	EHX	OCA (OTA)
2-Ethylhexyl acrylate	14	.....	103–11–7	EAI	
2-Ethylhexylamine	7	.....	104–75–6	EHM	
Ethyl hexyl phthalate	34	.....	117–81–7	EHE	
Ethyl hexyl tallate	34	.....	68334–13–4	EHT	
2-Ethyl-2-(hydroxymethyl) propane-1,3-diol (C8–C10) ester.	34	.....	77–99–6	EHD	
Ethyl lactate	34	.....	97–64–3	ELT	
Ethylidene norbornene	30	2	16219–75–3	ENB	
Ethyl methacrylate	14	.....	97–63–2	ETM	
N-Ethylmethylallylamine	7	.....	18328–90–0	EML	
Ethyl propionate	34	.....	105–37–3	EPR	
2-Ethyl-3-propylacrolein	19	2	645–62–5	EPA	
2-Ethyl-6-methyl-N-(1′-methyl-2-methoxyethyl)aniline.	9	.....	51219–00–2	EEM	
o-Ethyl phenol	21	.....	90–00–6	EPL	
Ethyl toluene	32	.....	25550–14–5	ETE	
Fatty acid methyl esters	34	3	67762–38–3	FME	
Fatty acids (C8–C10)	34	3	*124–07–2	FDS	
Fatty acids (C12+)	34	3	*143–07–7	FDT	FAB/FAD/ FAI/FDI

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Fatty acids (saturated, C13+)	34		700041–79–8	FAB	FAD
Fatty acids (saturated, C14+), see Fatty acids (saturated, C13+).			700041–79–8	FAD	FAB
Fatty acids (C16+)	34	3	*57–10–3	FDI	
Fatty acids, essentially linear (C6–C18) 2-ethylhexyl ester.	34	2, 3		FAE	
Ferric chloride solution	1		7705–08–0	FCS	FCL
Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution.	43	2		FHX	STA
Ferric nitrate/Nitric acid solution	3	2	7782–61–8	FNN	
Fish oil, see Oil, edible: Fish		2	8016–13–5		OFS (AFN)
Fish protein concentrate (containing 4% or less formic acid).	4			FPC	
Fish silage protein concentrate (containing 4% or less formic acid).	4			FSC	
Fish solubles (*water based fish meal extracts*).	43			FSO	
Fluorosilicic acid (20–30%) in water solution.	1	3	16961–83–4	FSK	FSJ/FSL/HFS
Fluorosilicic acid (30% or less)	1		16961–83–4	FSJ	FSK/FSL/HFS
Formaldehyde (50% or more), Methanol mixtures.	19	2	50–00–0	MTM	
Formaldehyde solutions (37%–50%).	19	2	50–00–0	FMS	FMG/FMR
Formaldehyde solutions (45% or less).	19	2, 3	50–00–0	FMR	FMG/FMS
Formamide	10		75–12–7	FAM	
Formic acid	4	2	64–18–6	FMA	FMB
Formic acid (85% or less)	4	2	64–18–6	FMB	FMA
Formic acid (over 85%)	4	2, 3	64–18–6	FMD	
Formic acid mixture (containing up to 18% Propionic acid and up to 25% Sodium formate).	4	2, 3	64–18–6	FMC	FMA/FMB
Fructose solution	43		57–48–7	FTS	FRT
Fumaric adduct of Rosin, water dispersion.	43		65997–04–8	FAR	
Fuming sulfuric (alternately *sulphuric*) *acid, see* Oleum.		2	8014–95–7		
Furfural	19		98–01–1	FFA	
Furfuryl alcohol	20	2	98–00–0	FAL	
Gas oil, cracked, see Oil, misc.: Gas, cracked.			64741–62–4		GOC
Gasoline blending stock, alkylates	33		64741–64–6	GAK	
Gasoline blending stock, reformates.	33		8006–61–9	GRF	
Gasolines:					
Automotive (containing not more than 4.23 grams lead per gal.).	33		86290–81–5	GAT	
Aviation (containing not more than 4.86 grams lead per gal.).	33			GAV	AVA
Casinghead (*natural*)	33		68425–31–0	GCS	
Polymer	33		8006–61–9	GPL	
Straight run	33		68606–11–1	GSR	
Gasolines: Pyrolysis (containing Benzene), see Pyrolysis gasoline (containing Benzene).			68477–58–7	GPY	PYG

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Glucitol/Glycerol blend propoxylated (containing less than 10% amines).	40	3	.....	GGA	
Glucitol/Glycerol blend propoxylated (containing 10% or more amines).	40	.....	.....	GGB	
Glucose solution	43	.....	50–99–7	GLS	DTS
Glutaraldehyde solutions (50% or less).	19	.....	111–30–8	GTA	
Glycerine	20	2	56–81–5	GCR	
Glycerine (83%)/Dioxanedimethanol (17%) mixture.	20	.....	.....	GDN	GDM
Glycerol, see Glycerine	.....	2	56–81–5		GCR
Glycerol ethoxylated	40	.....	31694–55–0	GXA	
Glycerol monooleate	20	.....	25496–72–4	GMO	
Glycerol polyalkoxylate	40	.....	700038–65–9	GPA	
Glycerol propoxylated	40	3	25791–96–2	GXP	
Glycerol, propoxylated and ethoxylated.	40	3	9082–00–2	GXE	
Glycerol/Sucrose blend propoxylated and ethoxylated.	40	3	.....	GSB	
Glyceryl triacetate	34	.....	102–76–1	GCT	
Glycidyl ester of C10 trialkyl acetic acid.	34	.....	.....	GLU	GLT
Glycidyl ester of tertiary carboxylic acid, see Glycidyl ester of C10 trialkyl acetic acid.	.....	.....	.....	GLT	GLU
Glycidyl ester of tridecyl acetic acid, see Glycidyl ester of C10 trialkyl acetic acid.	.....	.....	.....	GLT	GLU
Glycidyl ester of Versatic acid, see Glycidyl ester of C10 trialkyl acetic acid.	.....	.....	.....	GLT	GLU
Glycine, sodium salt solution	7	.....	56–40–6	GSS	
Glycol diacetate, see Ethylene glycol diacetate.	.....	.....	111–55–7		EGY
Glycol mixture, crude	20	.....	107–21–1	GMC	
Glycol triacetate, see Glyceryl triacetate.	.....	.....	102–76–1		GCT
Glycolic acid solution (70% or less)	4	3	79–14–1	GLC	
Glyoxal solution (40% or less)	19	3	107–22–2	GOS	
Glyoxylic acid solution (50% or less).	4	3	298–12–4	GAC	
Glyphosate solution (not containing surfactant).	7	.....	1071–83–6	GIO	RUP
Grape Seed Oil, see Oil, edible: Grape seed.	.....	.....	8024–22–4		
Groundnut oil, see Oil, edible: Groundnut.	.....	.....	8002–03–7		OGN (VEO)
Hazelnut oil, see Oil, edible: Hazelnut.	.....	.....	84012–21–5		OHN (VEO)
Heptadecane (all isomers), see n-Alkanes (C10+) (all isomers).	.....	.....	629–78–7		ALV (ALJ)
Heptane (all isomers), see Alkanes (C6–C9).	.....	.....	142–82–5	HMX	ALK(HPI/HPT)
n-Heptanoic acid	4	.....	111–14–8	HEN	HEP
Heptanol (all isomers)	20	3	111–70–6	HTX	HTN
Heptene (all isomers)	30	2, 3	592–76–7	HPX	THE
Heptyl acetate	34	.....	112–06–1	HPE	
Heptylbenzenes, see Alkyl (C5–C8) benzenes.	.....	.....	1078–71–3		AKD

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Herbicide (C15–H22–NO2-Cl), see Metolachlor.	.....	.....	51218–45–2		MCO
Hexadecanol (Cetyl alcohol), see Alcohols (C13+).	.....	.....	36653–82–4		ALY (ASY/AYL)
1-Hexadecylnaphthalene/1,4-bis(Hexadecyl)naphthalene mixture.	32	.....	*56388–47–7	HNH	HNI
1-n-Hexadecylnaphthalene (90%)/1,4-di-n-(Hexadecyl)naphthalene (10%).	32	.....	*56388–47–7	HNI	HNH
Hexaethylene glycol, see Polyethylene glycol.	.....	.....	2615–15–8	HMG	PEG
1,3,5-Hexahydrotriethanol-1,3,5-triazine solution.	9	.....	.....	HES	
Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less).	9	.....	.....	HET	
Hexamethylene diisocyanate	12	.....	822–06–0	HMS	HDI
Hexamethylene glycol	20	.....	629–11–8	HMG	HXG
Hexamethylenediamine (molten)	7	3	124–09–4	HME	HMD/HMC
Hexamethylenediamine adipate (50% in water).	43	.....	15511–81–6	HAM	HAN
Hexamethylenediamine adipate solution.	43	.....	15511–81–6	HAN	HAM
Hexamethylenediamine solution	7	.....	124–09–4	HMC	HMD/HME
Hexamethyleneimine	7	.....	111–49–9	HMI	
Hexamethylenetetramine solutions	7	.....	100–97–0	HTS	HMT
Hexane (all isomers), see Alkanes (C6–C9).	.....	2	110–54–3	HXS	ALK (IHA/HXA)
1,6-Hexanediol, distillation overheads.	4	2, 3	629–11–8	HDO	
Hexanoic acid	4	.....	142–62–1	HXO	
Hexanol	20	.....	111–27–3	HXM	HEW/HEZ/HXN
Hexene (all isomers)	30	2, 3	592–41–6	HEX	HXE/HXT/HXU/HXV/MPN/MTN
Hexyl acetate	34	.....	142–92–7	HAE	
Hexylbenzenes, see Alkyl (C5–C8) benzenes.	.....	.....	1077–16–3		AKD
Hexylene glycol, see Hexamethylene glycol.	.....	.....	107–41–5	HXG	HMG
Hog grease, see Lard	.....	.....	61789–99–9		LRD
Hydrochloric acid	1	.....	7647–01–0	HCL	
Hydrofluorosilicic acid (25% or less), see Fluorosilicic acid (30% or less).	.....	.....	16961–83–4		FSJ(FSK/FSL/HFS)
bis(Hydrogenated tallow alkyl)methyl amines.	7	.....	61788–63–4	HTA	
Hydrogen peroxide solutions (over 8% but not more than 60% by mass).	0	1, 3	7722–84–1	HPN	HPO/HPS
Hydrogen peroxide solutions (over 60% but not more than 70% by mass).	0	1, 3	7722–84–1	HPS	HPN/HPO
Hydrogenated starch hydrolysate ...	0	1, 3	68425–17–2	HSH	
2-Hydroxyethyl acrylate	14	2	818–61–1	HAI	
N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution.	43	.....	207386–87–6	HET	
N,N-bis(2-Hydroxyethyl) oleamide ..	10	.....	93–83–4	HOO	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
2-Hydroxy-4-(methylthio)butanoic acid.	4	.....	583–91–5	HBA	
Hydroxyl terminated polybutadiene, see Polybutadiene, hydroxyl terminated.	.....	.....	69102–90–5		PHT
alpha-Hydro-omega-hydroxytetradeca(oxytetramethylene).	40	.....	.....	HTO	PYS/PYT
Illipe oil, see Oil, edible: Illipe	.....	.....	68956–68–3		ILO (VEO)
Isoamyl alcohol	20	3	123–51–3	IAA	AAI/AAL/AAN/APM/ASE
Isobutyl alcohol	20	2, 3	78–83–1	IAL	BAN/BAS/BAT/BAY
Isobutyl formate	34	3	542–55–2	BFI	BFN/BFO
Isobutyl methacrylate	14	3	97–86–9	BMI	BMH/BMN
Isodecaldehyde	19	.....	3085–26–5		
Isononylaldehyde (crude)	19	.....	5435–64–3	INC	
Isophorone	18	2	78–59–1	IPH	
Isophoronediamine	7	.....	2855–13–2	IPI	
Isophorone diisocyanate	12	.....	4089–71–9	IPD	
Isoprene (all isomers)	30	.....	78–79–5	IPR	
Isoprene (part refined)	30	.....	78–79–5	IPS	IPR/ISC
Isoprene concentrate (Shell)	30	.....	78–79–5	ISC	
Isopropanolamine	8	3	78–96–6	MPA	IPF/PAX/PLA
Isopropanolamine solution	8	3	78–96–6	PAI	MPA/PAY/PLA/PRG
Isopropyl acetate	34	3	108–21–4	IAC	PAT
Isopropyl alcohol	20	2, 3	67–63–0	IPA	IPB/PAL
Isopropylamine	7	3	75–31–0	IPP	IPO/IPQ/PRA
Isopropylamine (70% or less) solution.	7	3	75–31–0	IPQ	IPO/IPP/PRA
Isopropylbenzene, see Alkyl (C3–C4) benzenes.	.....	.....	98–82–8		AKC(CUM/PBY/PBZ)
Isopropylcyclohexane	31	3	696–29–7	IPX	
Isopropyl ether	41	3	108–20–3	IPE	PRL/PRN
Jatropha oil, see Oil, misc.: Jatropha.	.....	.....	88–6–7		JTO
Jet fuels:	.....	.....	.....	JPO	JPT/JPF/JPV
JP–4	33	.....	50815–00–4	JPF	
JP–5	33	.....	8008–20–6	JPV	
JP–8	33	.....	8008–20–6	JPE	
Kaolin clay solution/suspension	43	.....	1332–58–7	KLC	KLS
Kaolin slurry	43	.....	1332–58–7	KLS	KLC
Kerosene	33	.....	8008–20–6	KRS	
Ketone residue	18	.....	.....	KTR	
Kraft black liquor	5	.....	66071–92–9	KBL	KPL
Kraft pulping liquors (free alkali content 3% or more) (Black, Green, or White).	5	.....	68131–33–9	KPL	KBL
Lactic acid	0	1, 2	79–33–4	LTA	
Lactonitrile solution (80% or less)	37	3	78–97–7	LNI	
Lard	34	.....	61789–99–9	LRD	OLD
Latex, ammonia (1% or less)-inhibited.	30	3	98–82–8	LTX	
Latex: Carboxylated Styrene-Butadiene copolymer; Styrene-Butadiene rubber.	43	3	98–82–8	LCC	LCB/LSB

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Latex, liquid synthetic	43		98–82–8	LLS	LCB/LCC/LSB
Lauric acid	34		143–07–7	LRA	
Lauric acid methyl ester/Myristic acid methyl ester mixture.	34		111–82–0	LMM	
Lauryl polyglucose, see Alkyl (C12–C14) polyglucoside solution (55% or less).			59122–55–3		AGM/LAP
Lauryl polyglucose (50% or less), see Alkyl (C12–C14) polyglucoside solution (55% or less).			59122–55–3	LAP	AMG
Lecithin	34		8002–43–5	LEC	
Lignin liquor	43		9005–53–2	LNL	ALG/CLL/LGA/LGM/LSL/SHC/SHP/SHQ/SLP
Ligninsulfonic (alternately Ligninsulphonic) acid, magnesium salt solution.	43	3	9009–75–0	LGM	LGA/LNL/LSL
Ligninsulfonic (alternately *Ligninsulphonic*) *acid, sodium salt solution, see* Lignin liquor or Sodium lignosulfonate (alternately lignosulphonate) solution.			8061–51–6	LGA	LNL or SLG
d-Limonene, see Dipentene			5989–27–5		DPN
Linear alkyl (C12–C16) propoxyamine ethoxylate.	8		68213–26–3	LPE	
Linseed oil, see Oil, misc.: Linseed			8001–26–1		OLS
Liquefied Natural Gas, see Methane.			74–82–8	LNG	MTH
Liquid chemical wastes	0	1, 3		LCW	
Liquid Streptomyces solubles	43				
Long-chain alkaryl polyether (C11–C20).	41			LCP	
Long-chain alkaryl sulfonic (alternately sulphonic) acid (C16–C60).	0	1		LCS	
Long-chain alkyl amine	7		61789–79–5	LAA	
Long-chain alkylphenate/Phenol sulfide (alternately sulphide) mixture.	21			LPS	
Long-chain alkylphenol (C14–C18)	21			LCA	
Long-chain alkylphenol (C18–C30)	21			LCK	
Long-chain alkyl (C13+) salicylic acid.	4		69–72–7	LAS	
Long-chain polyetheramine in alkyl (C2–C4)benzenes.	7			LCE	
L-Lysine solution (60% or less)	43	3	25988–63–0	LYS	
Magnesium chloride solution	0	1, 2	7786–30–3	MGL	
Magnesium hydroxide slurry	5		1309–42–8	MHS	
Magnesium long-chain alkaryl sulfonate (alternately sulphonate) (C11–C50).	34		*115254–47–2	MAS	MSE
Magnesium long-chain alkyl phenate sulfide (alternately sulphide) (C8–C20).	34			MPS	
Magnesium long-chain alkyl salicylate (C11+).	34			MLS	
Magnesium nitrate solution (66.7%)	43		13446	MGP	MGN/MGO

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Magnesium nonyl phenol sulfide (alternately *sulphide*), *see* Magnesium long-chain alkyl phenate sulfide (alternately sulphide) (C8–C20).	.....	.....	.....		MPS
Magnesium sulfonate (alternately *sulphonate*), *see* Magnesium long-chain alkaryl sulfonate (alternately sulphonate) (C11–C50).	.....	.....	71786–47–5	MSE	MAS
Maleic anhydride	11	.....	108–31–6	MLA	
Maleic anhydride/sodium allylsulphonate copolymer solution.	11	.....	.....		PHN (CFO/CRL/CRO/CRS/CSO)
Maltitol solution	0	1, 3	585–88–6	MTI	
Mango kernel oil, see Oil, edible: Mango kernel.	.....	.....	90063–86–8		MKO (VEO)
Mercaptobenzothiazol, sodium salt solution.	5	.....	149–30–4	SMB	MBT
2-Mercaptobenzothiazol (in liquid mixture).	5	.....	149–30–4	BTM	SMD
Mesityl oxide	18	2	141–79–7	MSO	
Metam sodium solution	7	.....	137–42–8	MSS	SMD
Methacrylic acid	4	.....	79–41–4	MAD	
Methacrylic acid—Alkoxypoly(alkylene oxide) methacrylate copolymer, sodium salt aqueous solution (45% or less).	20	3	79–41–4	MAQ	
Methacrylic resin in ethylene dichloride.	14	.....	.....	MRD	
Methacrylonitrile	15	2	126–98–7	MET	
Methane	31	.....	74–82–8	MTH	LNG
3-Methoxy-1-butanol	20	.....	2517–43–3	MTX	
3-Methoxybutyl acetate	34	.....	4435–53–4	MOA	
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide, *see* Metolachlor.	34	.....	51218–45		MCO
1-Methoxy-2-propyl acetate	34	.....	108–65–6	MXP	
Methoxy triglycol, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	112–35–6	MTG	PAG (TGY)
Methyl acetate	34	.....	79–20–9	MTT	
Methyl acetoacetate	34	.....	105–45–3	MAE	
Methyl acetylene/Propadiene mixture.	30	.....	74–99–7	MAP	
Methyl acrylate	14	.....	96–33–3	MAM	
Methyl alcohol	20	2	67–56–1	MAL	
Methylamine solutions (42% or less).	7	3	74–89–5	MSZ	
Methyl amyl acetate	34	.....	7789–99–3	MAC	
Methyl amyl alcohol	20	.....	108–11–2	MAA	MIC
Methyl amyl ketone	18	.....	110–43–0	MAK	
N-Methylaniline	9	3	100–61–8	MAN	
alpha-Methylbenzyl alcohol with Acetophenone (15% or less).	20	3	98–85–1	MBA	
Methyl bromide	36	.....	74–83–9	MTB	
Methyl butanol, see the Amyl alcohols.	.....	.....	71–41–0		AAI/AAL/AAN/APM/ASE/IAA

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Methyl butenes, see Pentene (all isomers).	.....	.....	109–67–1		PTX (AMW/AMZ/PTE)
Methyl butenol	20	.....	137–32–6	MBL	
Methyl tert-butyl ether	41	2	1634–04–4	MBE	
Methyl butyl ketone	18	2	591–78–6	MBB	MBK/MIK
Methyl 3-(3,5 di-tert-butyl-4-hydroxyphenyl) propionate crude melt.	20	.....	6386–38–5	MYP	
Methylbutynol	20	.....	137–32–6	MBY	MHB
3-Methyl butyraldehyde	19	.....	590–86–3	MBR	
Methyl butyrate	34	.....	623–42–7	MBU	
Methyl chloride	36	.....	74–87–3	MTC	
Methylcyclohexane	31	.....	591–47–9	MCY	
Methylcyclohexanemethanol (crude).	20	.....	34885–03–5	MYH	
Methylcyclopentadiene dimer	30	.....	26472–00–4	MCK	
Methylcyclopentadienyl manganese tricarbonyl.	0	1, 3	12108–13–3	MCT	MCW
Methylcyclopentadienyl manganese tricarbonyl (60–70%) in mineral oil.	0	1	12108–13–3	MCW	MCT
Methyl diethanolamine	8	.....	105–59–9	MDE	MAB
Methyl ethyl ketone	18	2	78–93–3	MEK	
2-Methyl-6-ethyl aniline	9	.....	24549–06–2	MEN	
Methyl formate	34	.....	107–31–3	MFM	
N-Methylglucamine solution	43	3	6284–40–8	MGC	
2-Methylglutaronitrile	37	.....	4553–62–2	MLN	MGN
2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less).	37	3	.....	MGE	MLN
Methyl heptyl ketone	18	.....	821–55–6	MHK	
2-Methyl-2-hydroxy-3-butyne	20	.....	115–19–5	MHB	MBY
Methyl isoamyl ketone, see Methyl amyl ketone.	.....	.....	110–12–0	MAJ	MAK
Methyl isobutyl carbinol, see Methyl amyl alcohol.	.....	.....	108–11–2	MIC	MAA
Methyl isobutyl ketone	18	.....	108–10–1	MIK	MBB/MBK
Methyl methacrylate	14	.....	80–62–6	MMM	
Methylene bridged isobutylenated phenols.	21	.....	68610–06–0	MBP	
Methylene chloride, see Dichloromethane.	.....	.....	75–09–2		DCM
3-Methyl-3-methoxybutanol	20	.....	56539–66–3	MXB	
2-Methyl-5-ethyl pyridine	9	.....	104–90–5	MEP	
3-Methyl-3-methoxybutyl acetate	34	.....	103429–90–9	MMB	
Methyl naphthalene (molten)	32	3	90–12–0	MNA	
Methylolurea	19	.....	1000–82–4	MUS	
2-Methyl pentane, see Hexane (all isomers).	.....	.....	107–83–5		HXS (ALK/HXA/IHA/NHX)
2-Methyl-1,5-pentanediamine	7	.....	15520–10–2	MPM	
2-Methyl-1-pentene, see Hexene (all isomers).	.....	.....	763–29–1	MPN	HEX (HXE/HXT/HXU/HXV/MTN)
4-Methyl-1-pentene, see Hexene (all isomers).	.....	.....	691–37–2	MTN	HEX (HXE/HXT/HXU/HXV/MPN)
Methyl tert-pentyl ether, see tert-Amyl methyl ether.	.....	.....	994–05–8		AYE
2-Methyl-1,3-propanediol	20	.....	78–26–2	MDL	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Methyl propyl ketone	18		107–87–9	MKE	
2-Methyl-5-ethylpyridine	9		104–90–5	MEP	
Methylpyridine, see the Methylpyridines.				MPQ	MPE/MPF/MPR
2-Methylpyridine	9	3	109–06–8	MPR	MPE/MPF/MPQ
3-Methylpyridine	9	3	109–99–6	MPE	MPF/MPQ/MPR
4-Methylpyridine	9	3	108–89–4	MPF	MPE/MPQ/MPR
N-Methyl-2-pyrrolidone	9	2	872–50–4	MPY	
Methyl salicylate	34		119–36–8	MES	
alpha-Methylstyrene	30		98–83–9	MSR	
3-(Methylthio)propionaldehyde	19		3268–49–3	MTP	
Metolachlor	34		51218–45–2	MCO	
Microsilica slurry	43		69012–64–2	MOS	
Milk	43		8049–98–7	MLK	
Mineral spirits	33		64475–85–0	MNS	
Mixed C4 Cargoes	30			MIX	
Molasses	20		68476–78–8	MOL	MON
Molasses residue (from fermentation).	0	1	94114–07–5	MON	MOL
Molybdenum polysulfide (alternately polysulphide) long-chain alkyl dithiocarbamide complex.	0	1, 3	1317–33–5	MOP	
Monochlorodifluoromethane	36		75–45–6	MCF	
Monoethanolamine, see Ethanolamine.			141–43–5	MEA	
Monoethylamine, see Ethylamine			75–04–7		EAM (EAN/EAO)
Monoisopropanolamine, see Isopropanolamine.			78–96–6		MPA (PLA/PLX)
Morpholine	7	2	110–91–8	MPL	
Motor fuel anti-knock compound (containing lead alkyls).	0	1		MFA	
MTBE, see Methyl tert-butyl ether			1634–04–4		MBE
Myrcene	30		123–35–3	MRE	
Naphtha:					
Aromatic	33		64742–94–5	NAR	
Coal tar solvent	33		8030–30–6	NCT	
Heavy	33		64742–94–5	NAG	
Paraffinic	33		8012–95–1	NPF	
Petroleum	33		64742–94–5	PTN	
Solvent	33		64742–94–5	NSV	
Stoddard solvent	33		8052–41–3	NSS	
Varnish Makers' and Painters'.	33		8032–32–4	NVM	
Naphthalene (molten)	32	3	91–20–3	NTM	
Naphthalene crude (molten)	32		91–20–3	NCM	NAC/NCD
Naphthalene still residue	32	2	91–20–3	NSR	
Naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution.	34		85–47–2	NSB	NSA
Naphthalene sulfonic (alternately sulphonic) acid-Formaldehyde copolymer, sodium salt solution.	0	1	85–47–2	NFS	
Naphthenic acid	4		1338–24–5	NTI	
Naphthenic acid, sodium salt solution.	43		61790–13–4	NTS	
Neodecanoic acid	4		26896–20–8	NEA	DCO/NAT

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Nitrating acid (mixture of Sulfuric (alternately Sulphuric) and Nitric acids).	0	1	7697–37–2	NIA	
Nitric acid (70% and over)	3	2, 3	7697–37–2	NCE	NAC/NCD
Nitric acid (less than 70%)	3	2	7697–37–2	NCD	NAC/NCE
Nitric Acid, fuming, see Nitric acid (70% and over).		1, 2, 3	7697–37–2		NCE
Nitric Acid, red fuming, see Nitric acid (70% and over).		1, 2, 3	52583–42–3		NCE
Nitrilotriacetic acid, trisodium salt solution.	34	3	139–13–9	NCA	
Nitrobenzene	42		98–95–3	NTB	
o-Nitrochlorobenzene, see o- Chloronitrobenzene.			88–73–3		CNO (CNP)
Nitroethane	42		79–24–3	NTE	
Nitroethane (80%)/Nitropropane (20%).	42	2, 3		NNL	NNM/NNO/ NPM/ NPN/NPP/ NTE
Nitroethane/1-Nitropropane (each 15% or more) mixture.	42	2		NNO	NNL/NNM/ NPM/ NPN/NPP/ NTE
Nitrogen	0	1	7727–37–9	NXX	
Nitrophenol (mixed isomers)	42		88–75–5	NPX	NIP/NPH
o-Nitrophenol (molten)	0	1, 2	88–75–5	NTP	NIP/NPH/ NPX
Nitropropane (60%)/Nitroethane (40%) mixture.	42			NNM	NNL/NNO/ NPM/ NPN/NPP/ NTE
1-or 2-Nitropropane	42		108–03–2	NPM	NPN/NPP
o- or *p*-Nitrotoluenes	42	3	99–99–0	NIT	NIE/NTR/ NTT
Nonane (all isomers), see Alkanes (C6–C9).			111–84–2	NAX	ALK (NAN)
Nonanoic acid (all isomers)	4		112–05–0	NNA	NAI/NIN
Nonanoic/Tridecanoic acid mixture	4			NAT	NAI/NIN/ NNA
Non-edible industrial grade palm oil, see Oil, misc.: Palm, non-edible industrial grade.			8002–75–3		OPB
Nonene (all isomers)	30	2	124–11–8	NOO	NNE/NON/ OAM/ OFX/OFY
Nonyl acetate	34		143–13–5	NAE	
Nonyl alcohol (all isomers)	20	2	143–08–8	NNS	ALR/DBC/ NNI/NNN
Nonylbenzene, see Alkyl (C9+) benzenes.			1081–77–2		AKB
Non-noxious Liquid Substance, (12) n.o.s. Cat OS.	0	1		NOL	
Nonyl methacrylate monomer	14		2696–43–7	NMA	
Nonyl phenol	21		25154–52–3	NNP	
Nonyl phenol poly(4+)ethoxylate, see Alkyl (C7–C11) phenol poly(4–12) ethoxylate.			9016–45–9	NPE	APN
Nonyl phenol sulfide (alternately *sulphide*) *(90% or less) solution, see* Alkyl (C8–C40) phenol sulfide (alternately sulphide).			34992–00–2		AKS (NPS)

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Nonylphenol (48–62%)/Phenol (42–48%)/Dinonylphenol (1–10%) mixture.	21	.....	.....	NYL	
Noxious Liquid Substance, NF, (1) n.o.s. (''trade name'' contains ''principal components'') Cat X.	0	1			
Noxious Liquid Substance, F, (2) n.o.s. (''trade name'' contains ''principal components'') Cat X.	0	1			
Noxious Liquid Substance, NF, (3) n.o.s. (''trade name'' contains ''principal components'') Cat X.	0	1			
Noxious Liquid Substance, F, (4) n.o.s. (''trade name'' contains ''principal components'') Cat X.	0	1			
Noxious Liquid Substance, NF, (5) n.o.s. (''trade name'' contains ''principal components'') Cat Y.	0	1			
Noxious Liquid Substance, F, (6) n.o.s. (''trade name'' contains ''principal components'') Cat Y.	0	1			
Noxious Liquid Substance, NF, (7) n.o.s. (''trade name'' contains ''principal components'') Cat Y.	0	1			
Noxious Liquid Substance, F, (8) n.o.s. (''trade name'' contains ''principal components'') Cat Y.	0	1			
Noxious Liquid Substance, NF, (9) n.o.s. (''trade name'' contains ''principal components'') Cat Z.	0	1			
Noxious Liquid Substance, F, (10) n.o.s. (''trade name'' contains ''principal components'') Cat Z.	0	1			
Noxious Liquid Substance, (11) n.o.s. (''trade name'' contains ''principal components'') Cat Z.	0	1			
Non-noxious Liquid Substance, (12) n.o.s. (''trade name'' contains ''principal components'') Cat OS.	0	1	.....	NOL	
Nutmeg butter oil, see Oil, edible: Nutmeg butter.	.....	.....	.....		ONB (VEO)
1-Octadecene, see the olefin or alpha-olefin entries.	.....	.....	112–88–9		OAM/OFZ
1-Octadecanol, see Stearyl alcohol	.....	.....	112–92–5		SYL (ALY/ASY)
Octadecenoamide solution	10	.....	3322–62–1	ODD	
Octadecenol (oleyl alcohol), see Alcohols (C13+).	.....	.....	143–28–2		ALY (AYL/ASY/OYL)
Octamethylcyclotetrasiloxane	34	3	556–67–2	OSA	
Octane (all isomers), see Alkanes (C6–C9).	.....	.....	111–65–9	OAX	ALK (IOO/OAN)
Octanoic acid (all isomers)	4	.....	124–07–2	OAY	OAA/EHO
Octanol (all isomers)	20	2	111–87–5	OCX	EHX/OPA/OTA
Octene (all isomers)	30	2	111–66–0	OTX	OAM/OFC/OFY/OFW/OTE
n-Octyl acetate	34	.....	112–14–1	OAF	OAE
Octyl alcohol, see Octanol (all isomers).	.....	2	111–87–5		OCX (EHX/IOA/OTA)

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Octyl aldehydes	19		124–13–0	OAL	EHA/IOC//OLX
Octylbenzenes, see Alkyl (C5–C8) benzenes.			2189–60–8		AKD
Octyl decyl adipate	34		110–29–2	ODA	
n-Octyl mercaptan	0		111–88–6	OME	
Octyl nitrates (all isomers), see Alkyl (C7–C9) nitrates.		2	629–39–0	ONE	AKN
Octyl phenol	21		27193–28–8	OPH	
Octyl phthalate, see Dioctyl phthalate.			117–84–0		DAH (DIE/DIO/DLK/DOP)
Offshore contaminated bulk liquid P	0			OBP	
Offshore contaminated bulk liquid S	0			OBS	
Oil, edible:					
Beechnut	34		481–39–0	OBN	VEO
Castor	34		8001–79–4	OCA	VEO
Cocoa butter	34		8002–31–1	OCB	VEO
Coconut	34	2	8001–31–8	OCC	VEO
Cod liver	34		8001–69–2	OCL	AFN
Corn	34		8001–30–7	OCO	VEO
Cottonseed	34		8001–29–4	OCS	VEO
Fish	34	2	8016–13–5	OFS	AFN
Grape seed	34		8024–22–4		
Groundnut	34		8002–03–7	OGN	VEO
Hazelnut	34		185630–72–2	OHN	VEO
Illipe	34		91770–65–9	ILO	VEO
Lard	34		61789–99–9	OLD	AFN
Maize, see Oil, edible: Corn.			8001–30–7		OCO (VEO)
Mango kernel	34	3	90063–86–8	MKO	
Nutmeg butter	34		8008–45–5	ONB	VEO
Olive	34		8001–25–0	OOL	VEO
Palm	34	2, 3	8002–75–3	OPM	VEO
Palm kernel	34		8023–79–8	OPO	VEO
Palm kernel olein	34		93334–39–5	PKO	VEO
Palm kernel stearin	34		91079–14–0	PKS	VEO
Palm mid fraction	34		91079–14–0	PFM	VEO
Palm olein	34		93334–39–5	PON	VEO
Palm stearin	34		91079–14–0	PMS	VEO
Peanut	34		8002–03–7	OPN	VEO
Poppy	34		8002–11–7	OPY	VEO
Poppy seed	34		8002–11–7	OPS	VEO
Raisin seed	34		8024–22–4	ORA	VEO
Rapeseed	34		8002–13–9	ORP	VEO
Rapeseed (low erucic acid containing less than 4% free fatty acids).	34	3	8002–13–9	ORO	ORP/VEO
Rice bran	34		68553–81–1	ORB	VEO
Safflower	34		8001–23–8	OSF	VEO
Salad	34		9083–41–4	OSL	VEO
Sesame	34		8008–74–0	OSS	VEO
Shea butter	34		194043–92–0	OSH	VEO
Soyabean	34	2	8001–22–7	OSB	VEO
Sunflower, see Oil, edible: Sunflower seed.			8001–21–6		OSN (VEO)
Sunflower seed	34		8001–21–6	OSN	VEO
Tucum	34		356065–49–1	OTC	VEO
Vegetable	34		9083–41–4	OVG	VEO
Walnut	34		8024–09–7	OWN	VEO
Oil, fuel:					

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
No. 1	33		8008–20–6	OON	
No. 1–D	33			OOD	
No. 2	33		68476–30–2	OTW	
No. 2–D	33			OTD	
No. 4	33		68553–00–4	OFR	
No. 5	33		70892–11–4	OFV	
No. 6	33		68553–00–4	OSX	
Oil, misc.:					
Acid mixture from soyabean, corn (maize) and sunflower oil refining.	34			AOM	
Aliphatic	33		8052–41–3	OML	
Animal	34		68991–19–5	OMA	AFN
Aromatic	33		6472–95–6	OMR	
Camelina	34		68956–68–3	OCI	
Cashew nut shell (untreated).	34		8007–24–7	OCN	
Clarified	33		64741–62–4	OCF	
Coal	33		8008–2–06	OMC	
Coconut fatty acid	34	2	61788–47–4	CFA	
Coconut, fatty acid methyl ester.	34		61788–59–8	OCM	
Cotton seed oil, fatty acid	34		8001–29–4	CFY	
Crude	33		8002–05–9	OFA	
Diesel	33		68334–30–5	ODS	
Disulfide (alternately Disulphide).	0	1	624–92–0	ODI	
Gas, cracked	33		8006–61–9	GOC	
Gas, high pour	33		8006–61–9	OGP	
Gas, low pour	33		8006–61–9	OGL	
Gas, low sulfur (alternately sulphur).	33		8006–61–9	OGS	
Heartcut distillate	33		68131–77–1	OHD	
Jatropha	34	3	88–6–7	JTO	
Lanolin	34		8006–54–0	OLL	AFN
Linseed	33		8001–26–1	OLS	
Lubricating	33	2	93572–43–1	OLB	
Mineral	33		8042–47–5	OMN	
Mineral seal	33		64742–46–7	OMS	
Motor	33			OMT	
Neatsfoot	33		8002–64–0	ONF	AFN
Oiticica	34		8016–35–1	OOI	
Palm acid	34		8002–75–3	PLM	
Palm fatty acid distillate	34		68440–15–3	PFD	
Palm oil, fatty acid methyl ester.	34		91051–34–2	OPE	
Palm kernel acid	34		101403–98	OPK	
Palm kernel fatty acid distillate.	34		68440–15–3	PNG	
Palm, non-edible industrial grade.	34		8002–75–3	OPB	
Penetrating	33		64742–95–6	OPT	
Perilla	34		68132–21–8	OPR	
Pilchard	34		8016–13–5	OPL	AFN
Pine	33		8002–09–3	OPI	PNL
Rapeseed fatty acid methyl esters.	34	3	73891–99–3	ORP	
Residual	33		68476–33–5	ORL	
Resin, distilled	30	3	8016–37–3	ORR	
Road	33		8052–42–4	ORD	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Rosin	33		8002–16–2	ORN	
Seal	34		64742–46–7	OSE	
Soapstock	34		68952–95–4	OIS	
Soyabean (epoxidized)	34		8013–07–8		OSC/EVO
Soyabean fatty acid methyl ester.	34		68919–53–9		OST
Spindle	33		64742–54–7	OSD	
Tall	34		8002–26–4	OTL	OTI/OTJ
Tall, crude	34	2	8002–26–4	OTI	OTJ/OTL
Tall, distilled	34	2	8002–26–4	OTJ	OTI/OTL
Tall, fatty acid	34	2	61790–12–3	OTT	
Tall fatty acid (resin acids less than 20%).	34	2	61790–12–3	OTK	OTT
Tall pitch	34		08016–81–7	OTP	
Transformer	33		64742–53–6	OTF	
Tung	34		8001–20–5	OTG	
Turbine	33			OTB	
Used cooking oil	34			OUC	VEO
Used cooking oil (triglycerides, C16–C18, and C18 unsaturated).	34			OUT	VEO
Vacuum gas oil	33		64741–57–7	OVC	
Oleamide solution, see Octadecenoamide solution.			301–02–0		ODD
Olefin-Alkyl ester copolymer (molecular weight 2000+).	30			OCP	
Olefin mixture (C7–C9) C8 rich, stabilized.	30	3	25339–56–4	OFC	OFW/OFY/OFX
Olefin mixtures (C5–C7)	30	3	25264–93–1	OFY	OAM/OFC/OFW/OFX/OFZ
Olefin mixtures (C5–C15)	30	3	25264–93–1	OFY	OAM/OFC/OFW/OFX/OFZ
Olefins (C13+, all isomers)	30		85535–87–1	OFZ	OAM/OFW
alpha-Olefins (C6–C18) mixtures	30		592–41–6	OAM	OFC/OFW/OFX/OFY/OFZ
Oleic acid	4		112–80–1	OLA	
Oleum	0	1, 2	8014–95–7	OLM	SAC/SFX
Oleyl alcohol, see Alcohols (C13+)			143–28–2	OYL	ALY (ASY)
Oleylamine	7		112–90–3	OLY	
Olive oil, see Oil, edible: Olive			8001–25–0		OOL (VEO)
Orange juice (concentrated)	0	1, 3	68514–75–0	OJC	OJN
Orange juice (not concentrated)	0	1, 3	68514–75–0	OJN	OJC
Organomolybdenum amide	10		445409–27–8	OGA	
ORIMULSION, see Asphalt emulsion.					ASQ
Oxyalkylated alkyl phenol formaldehyde.	33		9003–35–4	OPF	
Oxygenated aliphatic hydrocarbon mixture.	0	1, 3		OAH	
Palm acid oil, see Oil, misc.: Palm acid.		3	68440–15–3		PLM
Palm fatty acid distillate, see Oil, misc.: Palm fatty acid distillate.		3			PFD
Palm kernel acid oil, see Oil, misc.: Palm kernel acid.			101403–98		PNO
Palm kernel acid oil, methyl ester, see Oil, misc.: Palm kernel acid, methyl ester.					PNF

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Palm kernel oil, see Oil, edible: Palm kernel.	.....	.....	8023–79–8		OPO (VEO)
Palm kernel oil fatty acid distillate, see Oil, misc.: Palm kernel fatty acid distillate.	.....	.....	.....		PNG
Palm kernel olein, see Oil, edible: Palm kernel olein.	.....	3	93334–39–5		PKO (VEO)
Palm kernel stearin, see Oil, edible: Palm kernel stearin.	.....	3	.....		PKS (VEO)
Palm mid fraction, see Oil, edible: Palm mid fraction.	.....	3	91079–14–0		PFM (VEO)
Palm oil, see Oil, edible: Palm	.....	2, 3	8002–75–3	OPM	VEO/OPE
Palm oil fatty acid methyl ester, see Oil, misc.: Palm fatty acid methyl ester.	.....	3	.....		OPE
Palm olein, see Oil, edible: Palm olein.	.....	3	93334–39–5		PON (VEO)
Palm stearin, see Oil, edible: Palm stearin.	.....	.....	91079–14–0		PMS (VEO)
Parachlorobenzotrifluoride	32	.....	98–56–6	PBF	
Paraffin wax, see Waxes: Paraffin	.....	3	8002–74–2		WPF
n-Paraffins (C10–C20), see n-Alkanes (C10+) all isomers.	.....	.....	.....	PFN	ALJ
Paraldehyde	19	.....	123–63–7	PDH	
Paraldehyde-Ammonia reaction product.	9	.....	.....	PRB	
Peanut, see Oil, edible: Peanut	.....	.....	8002–03–7		OPN (VEO)
Pentachloroethane	36	.....	76–01–7	PCE	
Pentacosa (oxypropane-2,3-diyl)s ..	20	.....	923–61–5	POY	
Pentadecanol, see Alcohols (C13+)	.....	.....	629–76–5	PDC	ALY
1,3-Pentadiene	30	.....	1574–41–0	PDE	PDN
1,3-Pentadiene (greater than 50%), Cyclopentene and isomers, mixtures.	30	3	1574–41–0	PMM	
Pentaethylene glycol, see Polyethylene glycols.	.....	.....	4792–15–8		PEG
Pentaethylene glycol methyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	23778–52–1		PAG
Pentaethylenehexamine	7	.....	4067–16–7	PEN	
Pentaethylenehexamine/ Tetraethylenepentamine mixture.	7	.....	.....	PEP	
Pentane (all isomers)	31	.....	109–66–0	PTY	IPT/PTA
Pentanoic acid	4	.....	109–52–4	POC	
n-Pentanoic acid (64%)/2-Methyl butyric acid (36%) mixture.	4	.....	.....	POJ	POC
Pentasodium salt of Diethylenetriaminepentaacetic acid solution, see Diethylenetriaminepentaacetic acid, pentasodium salt solution.	.....	.....	140–01–2		DYS
Pentene (all isomers)	30	.....	109–67–1	PTX	PTE
Pentyl aldehyde	19	.....	110–62–3	PYL	
n-Pentyl propionate	34	.....	624–54–4	PPE	
Perchloroethylene	36	2	127–18–4	PER	TTE
Petrolatum	33	.....	8009–03–8	PTL	
Phenol	21	2	108–95–2	PHN	PNS
Phenol solutions (2% or less)	43	.....	108–95–2	PNS	PHN
1-Phenyl-1-xylyl ethane	32	.....	6196–96–8	PXE	
Phosphate esters	34	.....	68130–47–2	PZE	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Phosphate esters, alkyl (C12–C14) amine.	7			PEA	
[[(Phosphonomethyl) imino] bis[ethylenenitrilobis (methylene)]] tetrakisphosphonic acid, ammonium salt solution (60% or less).	3			PES	
Phosphoric acid	1	2	7664–38–2	PAC	
Phosphorus, yellow or white	0	1	7723–14–0	PPW	PPB/PPR
Phosphosulfurized (alternately Phosphosulphurized) bicycle terpene.	0	1		PBT	
Phthalate based polyester polyol	0	1, 2	32472–85–8	PBE	
Phthalic anhydride (molten)	11		85–44–9	PAN	
PIB, see Poly (4+)isobutylene (molecular weight >224)..			9003–27–4		
alpha-Pinene	30		7785–26–4	PIO	PIB/PIN
beta-Pinene	30		127–91	PIP	PIN/PIO
Pine oil, see Oil, misc.: Pine			8002–09–3	PNL	OPI
Piperazine (70% or less)	7	3	110–85–0	PIZ	PPB/PPZ
Piperazine (crude)	7		110–85–0	PZC	PPZ/PIZ
Piperazine, 68% solution	7		110–85–0		
Polyacrylic acid solution (40% or less).	43		9003–01–4	PYA	
Polyalkenyl succinic anhydride amine.	7		108–30–5	PSN	
Polyalkyl acrylate	14		9003–21–8	PAY	
Polyalkyl (C18–C22) acrylate in Xylene.	14			PIX	
Polyalkylalkenaminesuccinimide, molybdenum oxysulfide (alternately oxysulphide).	0	3		PSO	
Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures.	40		9038–95–3	PPX	
Polyalkylene glycol butyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.				PGB	PAG
Poly(2–8)alkylene glycol monoalkyl (C1–C6) ether.	40	2		PAG	
Including:					
Diethylene glycol butyl ether.	40		112–34–5		
Diethylene glycol ethyl ether.	40		111–90–0		
Diethylene glycol n-hexyl ether.	40		112–59–4		
Diethylene glycol methyl ether.	40		111–77–3		
Diethylene glycol propyl ether.	40		6881–94–3		
Dipropylene glycol butyl ether.	40		112–34–5		
Dipropylene glycol methyl ether.	40		34590–94–8		
Polyalkylene glycol butyl ether.	40		111–76–2		
Polyethylene glycol monoalkyl ether.	40		111–80–5		

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Polypropylene glycol methyl ether.	40	.....	34590–94–8		
Tetraethylene glycol methyl ether.	40	.....	23783–42–8		
Triethylene glycol butyl ether.	40	.....	143–22–6		
Triethylene glycol ethyl ether.	40	.....	112–50–5		
Triethylene glycol methyl ether.	40	.....	112–35–6		
Tripropylene glycol methyl ether.	40	.....	25498–49–1		
Poly(2–8)alkylene glycol monoalkyl (C1–C6) ether acetate.	34	.....	.....	PAF	
Including:					
Diethylene glycol butyl ether acetate.	34	.....	124–17–4		
Diethylene glycol ethyl ether acetate.	34	.....	112–15–2		
Diethylene glycol methyl ether acetate.	34	.....	110–49–6		
Polyalkylene oxide polyol	20	.....	.....	PAO	
Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures.	40	.....	.....	PPX	
Polyalkylene oxide polyol	20	.....	.....	PAO	
Polyalkyl (C10–C20) methacrylate	14	.....	221–657–1	PMT	PYY
Polyalkyl methacrylate in mineral oil	14	.....	.....	PYY	PMT
Polyalkyl (C10–C18) methacrylate/ Ethylene-propylene copolymer mixture.	14	.....	.....	PEM	
Polyalpha olefins	31	.....	115–07–1	PYO	
Polyaluminum (alternately Polyaluminium) chloride solution.	1	.....	1327–41–9	PLS	
Polybutadiene, hydroxyl terminated	20	.....	69102–90–5	PHT	
Polybutene	33	.....	9003–29–6	PLB	
Polybutenyl succinimide	10	.....	84605–20–9	PBS	
Polycarboxylic ester (C9+), see Ditridecyl adipate.	.....	.....	16958–92–2		DTY
Poly (2+)cyclic aromatics	32	.....	91–20–3	PCA	
Polydimethylsiloxane, see Dimethylpolysiloxane.	.....	.....	9016–00–6		DMP
Polyether, borated	41	.....	.....	PED	
Polyether (molecular weight 1350+)	41	.....	.....	PYR	
Polyether polyols	41	.....	25214–63–5	PEO	
Polyethylene glycol	40	.....	25322–68–3	PEG	
Polyethylene glycol dimethyl ether	40	.....	24991–55–7	PEF	
Poly(ethylene glycol) methylbutenyl ether (molecular weight >1000).	40	.....	.....	PBN	
Polyethylene glycol monoalkyl ether, see Poly(2–8)alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	111–77–3	PEE	PAG
Polyethylene polyamines	7	2	109–89–7	PEB	PEY
Polyethylene polyamines (more than 50% C5–C20 Paraffin oil).	7	2, 3	.....	PEY	PEB

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Polyferric sulfate (alternately sulphate) solution.	34	.....	51434–22–1	PSS	
Polyglycerine/Sodium salts solution (containing less than 3% Sodium hydroxide).	20	2	.....	PGT	PGS
Polyglycerol	20	.....	25618–55–7	PGL	
Poly(iminoethylene)-graft-N-poly(ethyleneoxy) solution (90% or less).	7	3	.....	PIG	PIM
Polyisobutenamine in aliphatic (C10–C14) solvent.	7	2	.....	PIB	PIA
(Polyisobutene) amino products in aliphatic hydrocarbons.	7	3			
Polyisobutenyl anhydride adduct	11	.....	.....	PBA	
Polyisobutenyl succinimide	10	.....	84605–20–9	PIS	
Poly(4+)isobutylene (molecular weight >224).	30	3	9003–27–4	PIL	
Polyisobutylene (molecular weight ≤224).	30	3	9003–27–4	PIL	
Polyisobutylene succinic anhydride	11	.....	67762–77–0	PYS	
Polymerized esters	34	.....	.....	PYM	
Polymethylene polyphenyl isocyanate.	12	2	9016–87–9	PPI	
Polymethylsiloxane	34	.....	9006–65–9	PMX	
Polyolefin (molecular weight 300+)	33	.....	.....	PMW	PLF
Polyolefin amide alkeneamine (C17+).	33	.....	.....	POH	POD
Polyolefin amide alkeneamine (C28+), see Polyolefin amide alkenamine (C17+).	.....	.....	.....	POD	POH
Polyolefin amide alkeneamine borate (C28–C250).	33	.....	134758–95–5	PAB	
Polyolefin amide alkeneamine in mineral oil.	33	.....	.....	PLK	
Polyolefin amide alkeneamine/Molybdenum oxysulfide (alternately oxysulphide) mixture.	7	.....	.....	PMO	
Polyolefin amide alkeneamine polyol.	20	.....	.....	PAP	
Polyolefinamine (C17+)	7	.....	98761–78–5	POG	
Polyolefinamine (C28–C250)	33	.....	.....	POM	
Polyolefinamine in alkyl (C2–C4) benzenes.	32	.....	.....	POF	POR
Polyolefinamine in aromatic solvent	32	3	.....	POR	POF
Polyolefin aminoester salts (molecular weight 2000+).	34	.....	.....	PAE	
Polyolefin anhydride	11	.....	9006–26–2	PAR	
Polyolefin ester (C28–C250)	34	.....	.....	POS	
Polyolefin in mineral oil	30	.....	.....	PLF	PMW
Polyolefin phenolic amine (C28–C250).	9	.....	.....	PPH	
Polyolefin phosphorosulfide (alternately phosphorosulphide), barium derivative (C28–C250).	34	.....	.....	PPS	
Poly (oxyalkylene) alkenyl ether (molecular weight >1000).	41	3	9005–00–9	PXY	
Polyoxybutylene alcohol	41	.....	9002–92–0	PXA	
Poly(20)oxyethylene sorbitan monooleate.	34	.....	9005–65–6	PSM	
Polyoxypropylenediamine (molecular weight 2000).	7	.....	.....	PYD	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Poly(5+) propylene	30		9003–07–0	PLQ	PLP
Polypropylene glycol	40	2	25322–69–4	PGC	
Polypropylene glycol methyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.			107–98–2	PGM	PAG
Polysiloxane	34		63148–53–8	PSX	
Polysiloxane/White spirit, low (15–20%) aromatic.	34			PWS	
Poly(tetramethylene ether) glycols (molecular weight 950–1050), see alpha-hydro-omega-Hydroxytetradec-a(oxytetramethylene).			25190–06–1	PYU	HTO
Polytetramethylene ether glycol	40		25190–06–1	PYT	HTO/PYU/PYS
Poppy seed, see Oil, edible: Poppy seed.			8002–11–7		OPS (VEO)
Poppy, see Oil, edible: Poppy					OPY (VEO)
Potassium chloride solution	43		7447–40–7	PCU	PCD/PSD
Potassium chloride solution (10% or more).	43		7447–40–7	PCS	PCD/PCU
Potassium chloride solution (less than 26%).	43		7447–40–7	PSD	CLM/DRL/PCS/PCU
Potassium formate solutions	34		590–29–4	PFR	
Potassium hydroxide solution, see Caustic potash solution.		2	1310–58–3		CPS/PTH
Potassium oleate	34		143–18–0	POE	
Potassium polysulfide (alternately polysulphide)/Potassium thiosulfide (alternately thiosulphide) solution (41% or less).	0	1		PYP	PSF/PTF
Potassium salt of polyolefin acid	34			PSP	
Potassium thiosulfate (alternately thiosulphate) (50% or less).	43		10294–66–3	PTF	
Propane	31		74–98–6	PRP	LPG
iso-Propanolamine, see Isopropanolamine.			78–96–6		MPA (PAX/PLA)
n-Propanolamine	8		107–10–8	PLA	MPA/PAX
2-Propene-1-aminium, N,N-di-methyl-N–2-propenyl-, chloride, homopolymer solution.	0	1, 3		PLN	
Propionaldehyde	19		123–38–6	PAD	
beta-Propiolactone	18	3	57–57–8	PLT	
Propionic acid	4		79–09–4	PNA	
Propionic anhydride	11		123–62–6	PAH	
Propionitrile	37		107–12–0	PCN	
n-Propoxypropanol, see Propylene glycol monoalkyl ether.			1569–01–3	PXP	PGE
n-Propyl acetate	34		109–60–4	PAT	IAC
n-Propyl alcohol	20	2	71–23–8	PAL	IPA
n-Propyl chloride	36		540–54–5	PRC	
Propyl ether	41		557–17–5		IPE/PRE
n-Propylamine	7		107–10–8	PRA	IPO/IPP/IPQ
iso-Propylamine solution, see Isopropylamine (70% or less) solution.			75–31–0		IPQ (IPO/IPP/PRA)
Propylbenzenes (all isomers), see Alkyl (C3–C4) benzenes.			103–65–1	PBY	AKC (CUM/PBZ)
iso-Propyl cyclohexane, see Isopropylcyclohexane.			696–29–7		IPX

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Propylene	30		115–07–1	PPL	
Propylene-Butylene copolymer	30		29160–13–2	PBP	
Propylene carbonate	34		108–32–7	PLC	
Propylene dimer	30		26824–72–2	PDR	
Propylene glycol	20	2	57–55–6	PPG	
Propylene glycol n-butyl ether, see Propylene glycol monoalkyl ether.			5131–66–8	PGD	PGE
Propylene glycol ethyl ether, see Propylene glycol monoalkyl ether.			1569–02–4	PGY	PGE
Propylene glycol methyl ether, see Propylene glycol monoalkyl ether.		2	107–98–2	PME	PGE
Propylene glycol methyl ether acetate.	34	2	108–65–6	PGN	
Propylene glycol monoalkyl ether	40			PGE	
Including:					
n-Propoxypropanol.	40		30136–13–1		
Propylene glycol n-butyl ether.	40		5131–66–8		
Propylene glycol ethyl ether.	40		1569–02–4		
Propylene glycol methyl ether.	40		107–98–2		
Propylene glycol propyl ether.	40		1569–01–3		
Propylene glycol phenyl ether.	40		770–35–4	PGP	
Propylene glycol propyl ether, see Propylene glycol monoalkyl ether.			1569–01–3		PGE
Propylene oxide	16		75–56–9	POX	
Propylene tetramer	30		6842–15–5	PTT	
Propylene trimer	30		13987–01–4	PTR	
Propylene/Propane/MAPP gas mixture.	30	2		PPM	
Pseudocumene, see Trimethylbenzene (all isomers).			95–63–6		TMB/TMD/TME/TRE
Pyridine	9		110–86–1	PRD	
Pyridine bases, see Paraldehyde-Ammonia reaction product.					PRB
Pyrolysis gasoline (containing Benzene).	32	3	68477–58–7	PYG	GPY
Rapeseed oil (low erucic acid containing less than 4% free fatty acids), see Oil, edible: Rapeseed (low erucic acid containing less than 4% free fatty acids).		3	8002–13–9		ORO (VEO)
Rapeseed oil fatty acid methyl esters, see Oil, misc.: Rapeseed fatty acid methyl esters.		3	73891–99–3		RSO
Rapeseed oil, see Oil, edible: Rapeseed.			8002–13–9		ORO (VEO)
Refrigerant gases	0	1		RFG	
Resin oil, distilled, see Oil, misc.: Resin, distilled.		3			ORR (ORS)
Rice bran oil, see Oil, edible: Rice bran.			68553–81–1		ORB
Rosin soap (disproportionated) solution.	43		61790–50–9	RSP	
Rosin, see Oil, misc.: Rosin			8050–09–7		ORN

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Rum, see Alcoholic beverages, n.o.s..	.....	.....	64–17–5		ABV
Safflower oil, see Oil, edible: Safflower.	.....	.....	8001–23–8		OSF (VEO)
Sewage sludge	43	.....	.....	SWS	
Shea butter, see Oil, edible: Shea butter.	.....	3	194043–92–0		OSH (VEO)
Silica slurry	43	.....	69012–64–2	SLC	
Siloxanes	34	.....	9011–19–2	SLX	
Sludge, treated	43	.....	.....	SWA	
Sodium acetate solutions	34	.....	127–09–3	SAN	
Sodium acetate, Glycol, Water mixture (containing 1% or less Sodium hydroxide) (if non-flammable or non-combustible).	5	2	.....	SAY	SAO/SAP/SAQ/SAY
Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide).	5	.....	.....	SAQ	SAO/SAP/SAW/SAY
Sodium acetate, Glycol, Water mixture (not containing Sodium hydroxide).	34	2	.....	SAW	SAO/SAP/SAQ/SAY
Sodium alkyl (C14–C17) sulfonates (alternately sulphonates) (60–65% solution).	34	.....	.....	SSU	AKA/AKE
Sodium aluminate solution	5	.....	11138–49–1	SAV	SAU
Sodium aluminate solution (45% or less).	5	.....	11138–49–1	SAU	SAV
Sodium aluminosilicate slurry	34	.....	1344–00–9	SLR	
Sodium benzoate	34	.....	532–32–1	SBN	SBM
Sodium bicarbonate solution (less than 10%).	34	3	144–55–8	SBC	
Sodium borohydride (15% or less)/Sodium hydroxide solution.	5	.....	.....	SBX	CSS/SBH/SBI/SHD
Sodium bromide solution (less than 50%).	43	3	7647–15–6	SBL	SBR
Sodium carbonate solution	5	.....	497–19–8	SCE	
Sodium chlorate solution (50% or less).	0	1, 2	7775–09	SDD	SDC
Sodium cyanide solution	5	.....	143–33–9	SCO	SCN/SCS
Sodium dichromate solution (70% or less).	0	1, 2	7789–12–0	SDL	SCR
Sodium dimethyl naphthalene sulfonate solution, see Dimethyl naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution.	.....	.....	532–02–5		DNS
Sodium hydrogen sulfide (alternately sulphide) (6% or less)/Sodium carbonate (3% or less) solution.	0	1, 2, 3	.....	SSS	SCE/SHW
Sodium hydrogen sulfite (alternately sulphite) solution (45% or less).	43	.....	7631–90–5	SHY	SHX
Sodium hydrosulfide (alternately hydrosulphide)/Ammonium sulfide (alternately sulphide) solution.	5	2	.....	SSA	ASF/ASS
Sodium hydrosulfide (alternately hydrosulphide) solution (45% or less).	5	2	16721–80–5	SHR	
Sodium hydroxide solution, see Caustic soda solution.	.....	2	1310–73–2		CSS (SHD)

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Sodium hypochlorite solution (15% or less).	5	.....	7681–52–9	SHP	SHC/SHQ
Sodium hypochlorite solution (20% or less).	5	.....	7681–52–9	SHQ	SHC/SHP
Sodium lignosulfonate (alternately lignosulphonate) solution.	43	.....	8061–51–6	SLG	LNL
Sodium long-chain alkyl salicylate (C13+).	34	.....	84539–60–6	SLS	
Sodium-2-mercaptobenzothiazol solution, see Mercaptobenzothiazol, sodium salt solution.	.....	.....	2492–26–4		SMB
Sodium methoxide (25% in methanol).	0	1	124–41–4	SMO	
Sodium methylate 21–30% in methanol.	0	1, 2, 3	124–41–4	SMT	SMS
Sodium naphthalene sulfonate (alternately *sulphonate*) *solution, see* Naphthalene sulfonic (alternately sulphonic) acid (40% or less), sodium salt solution (40% or less).	.....	.....	532–02–5	SNS	NSA (NSB)
Sodium naphthenate solution, see Naphthenic acid, sodium salt solution.	.....	.....	61790–13–4		NTS
Sodium nitrite solution	5	.....	7632–00–0	SNI	SNT
Sodium N-methyl dithio carbamate solution, see Metam sodium solution.	.....	.....	137–42–8	MSS	SMD
Sodium petroleum sulfonate (alternately sulphonate).	34	.....	68608–26–4	SPS	
Sodium poly (4+)acrylate solution ..	43	2	9003–04–7	SOP	SOO
Sodium polyacrylate solution	43	2	9003–04–7	SOO	SOP
Sodium salt of Ferric hydroxyethylethylenediaminetriacetic acid solution, see Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution.	.....	.....	139–89–9	STA	FHX
Sodium silicate solution	43	2	1344–09–8	SSN	SSC
Sodium sulfate (alternately sulphate) solution.	34	3	7757–82–5	SST	SSO
Sodium sulfide (alternately sulphide) solution (15% or less).	43	.....	1313–82–2	SDR	SDS
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H_2S 15 ppm or less).	0	1, 2	.....	SSH	SDS/SHR/SSI/SSJ
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H_2S greater than 15 ppm but less than 200 ppm).	0	1, 2	.....	SSI	SDS/SHR/SSH/SSJ
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H_2S greater than 200 ppm).	0	1, 2	.....	SSJ	SDS/SHR/SSH/SSI
Sodium sulfite (alternately sulphite) solution (25% or less).	43	.....	7757–83–7	SUP	SSF/SUS
Sodium tartrates/Sodium succinates solution.	43	.....	.....	STM	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Sodium thiocyanate solution (56% or less).	0	1, 2	540–72–7	STS	SCY
Sorbitol solution	20		50–70–4	SBU	SBT
Soyabean fatty acid methyl ester, see Oil, misc.: Soyabean fatty acid methyl ester.			67784–80–9		OST
Soyabean oil (epoxidized)	34		8013–07–8		OSC/EVO
Soyabean oil, see Oil, edible: Soyabean.		2	8001–22–7		OSB (VEO)
Stearic acid, see Fatty acids (saturated, C13+).			57–11–4	SRA	FAD (FAB/FAE/FDI/FDT)
Stearyl alcohol	20		112–92–5	SYL	ALY/ASY
Stoddard solvent, see Naphtha: Stoddard solvent.			8032–32–4		NSS
Styrene monomer	30		100–42–5	STY	
Sulfohydrocarbon (alternately Sulphohydrocarbon) (C3–C88).	33			SFO	
Sulfohydrocarbon (alternately Sulphohydrocarbon), long-chain (C18+) alkylamine mixture.	7			SFX	
Sulfolane (alternately Sulpholane)	39		126–33–0	SFL	
Sulfonated (alternately Sulphonated) polyacrylate solutions.	43	2		SPA	
Sulfur (alternately Sulphur) (molten)	0	1, 2	7704–34–9	SXX	
Sulfur (alternately Sulphur) dioxide	0	1	7446–09–5	SFD	
Sulfuric (alternately Sulphuric) acid	2	2	7664–93–9	SFA	SAC
Sulfuric (alternately Sulphuric) acid, spent.	2	2	7664–93–9	SAC	SFA
Sulfurized (alternately Sulphurized) fat (C14–C20).	33			SFT	
Sulfurized (alternately Sulphurized) polyolefinamide.	10			SPY	
Sulfurized (alternately Sulphurized) polyolefinamide alkene (C28–C250) amine.	33			SPO	
Sunflower seed oil, see Oil, edible: Sunflowerseed.	34		8001–21–6		OSN (VEO)
Sym-trichlorobenzene, see 1,2,4-Trichlorobenzene..			108–70–3		
Tall oil, see Oil, misc.: Tall			8002–26–4		OTL (OTI/OTJ)
Tall oil, crude, see Oil, misc.: Tall, crude.		2, 3	8002–26–4		OTI (OTJ/OTL)
Tall oil, distilled, see Oil, misc.: Tall, distilled.		3	8002–26–4		OTJ (OTI/OTL)
Tall oil, fatty acid, see Oil, misc.: Tall fatty acid.		2	61790–12–3		OTT
Tall oil fatty acid (resin acids less than 20%), see Oil, misc.: Tall oil fatty acid (resin less than 20%).		2			OTK (OTT)
Tall oil fatty acid, barium salt	0	1, 2		TOB	
Tall oil pitch, see Oil, misc.: Tall pitch.		3	08016–81–7		OTP (OTI/OTJ/OTL)
Tall oil soap (crude)	34			TOR	TOS
Tall oil soap (disproportionated) solution.	43			TOS	
Tallow	34	2	61789–97–7	TLO	
Tallow alcohol, see Alcohols (C13+).		2	67762–27–0	TFA	ALY (ASY)

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Tallow alkyl nitrile	37			TAN	
Tallow fatty acid	34	2	61790–37–2	TFD	
Tallow fatty alcohol, see Alcohols (C13+).		2	67762–27–0	TFA	ALY
TAME, see tert-Amyl methyl ether			994–05–8		AYE
Tertiary butylphenols	21		128–39–2	BLT	BTP
Tetrachloroethane	36		79–34–5	TEC	
1,1,2,2-Tetrachloroethane, see Tetrachloroethane.	36		79–34–5	TEC	TEE
Tetradecanol, see Alcohols (C13+)			112–72–1	TTN	ALY
Tetradecene, see olefins or alpha-olefin entries.			1120–36–1		OAM/OFY/ OFW/ OFZ/TDD
Tetradecylbenzene, see Alkyl (C9+) benzenes.			1459–10–5	TDB	AKB
Tetraethyl silicate monomer/ oligomer (20% in ethanol).	0	1, 3		TSM	
Tetraethylene glycol	40		112–60–7	TTG	
Tetraethylene glycol methyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.			23783–42–8		PAG
Tetraethylenepentamine	7	2	112–57–2	TTP	
Tetrahydrofuran	41		109–99–9	THF	
Tetrahydronaphthalene	32		119–64–2	THN	
Tetramethylbenzene (all isomers)	32		527–53–7	TTC	TTB
1,2,3,5-Tetramethylbenzene, see Tetramethylbenzene (all isomers).			527–53–7	TTB	TTC
Tetrapropylbenzene, see Alkyl (C9+) benzenes.					AKB
Tetrasodium salt of ethylenediaminetetraacetic acid solution, see Ethylenediaminetetraacetic acid, tetrasodium salt solution.			13235–36–4		EDS
Titanium dioxide slurry	43		13463–67–7	TDS	
Titanium tetrachloride	2		7550–45–0	TTT	
Toluene	32	2	108–88–3	TOL	
Toluene diisocyanate	12	2	584–84–9		TDI
Toluenediamine	9		95–80–7	TDA	
o-Toluidine	9	2	95–53–4	TLI	TOD/TOI
Triarylphosphate, see Triisopropylated phenyl phosphates.			115–86–6	TRA	TPL
Tributyl phosphate	34		126–73–8	TBP	
1,2,3-Trichlorobenzene (molten)	36	3	120–82–1	TBZ	TCB
1,2,4-Trichlorobenzene	36		120–82–1	TCB	TBZ
1,2,3-Trichlorobenzol, see 1,2,3-Trichlorobenzene (molten).			87–61–6	TBZ	TCB
1,1,1-Trichloroethane	36	2	71–55–6	TCE	TCM
1,1,2-Trichloroethane	36		79–00–5	TCM	TCE
Trichloroethylene	36	2	79–01–6	TCL	
1,1,2-Trichloro-1,2,2-trifluoroethane	36		76–13–1	TTF	
Tricresyl phosphate (containing 1% or more ortho-isomer).	34	3	78–30–8 (o isomer)	TCO	TCP/TCQ
Tricresyl phosphate (containing less than 1% ortho-isomer).	34	3	1330–78–5	TCP	TCO/TCQ
1,2,3-Trichloropropane	36	2	96–18–4	TCN	
Tridecane (all isomers), see n-Alkanes (C10+) (all isomers).			629–50–5	TRD	ALV (ALJ)
Tridecanoic acid	34		638–53–9	TDO	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Tridecanol, see Alcohols (C13+)	.....	.....	112–70–9	TDN	ALY (ASK/ ASY/AYK/ LAL)
Tridecene, see Olefins (C13+ all isomers).	.....	.....	2437–56–1	TRD	OAM/OFY/ OFW/ OFZ/TDC
Tridecyl acetate	34	.....	1072–33–9	TAE	
Tridecylbenzene, see Alkyl (C9+) benzenes.	.....	.....	123–02–4	TRB	AKB
Triethanolamine	8	2	102–71–6	TEA	
Triethylamine	7	.....	121–44–8	TEN	
Triethylbenzene	32	.....	102–25–0 (1,3,5)	TEB	
Triethylene glycol	40	.....	112–27–6	TEG	
Triethylene glycol butyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	143–22–6	TBE	PAG
Triethylene glycol butyl ether mixture.	40	.....	143–22–6	TBD	
Triethylene glycol di-(2-ethylbutyrate).	34	.....	95–08–9	TGD	
Triethylene glycol dibenzoate	34	.....	120–56–9	TGB	
Triethylene glycol ether mixture	40	.....	112–35–6	TYM	
Triethylene glycol ethyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	112–50–5	TGE	PAG
Triethylene glycol methyl ether, see Poly (2–8)alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	112–35–6	TGY	PAG
Triethylenetetramine	7	2	112–24–3	TET	
Triethyl phosphate	34	.....	78–40–0	TPS	
Triethyl phosphite	34	2	122–52–1	TPI	
Triisobutylene	30	.....	7756–94–7	TIB	
Triisooctyl trimellitate	34	.....	27251–75–8	TIS	
Triisopropanolamine	8	.....	122–20–3	TIP	
Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution.	.....	.....	.....		DTI
Triisopropylated phenyl phosphates	34	.....	26967–76–0	TPL	
Trimethylacetic acid	4	.....	75–98–9	TAA	
Trimethylamine solution (30% or less).	7	.....	75–50–3	TMT	TMA
Trimethylbenzene (all isomers)	32	.....	95–63–6 (1,2,4)	TRE	TMB/TMD/ TME
Trimethyl nonanol, see Dodecyl alcohol.	.....	.....	112–53–8		DDN (ASK/ ASY/LAL)
Trimethylol propane polyethoxylated.	20	.....	50586–59–9	TPR	
Trimethyl phosphite	34	2	121–45–9	TPP	
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-).	12	.....	28679–16–5	THI	
Trimethylhexamethylenediamine (2,2,4- and 2,4,4-).	7	.....	25513–64–8	THA	
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate.	34	.....	6846–50–0	TMQ	
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate.	34	.....	18491–15–1	TMP	
2,2,4-Trimethyl-3-pentanol-1-isobutyrate.	34	.....	.....	TMR	
1,3,5-Trioxane	41	2	110–88–3	TRO	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Triphenylborane (10% or less)/ Caustic soda solution.	5	.....	960–71–4	TPB	
Tripropylene, see Propylene trimer	.....	.....	13987–01–4		PTR
Tripropylene glycol	40	.....	24800–44–0	TGC	
Tripropylene glycol methyl ether, see Poly (2–8) alkylene glycol monoalkyl (C1–C6) ether.	.....	.....	25498–49–1	TGM	PAG
Trisodium nitrilotriacetate solution, see Nitrilotriacetic acid, trisodium salt solution.	.....	.....	5064–31–3	TSO	NCA (TSN)
Trisodium phosphate solution	5	.....	10101–89–0	TSP	
Trisodium salt of N-(Hydroxyethyl)ethylenediaminetriacetic acid solution, see N-(Hydroxyethyl)ethylenediaminetriacetic acid, trisodium salt solution.	.....	.....	207386–87–6		HET
Trixylyl phosphate	34	.....	25155–23–1		TRP
Trixylenyl phosphate, see Trixylyl phosphate.	.....	.....	25155–23–1		TRP
Tung oil, see Oil, misc.: Tung	.....	.....	8001–20–5		OTG
Turpentine	30	.....	9005–90–7	TPT	
Turpentine substitute, see White spirit (low (15–20%) aromatic).	.....	.....	8052–41–13		WSL (WSP)
Undecane (all isomers), see Alkanes (C10+) (all isomers).	.....	.....	1120–21–4	UDN	ALV (ALJ)
Undecanoic acid	4	.....	112–37–8	UDA	
Undecanol, see Undecyl alcohol	.....	.....	112–42–5		UND (ALR)
Undecene	30	.....	1120–21–4	UDD	UDC
1-Undecene	30	.....	821–95–4	UDC	UDD
Undecyl alcohol	20	.....	112–42–5	UND	ALR
Undecylbenzene, see Alkyl (C9+) benzenes.	.....	.....	67774–74–7	UDB	AKB
Urea solution	43	.....	57–13–6	USL	URE
Urea, Ammonium mono- and di-hydrogen phosphate/Potassium chloride solution.	0	1	.....	UPX	
Urea/Ammonium nitrate solution (containing less than 1% free Ammonia).	43	2	.....	UAU	ANU/UAS/ UAT/UAV
Urea/Ammonium nitrate solution (containing 1% or more free Ammonia).	6	.....	.....	UAT	ANU/UAS
Urea/Ammonium phosphate solution.	43	.....	.....	UAP	
Vacuum gas oil, see oil misc.: Vacuum gas oil.	33	.....	64741–57–7	OVC	
Valeraldehyde (all isomers)	19	.....	110–62–3	VAK	IVA/VAL
Vanillin black liquor (free alkali content 3% or more).	5	.....	68514–06–7	VBL	
Vegetable acid oils, n.o.s.	34	.....	.....	VAD	
Including:					
Corn acid oil	34	.....	68308–50–9		
Cottonseed acid oil.	34	.....	68308–51–0		
Dark mixed acid oil.	34				
Groundnut acid oil.	34				
Mixed acid oil	34				
Mixed general acid oil.	34				

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Mixed hard acid oil.	34				
Mixed soft acid oil.	34				
Rapeseed acid oil	34	.....	112–86–7		
Safflower acid oil	34				
Soya acid oil	34	.....	68308–53–2		
Sunflower seed acid oil.	34	.....	84625–38–7		
Vegetable oil mixtures, containing less than 15% free fatty acid (m).	34	.....	.....	VEO	
Vegetable fatty acid distillates, n.o.s..	34	3	.....	VFD	
Including:					
Palm kernel fatty acid distillate.	34	.....	67701–05–7		
Palm oil fatty acid distillate.	34	.....	68440–15–3		
Tall fatty acid distillate.	34	.....	61790–12–3		
Tall oil fatty acid distillate.	34	.....	61790–12–3		
Vegetable oils, n.o.s.	34	.....	.....	VEO	
Including:					
Beechnut oil	34				
Camelina oil	34	.....	68956–68–3		
Cashew nut shell	34	.....	8007–24–7		
Castor oil	34	.....	8001–79–4		
Cocoa butter	34	.....	8002–31–1		
Coconut oil	34	2	8001–31–8		
Corn oil	34	.....	8001–30–7		
Cottonseed oil	34	.....	801–29–4		
Croton oil	34	.....	8001–28–3		
Grape seed oil	34	.....	8024–22–4		
Groundnut acid oil.	34				
Hazelnut oil	34	.....	84012–21–5		
Illipe oil	34	.....	91770–65–9		
Jatropha oil	34	.....	88–6–7	JTO	
Linseed oil	34	.....	8001–26–1		
Mango kernel oil	34	.....	90063–86–8		
Nutmeg butter	34	.....	8008–45–5		
Oiticica oil	34	.....	8016–35–1		
Olive oil	34	.....	8001–25–0		
Palm kernel oil ...	34	.....	8023–79–8		
Palm kernel olein	34	.....	93334–39–5		
Palm kernel stearin.	34				
Palm mid fraction	34	.....	91079–14–0		
Palm, non-edible industrial grade.	34	.....	8002–75–3		
Palm oil	34	2, 3	8002–75–3		
Palm olein	34	.....	93334–39–5		
Palm stearin	34	.....	91079–14–0		
Peanut oil	34	.....	8002–03–7		
Peel oil (oranges and lemons).	34	.....	8008–56–8		
Perilla oil	34	.....	68132–21–8		

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Pine oil	34		8002–09–3		
Poppy seed oil	34		8002–11–7		
Poppy oil	34				
Raisin seed oil	34		8024–22–4		
Rapeseed oil	34		8002–13–9		
Rapeseed (low erucic acid containing less than 4% free fatty acids).	34	3			
Resin oil, distilled	30	3			
Rice bran oil	34		68553–81–1		
Rosin oil	34		8002–16–2		
Safflower oil	34		8001–23–8		
Salad oil	34		68956–68–3		
Sesame oil	34		8008–74–0		
Shea butter	34		194043–92–0		
Soyabean oil	34	2	8001–22–7		
Sunflower seed oil.	34		8001–21–6		
Tall	34		8002–26–4		
Tall, crude	34		8002–26–4		
Tall, distilled	34		8002–26–4		
Tall, pitch	34		8016–81–7		
Tucum oil	34		98143–57–8		
Tung oil	34		8001–20–5		
Walnut oil	34		8024–09–7		
Vegetable protein solution (hydrolyzed).	43		100209–45–8	VPS	
Vinyl acetate	13	2	108–05–4	VAM	
Vinyl chloride	35		75–01–4	VCM	
Vinyl ethyl ether	13		109–92–2	VEE	
Vinylidene chloride	35		75–35–4	VCI	
Vinyl neodecanoate	13	2	51000–52–3	VND	
Vinyltoluene	13		25013–15–4	VNT	
Water	43		7732–18–5	WTR	
Waxes				WAX	
Including:					
Candelilla	34		8006–44–8	WCD	
Carnauba	34		8015–86–9	WCA	
Hydrocarbon	31			WHC	WPF
Paraffin	31		8002–74–2	WPF	
Petroleum	33			WPT	
White spirit, see White spirit (low (15–20%) aromatic).			8052–41–13	WSP	WSL
White spirit (low (15–20%) aromatic).	33		8052–41–3	WSL	WSP
Wine, see Alcoholic beverages			64–17–5	ABV	
Wood lignin with Sodium acetate/oxalate.	0	1, 3		WOL	
Xylenes	32	2	106–42–3	XLX	XLM/XLO/XLP
Xylenes/Ethylbenzene (10% or more) mixture.	32			XEB	
Xylenols	21		105–67–9	XYL	
Zinc alkaryl dithiophosphate (C7–C16).	34			ZAD	
Zinc alkenyl carboxamide	10			ZAA	WSL
Zinc alkyl dithiophosphate (C3–C14).	34		688649–42–3	ZAP	

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES—Continued

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Zinc bromide/Calcium bromide solution, see Drilling brine (containing Zinc salts).	.....	.....	7699–45–8		DZB

Notes:

Italicized words are not part of the cargo name but may be used in addition to the cargo name.

CAS numbers marked with an asterisk (*) represent the CAS number of the lowest member in the homologous series.

Not all chemicals have been assigned CAS numbers. These cells are left blank in the CAS Number column.

Footnotes:

1. Because of very high reactivity, unusual conditions of carriage, or potential compatibility problems, this commodity is not assigned to a specific group in Figure 1 to 46 CFR part 150 (Compatibility Chart).

2. See Appendix I to 46 CFR part 150 (Exceptions to the Chart).

3. Entry was added from the March 2012 Annex to the 2007 edition of the IBC Code (MEPC 63/23/Add.1), the December 2012 IMO Marine Environmental Protection Committee Circular (MEPC.2/Circ.18), or the December 2013 IMO Marine Environmental Protection Committee Circular (MEPC.2/Circ.19).

[USCG–2022–0327, 88 FR 81190, Nov. 21, 2023]

TABLE 2 TO PART 150—GROUPING OF CARGOES

TABLE 2 TO PART 150—GROUPING OF CARGOES

Group	Cargo
0. Unassigned Cargoes	Acetone cyanohydrin Alkenoic acid, polyhydroxy ester borated Alkylbenzene distillation bottoms Alkyl (C8–C10)/(C12–C14):(60% or more/40% or less) Alkyl (C11–C17) benzene sulfonic (alternately sulphonic) acid Alkylbenzene sulfonic (alternately sulphonic) acid (less than 4%)[1] Alkyl (C18–C28) toluenesulfonic (alternately toluenesulphonic) acid Aluminum (alternately Aluminium) chloride/Hydrogen chloride solution Ammonium hydrogen phosphate solution Ammonium nitrate solution (45% or less) Ammonium nitrate solution (93% or less) Ammonium thiocyanate/Ammonium thiosulfate (alternately thiosulphate) solution Argon, liquefied Benzenesulfonyl (alternately Benzenesulphonyl) chloride[1] gamma-Butyrolactone[1] Carbon dioxide (high purity) Carbon dioxide (reclaimed quality) Carbon dioxide, liquefied Chlorine 2-Chloro-4-ethylamino-6-isopropylamino-5-triazine solution Chlorosulfonic (alternately Chlorosulphonic) acid Decyloxytetrahydro-thiophene dioxide 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (70% or less)[1] Dimethyl disulfide (alternately disulphide) Diphenylol propane-Epichlorohydrin resins Disulfide (alternately Disulphide) Dodecyl hydroxypropyl sulfide (alternately sulphide)[1] Dodecyl benzenesulfonic (alternately Dodecyl benzenesulphonic) acid[1] Ethylene oxide Hydrogen peroxide solutions (over 60% but not more than 70% by mass) Hydrogen peroxide solutions (over 8% but not more than 60% by mass) Hydrogenated starch hydrolysate Lactic acid[1] Liquid chemical wastes Long-chain alkaryl sulfonic (alternately sulphonic) acid (C16–C60)[1] Magnesium chloride solution[1] Maltitol solution Methylcyclopentadienyl manganese tricarbonyl Methylcyclopentadienyl manganese tricarbonyl (60–70%) in mineral oil Molasses residue (from fermentation) Molybdenum polysulfide (alternately polysulphide) long-chain alkyl dithiocarbamide complex Motor fuel anti-knock compound (containing lead alkyls) Naphthalene sulfonic (alternately sulphonic) acid-formaldehyde copolymer, sodium salt solution

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Nitrating acid (mixture of Sulfuric (alternately Sulphuric) and Nitric acids)
	Nitric acid (70% and over)[1]
	Nitric acid fuming
	Nitric acid red fuming
	Nitrogen
	o-Nitrophenol (molten)[1]
	Noxious Liquid Substance, NF, (1) n.o.s. (''trade name'' contains ''principal components'') Cat X
	Noxious Liquid Substance, F, (2) n.o.s. (''trade name'' contains ''principal components'') Cat X
	Noxious Liquid Substance, NF, (3) n.o.s. (''trade name'' contains ''principal components'') Cat X
	Noxious Liquid Substance, F, (4) n.o.s. (''trade name'' contains ''principal components'') Cat X
	Noxious Liquid Substance, NF, (5) n.o.s. (''trade name'' contains ''principal components'') Cat Y
	Noxious Liquid Substance, F, (6) n.o.s. (''trade name'' contains ''principal components'') Cat Y
	Noxious Liquid Substance, NF, (7) n.o.s. (''trade name'' contains ''principal components'') Cat Y
	Noxious Liquid Substance, F, (8) n.o.s. (''trade name'' contains ''principal components'') Cat Y
	Noxious Liquid Substance, NF, (9) n.o.s. (''trade name'' contains ''principal components'') Cat Z
	Noxious Liquid Substance, F, (10) n.o.s. (''trade name'' contains ''principal components'') Cat Z
	Noxious Liquid Substance, (11) n.o.s. (''trade name'' contains ''principal components'') Cat Z
	Non-noxious Liquid Substance, (12) n.o.s. (''trade name'' contains ''principal components'') Cat OS
	n-Octyl Mercaptan
	Offshore contaminated bulk liquid P (Pollution-only products)
	Offshore contaminated bulk liquid S (Safety hazard products)
	Oleum[1]
	Orange juice (concentrated)
	Orange juice (not concentrated)
	Oxygenated aliphatic hydrocarbon mixture
	Phosphorus, yellow or white
	Phosphosulfurized (alternately Phosphosulphurized) bicycle terpene
	Phthalate-based polyester polyol[1]
	Polyalkylalkenaminesuccinimide, molybdenum oxysulfide
	Potassium polysulfide (alternately polysulphide), Potassium thiosulfide (alternately thiosulphide) solution (41% or less)
	2-Propene-1-aminium, N,N-dimethyl-N–2-propenyl-, chloride, homopolymer solution
	Refrigerant gases
	Sodium chlorate solution (50% or less)[1]
	Sodium dichromate solution (70% or less)[1]
	Sodium hydrogen sulfide (alternately sulphide) (6% or less)/Sodium carbonate (3% or less) solution[1]
	Sodium methoxide (25% in methanol)
	Sodium methylate (21–30% in methanol)
	Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H_2S 15 ppm or less)
	Sodium sulfide (alternately sulphide), Hydrosulfide (alternately Hydrosulphide) solution (H_2S greater than 15 ppm but less than 200 ppm)[1]
	Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H_2S greater than 200 ppm)
	Sodium thiocyanate solution (56% or less)[1]
	Sulfur (alternately Sulphur) (molten)
	Sulfur (alternately Sulphur) dioxide
	Tall oil fatty acid, barium salt[1]
	Tetraethyl silicate monomer/oligomer (20% in ethanol)
	Urea, Ammonium mono- and di-hydrogen phosphate/Potassium chloride solution
	Wood lignin with Sodium acetate/oxalate
1. Non-Oxidizing Mineral Acids	Di-(2-ethylhexyl) phosphoric acid
	Ferric chloride solution
	Fluorosilicic acid (20–30%) in water solution
	Fluorosilicic acid (30% or less)
	Hydrochloric acid
	Hydrofluorosilicic acid (25% or less)
	Phosphoric acid
	Polyaluminum (alternately Polyaluminium) chloride solution
2. Sulfuric (Alternately Sulphuric) Acids.	Sulfuric (alternately Sulphuric) acid[1]
	Sulfuric (alternately sulphuric) acid, spent

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Titanium tetrachloride
3. Nitric Acids	Ferric nitrate/Nitric acid solution
	Nitric acid (70% or less)
4. Organic Acids	Acetic acid[1]
	Acetic acid[1]
	Butyric acid
	Chloroacetic acid (80% or less)
	2- or 3-Chloropropionic acid
	Citric acid (70% or less)
	Decanoic acid
	2,2-Dichloropropionic acid
	Dimethyl octanoic acid
	Fish protein concentrate (containing 4% or less formic acid)
	Fish silage protein concentrate (containing 4% or less formic acid)
	Formic acid[1]
	Formic acid (85% or less)
	Formic acid (over 85%)
	Formic acid mixture (containing up to 18% Propionic acid and up to 25% Sodium formate)
	Glycolic acid (70% or less)
	Glyoxylic acid solution (50% or less)
	n-Heptanoic acid
	1,6-Hexanediol, distillation overheads
	Hexanoic acid
	2-Hydroxy-4-(methylthio)butanoic acid
	Jatropha oil
	Long-chain alkyl (C13+) salicylic acid
	Methacrylic acid
	Naphthenic acid
	Neodecanoic acid
	Nonanoic acid (all isomers)
	Nonanoic/Tridecanoic acid mixture
	Octanoic acid (all isomers)
	Oleic acid
	Pentanoic acid
	n-Pentanoic acid (64%)/2-Methyl butyric acid (36%) mixture
	Propionic acid
	Trimethylacetic acid
	Undecanoic acid
5. Caustics	Aluminum (alternately Aluminium) hydroxide/sodium hydroxide/sodium carbonate solution (40% or less)
	Ammonium sulfide (alternately sulphide) solution (45% or less)
	Calcium hydroxide slurry
	Calcium hypochlorite solution (15% or less)
	Calcium hypochlorite solution (more than 15%)
	Caustic potash solution[1]
	Caustic soda solution[1]
	Cresylic acid, sodium salt solution
	1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution
	Kraft black liquor
	Kraft pulping liquors (free alkali content 3% or more) (Black, Green, or White)
	Magnesium hydroxide slurry
	Mercaptobenzothiazol, sodium salt solution
	2-Mercaptobenzothiazol (in liquid mixture)
	Potassium hydroxide solution[1]
	Sodium acetate, Glycol, Water mixture (containing 1% or less Sodium hydroxide) (if non-flammable or non-combustible)
	Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide)
	Sodium aluminate solution
	Sodium aluminate solution (45% or less)
	Sodium borohydride (15% or less)/Sodium hydroxide solution
	Sodium carbonate solutions
	Sodium cyanide solution
	Sodium hydrosulfide (alternately hydrosulphide) solution (45% or less)[1]
	Sodium hydrosulfide (alternately hydrosulphide)/Ammonium sulfide (alternately sulphide) solution[1]
	Sodium hypochlorite solution (15% or less)
	Sodium hypochlorite solution (20% or less)
	Sodium 2-mercaptobenzothiazol solution
	Sodium nitrite solution
	Triphenylborane (10% or less)/Caustic soda solution
	Trisodium phosphate solution
	Vanillin black liquor (free alkali content 3% or more)

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
6. Ammonia	Ammonia, anhydrous
	Ammonium hydroxide (28% or less Ammonia)
	Urea/Ammonium nitrate solution (containing 1% or more Ammonia)
7. Aliphatic Amines	Alkyl amine (C17+)
	Alkyl (C12+) dimethylamine
	N-Aminoethylpiperazine
	Butylamine (all isomers)
	Crude piperazine
	Cyclohexylamine
	Dibutylamine
	Diethylamine[1]
	Diethylenetriamine[1]
	Diisobutylamine
	Diisopropylamine
	Dimethylamine
	Dimethylamine solution (45% or less)
	Dimethylamine solution (greater than 45% but not greater than 55%)
	Dimethylamine solution (greater than 55% but not greater than 65%)
	N,N-Dimethylcyclohexylamine
	N,N-Dimethyldodecylamine
	Di-n-propylamine
	Dodecylamine/Tetradecylamine mixture
	Dodecyldimethylamine/Tetradecyldimethylamine mixture
	Ethoxylated tallow alkyl amine
	Ethoxylated tallow alkyl amine, glycol mixture
	Ethoxylated tallow amine (>95%)
	Ethylamine[1]
	Ethylamine solution (72% or less)
	N-Ethylbutylamine
	N-Ethylcyclohexylamine
	Ethyleneamine EA 1302[1]
	Ethylenediamine[1]
	2-Ethylhexylamine
	N-Ethylmethylallylamine
	Glycine, sodium salt solution
	Glyphosate solution (not containing surfactant)
	Hexamethylenediamine (molten)
	Hexamethylenediamine solution
	Hexamethylenimine
	Hexamethylenetetramine solutions
	bis-(Hydrogenated tallow alkyl) methyl amines
	Isophoronediamine
	Isopropylamine
	Isopropylamine (70% or less) solution
	Long-chain alkyl amine
	Long-chain polyetheramine in alkyl (C2–C4) benzenes
	Metam sodium solution
	Methylamine solutions (42% or less)
	2-Methyl-1,5-pentanediamine
	Monoethylamine
	Morpholine[1]
	Oleylamine
	Pentaethylenehexamine
	Pentaethylenehexamine/Tetraethylenepentamine mixture
	Phosphate esters, alkyl (C12–C14) amine
	Piperazine (70% or less)
	Piperazine (crude)
	Piperazine, 68% solution
	Polyalkenyl succinic anhydride amine
	Polyethylene polyamines[1]
	Polyethylene polyamines (more than 50% C5–C20 Paraffin oil)
	Poly(iminoethylene)-graft-N-poly (ethyleneoxy) solution (90% or less)
	(Polyisobutene) amino products in aliphatic hydrocarbons
	Polyisobutenamine in aliphatic (C10–C14) solvent
	Polyolefin amide alkeneamine/Molybdenum oxysulfide (alternately oxysulphide) mixture
	Polyolefinamine (C17+)
	Polyoxypropylenediamine
	n-Propylamine
	iso-Propylamine solution
	Sodium N-methyl dithio carbamate solution
	Sulfohydrocarbon (alternately Sulphohydrocarbon), long-chain (C18+) alkylamine mixture
	Tetraethylenepentamine[1]

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Triethylamine
	Triethylenetetramine[1]
	Trimethylamine solution (30% or less)
	Trimethylhexamethylenediamine (2,2,4- and 2,4,4-)
8. Alkanolamines	Alkyl (C12–C16) propoxyamine ethoxylates
	2-(2-Aminoethoxy)ethanol
	Aminoethyldiethanolamine/Aminoethylethanolamine solution
	Aminoethylethanolamine
	2-Amino-2-methyl-1-propanol
	Diethanolamine
	Diethylaminoethanol
	Diisopropanolamine
	Dimethylethanolamine[1]
	Ethanolamine
	Ethoxylated alkyloxy alkyl amine
	Ethoxylated long-chain (C16+) alkyloxyalkanamine
	Isopropanolamine
	Isopropanolamine solution
	Linear alkyl (C12–C16) propoxyamine ethoxylates
	Methyl diethanolamine
	Monoethanolamine
	Monoisopropanolamine
	n-Propanolamine
	Triethanolamine
	Triisopropanolamine
9. Aromatic Amines	Alkyl (C8–C9) phenylamine in aromatic solvents
	Amine C–6, morpholine process residue
	Aniline
	Calcium long chain alkyl phenolic amine (C8–C40)
	4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution
	Dialkyl (C8–C9) diphenylamines
	2,6-Diethylaniline
	2,6-Dimethylaniline
	Diphenylamine (molten)
	Diphenylamine, reaction product with 2,2,4-trimethylpentene
	Diphenylamines, alkylated
	2-Ethyl-6-methyl-N-(1′-methyl-2-methoxyethyl)aniline
	1,3,5-Hexahydrotriethanol-1,3,5-triazine solution
	Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)
	N-Methylaniline
	2-Methyl-6-ethyl aniline
	2-Methyl-5-ethylpyridine
	Methylpyridine
	2-Methylpyridine
	3-Methylpyridine
	4-Methylpyridine
	N-Methyl-2-pyrrolidone[1]
	Paraldehyde-Ammonia reaction product
	Polyolefin phenolic amine (C28–C250)
	Pyridine
	Pyridine bases
	Toluenediamine
	o-Toluidine
10. Amides	Acetochlor
	Acrylamide solution (50% or less)
	Alkenyl (C11+) amide
	N,N-Dimethylacetamide
	N,N-Dimethylacetamide solution
	N,N-Dimethylacetamide solution (40% or less)
	Dimethylformamide
	Formamide
	N,N-bis(2-Hydroxyethyl) oleamide
	Octadecenoamide solution
	Oleamide solution
	Organomolybdenum amide
	Polybutenyl succinimide
	Polyisobutenyl succinimide
	Sulfurized (alternately Sulphurized) polyolefinamide
	Zinc alkenyl carboxamide
11. Organic Anhydrides	Acetic anhydride
	Alkenyl (C16–C20) succinic anhydride
	Alkyl succinic anhydride

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Maleic anhydride
	Maleic anhydride/sodium allylsulphonate copolymer solution
	Phthalic anhydride (molten)
	Polyisobutenyl anhydride adduct
	Polyisobutylene succinic anhydride
	Polyolefin anhydride
	Propionic anhydride
12. Isocyanates	Diphenylmethane diisocyanate
	Hexamethylene diisocyanate
	Isophorone diisocyanate
	Polymethylene polyphenyl isocyanate
	Toluene diisocyanate
	Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-)
13. Vinyl Acetates	Vinyl acetate
	Vinyl ethyl ether
	Vinyl neodecanate
	Vinyl toluene
14. Acrylates	Butyl acrylate (all isomers)
	Butyl methacrylate
	Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture
	Cetyl/Eicosyl methacrylate mixture
	Decyl acrylate
	Dodecyl methacrylate
	Dodecyl/Octadecyl methacrylate mixture
	Dodecyl/Pentadecyl methacrylate mixture
	Ethyl acrylate
	2-Ethylhexyl acrylate
	Ethyl methacrylate
	2-Hydroxyethyl acrylate[1]
	Isobutyl methacrylate
	Methacrylic resin in ethylene dichloride
	Methyl acrylate
	Methyl methacrylate
	Nonyl methacrylate monomer
	Polyalkyl acrylate
	Polyalkyl (C18–C22) acrylate in Xylene
	Polyalkyl (C10–C20) methacrylate
	Polyalkyl methacrylate in mineral oil
	Polyalkyl (C10–C18) methacrylate/Ethylene-propylene copolymer mixture
15. Substituted Allyls	Acrylonitrile[1]
	Allyl alcohol[1]
	Allyl chloride
	Dichloropropene (all isomers)
	1,3-Dichloropropene
	Dichloropropene/Dichloropropane mixtures
	Methacrylonitrile
16. Alkylene Oxides	Brominated Epoxy Resin in Acetone
	1,2-Butylene oxide
	Diglycidyl ether of Bisphenol A
	Diglycidyl ether of Bisphenol F
	Epoxy resin
	Ethylene oxide/Propylene oxide mixture
	Ethylene oxide/Propylene oxide mixture with an Ethylene oxide content not more than 30% by mass
	Propylene oxide
17. Epichlorohydrins	Chlorohydrins
	Chlorohydrins (crude)
	Epichlorohydrin
18. Ketones	Acetone[1]
	Acetophenone
	Butyl heptyl ketone
	Camphor oil (light)
	1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one[1]
	Cyclohexanone
	Cyclohexanone/Cyclohexanol mixtures
	Diisobutyl ketone
	Ethyl amyl ketone
	Isophorone
	Ketone residue
	Mesityl oxide[1]
	Methyl amyl ketone
	Methyl butyl ketone

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Methyl ethyl ketone[1]
	Methyl heptyl ketone
	Methyl isoamyl ketone
	Methyl isobutyl ketone[1]
	Methyl propyl ketone
	beta-Propriolactone
19. Aldehydes	Acetaldehyde
	Acrolein[1]
	Butyraldehyde (all isomers)
	Crotonaldehyde[1]
	Crude isononylaldehyde
	Decaldehyde
	n-Decaldehyde
	2-Ethyl-3-propylacrolein[1]
	Formaldehyde (50% or more)/Methanol mixtures[1]
	Formaldehyde solutions (37%-50%)[1]
	Formaldehyde solutions (45% or less)[1]
	Furfural
	Glutaraldehyde solutions (50% or less)
	Glyoxal solution (40% or less)
	Isodecaldehyde
	Isononylaldehyde (crude)
	3-Methyl butyraldehyde
	Methylolureas
	3-(Methylthio)propionaldehyde
	Octyl aldehyde
	Paraldehyde
	Pentyl aldehyde
	Propionaldehyde
	Valeraldehyde (all isomers)
20. Alcohols, Glycols	Acrylonitrile-Styrene copolymer dispersion in Polyether polyol
	Alcoholic beverages
	Alcohol (C9–C11) poly (2.5–9) ethoxylates
	Alcohol (C6–C17) (secondary) poly (3–6) ethoxylates
	Alcohol (C10–C18) poly (7) ethoxylates
	Alcohol (C6–C17) (secondary) poly (7–12) ethoxylates
	Alcohol (C12–C16) poly (1–6) ethoxylates
	Alcohol (C12–C16) poly (7–19) ethoxylates
	Alcohol (C12–C16) poly (20+) ethoxylates
	Alcohol polyethoxylates
	Alcohol polyethoxylates, secondary
	Alcoholic beverages, n.o.s.
	Alcohols (C12+), primary, linear
	Alcohols (C8–C11), primary, linear and essentially linear
	Alcohols (C12–C13), primary, linear and essentially linear
	Alcohols (C14–C18), primary, linear and essentially linear
	Alcohols (C13+)
	Alkyl/cyclo (C4–C5) alcohols:
	Amyl alcohol, primary
	n-Amyl alcohol
	sec-Amyl alcohol
	tert-Amyl alcohol
	Cetyl Alcohol (Hexadecanol)
	Oleyl Alcohol (Octadecenol)
	Pentadecanol
	Tallow alcohol
	Tetradecanol
	Tridecanol
	Behenyl alcohol
	Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume)
	Brake fluid base mix: Poly(2–8)alkylene (C2–C3) glycols/Polyalkylene (C2–C10) glycols monoalkyl (C1–C4) ethers and their borate esters
	2-Butoxyethanol (58%)/Hyperbranched polyesteramide (42%) (mixture)
	Butyl alcohol (all isomers)[1]
	n-Butyl alcohol
	Butylene glycol
	Choline chloride solutions
	Crude Isopropanol
	Cyclohexanol
	Decyl alcohol (all isomers)[1]
	Decyl/Dodecyl/Tetradecyl alcohol mixture
	Diacetone alcohol[1]

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	2,2-Dimethylpropane-1,3-diol (molten or solution)
	tert-Dodecanethiol[1]
	Dodecyl alcohol (all isomers)
	n-Dodecyl mercaptan
	Ethoxylated alcohols, C11–C15
	Ethyl alcohol[1]
	Ethyl butanol
	Ethylene chlorohydrin
	Ethylene cyanohydrin
	Ethylene glycol[1]
	Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture
	Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture
	Furfuryl alcohol[1]
	Glycerine[1]
	Glycerine (83%)/Dioxanedimethanol (17%) mixture
	Glycerol
	Glycerol monooleate
	Glycol mixture, crude
	Heptanol (all isomers)
	Hexadecanol (Cetyl alcohol)
	Hexamethylene glycol
	Hexanol
	Hexylene glycol
	Isoamyl alcohol
	Isobutyl alcohol
	Isopropyl alcohol
	Methacrylic acid—Alkyloxypoly (alkylene oxide) methacrylate copolymer, sodium salt aqueous solution (45% or less)
	3-Methoxy-1-butanol
	Methyl alcohol[1]
	Methyl amyl alcohol
	alpha-Methylbenzyl alcohol with Acetophenone (15% or less)
	Methyl butanol
	Methyl butenol
	Methyl 3- (3,5 di-tert-butyl-4-hydroxyphenyl) propionate crude melt
	Methyl butynol
	Methylcyclohexanemethanol (crude)
	2-Methyl-2-hydroxy-3-butyne
	Methyl isobutyl carbinol
	3-Methyl-3-methoxybutanol
	2-Methyl-1,3-propanediol
	Molasses
	Nonyl alcohol (all isomers)[1]
	1-Octadecanol
	Octadecenol (oleyl alcohol)
	Octanol (all isomers)[1]
	Octyl alcohol[1]
	Pentacosa(oxypropane-2,3-diyl)s
	Polyalkylene oxide polyol
	Polybutadiene, hydroxyl terminated
	Polyglycerine/Sodium salts solution (containing less than 3% Sodium hydroxide)[1]
	Polyglycerol
	Polyolefin amide alkeneamine polyol
	n-Propyl alcohol[1]
	Propylene glycol[1]
	Sorbitol solution
	Stearyl alcohol
	Tallow alcohol
	Tallow fatty alcohol (C13+)
	Trimethyl nonanol
	Trimethylol propane polyethoxylated
	Undecanol
	Undecyl alcohol
	Wine
21. Phenols, Cresols	Alkyl (C4–C9) phenols
	Alkylated (C4–C9) hindered phenols
	Alkylphenols (C10–C18, C12 rich)
	Benzyl alcohol
	Carbolic oil
	Creosote[1]
	Creosote (coal tar)
	Creosote (wood tar)

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Cresols (all isomers)
	Cresol/Phenol/Xylenol mixture
	Cresols with 5% or more phenol
	Cresols with less than 5% phenol
	Cresylic acid
	Cresylic acid dephenolized
	Cresylic acid tar
	Cresylic acid with 5% or more phenol
	Dibutylphenols
	2,4-Dichlorophenols
	Di-tert-butylphenol
	2,4-Di-tert-butylphenol
	2,6-Di-tert-butylphenol
	2,4-Dichlorophenol
	Dodecyl phenol
	o-Ethyl phenol
	Long-chain alkylphenate/Phenol sulfide (alternately sulphide) mixture
	Long-chain alkylphenol (C14–C18)
	Long-chain alkylphenol (C18–C30)
	Methylene bridged isobutylenated phenols
	Nonylphenol
	Nonylphenol (48–62%)/Phenol (42–48%)/Dinonylphenol (1–10%) mixture
	Octyl phenol
	Phenol
	Tertiary butylphenols
	Xylenols
22. Caprolactam Solutions	epsilon-Caprolactam (molten or aqueous solutions)
23–29. Unassigned.	
30. Olefins	Acrylic acid/ethenesulfonic (alternately ethenesulphonic) acid copolymer with phosphonate groups, sodium salt solution
	Aryl polyolefin (C11–C50)
	Butadiene (all isomers)
	Butadiene/Butylene mixtures (containing Acetylenes)
	Butene oligomer
	Butylenes (all isomers)
	1,5,9-Cyclododecatriene
	Cyclopentadiene/Styrene/Benzene mixture
	1,3-Cyclopentadiene dimer (molten)
	Cyclopentene
	Decene
	Dicyclopentadiene, Resin Grade, 81–89%
	Diisobutylene
	Dipentene
	Dodecene (all isomers)
	1-Dodecene
	Ethylene
	Ethylidene norbornene[1]
	Heptene (all isomers)
	Hexene (all isomers)
	Isoprene (all isomers)
	Isoprene (part refined)
	Isoprene concentrate (Shell)
	Latex ammonia (1% or less)-inhibited
	d-Limonene
	Methyl acetylene/Propadiene mixture
	Methyl butenes
	Methylcyclopentadiene dimer
	2-Methyl-1-pentene
	4-Methyl-1-pentene
	alpha-Methylstyrene
	Mixed C4 Cargoes
	Myrcene
	Nonene (all isomers)
	1-Octadecene
	Octene (all isomers)
	Olefin-Alkyl ester copolymer (molecular weight 2000+)
	Olefin mixture (C7–C9) C8 rich, stabilized
	Olefin mixtures (C5–C7)
	Olefin mixtures (C5–C15)
	Olefins (C13+, all isomers)
	alpha-Olefins (C6–C18) mixtures
	1,3-Pentadiene

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	1,3-Pentadiene (greater than 50%), Cyclopentene and isomers, mixtures
	Pentene (all isomers)
	Pentene
	alpha-Pinene
	beta-Pinene
	Piperylene concentrate
	Poly(4+)isobutylene (molecular weight >224)
	Polyisobutylene (molecular weight ≤224)
	Polyolefin in mineral oil
	Poly(5+)propylene
	Propylene
	Propylene-butylene copolymer
	Propylene dimer
	Propylene tetramer
	Propylene trimer
	Propylene/Propane/MAPP gas mixture
	Styrene monomer
	Tetradecene
	Tridecene
	Triisobutylene
	Tripropylene
	Turpentine
	Undecene
	1-Undecene
	Alkanes (C10–C26) linear and branched (flash point >60 °C)
31. Paraffins	Alkanes (C10–C26) linear and branched (flash point ≤60 °C)
	Alkanes (C6–C9)
	n-Alkanes (C9–C11)
	n-Alkanes (C10+) (all isomers)
	iso- & cyclo-Alkanes (C10–C11)
	iso- & cyclo-Alkanes (C12+)
	Butane (all isomers)
	Butane/Propane mixture
	Cycloheptane
	Cyclohexane
	Cyclopentane
	Ethane
	Ethyl cyclohexane
	Ethylene-Propylene copolymer (in liquid mixtures)
	Heptadecane (all isomers)
	Hydrocarbon wax
	Isopropylcyclohexane
	Methane
	Methylcyclohexane
	2-Methyl pentane
	Nonane (all isomers)
	Octane (all isomers)
	Paraffin wax
	Pentane (all isomers)
	Polyalpha olefins
	Propane
32. Aromatic Hydrocarbons Mixtures.	Alkyl acrylate-Vinyl pyridine copolymer in Toluene
	Alkyl (C3–C4) benzenes:
	Butylbenzenes
	Cumene
	Propylbenzenes
	Alkyl (C5–C8) benzenes:
	Amylbenzenes
	Heptylbenzenes
	Hexylbenzenes
	Octylbenzenes
	Alkyl (C9+) benzenes
	Decylbenzenes
	Dodecylbenzenes
	Nonylbezenes
	Tetradecylbenzenes
	Tetrapropylbenzenes
	Tridecylbenzenes
	Undecylbenzenes
	Alkylbenzenes mixtures (containing naphthalene)
	Alkylbenzene mixtures (containing at least 50% of Toluene)
	Alkylbenzene, Alkylindane, Alkylindene mixture (each C12–C17)

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Alkyl toluene
	Alkyl (C18+) toluenes
	Benzene
	Benzene and mixtures having 10% Benzene or more
	Benzene hydrocarbon mixtures (containing Acetylenes) (having 10% Benzene or more)
	Benzene/Toluene/Xylene mixtures (having 10% Benzene or more)
	Butyl phenol, Formaldehyde resin in Xylene
	Butyl toluene
	C9 Resinfeed (DSM)[1]
	p-Cymene
	Detergent alkylate
	Diethylbenzene
	Diisopropylbenzene (all isomers)
	Diisopropylnaphthalene
	Diphenyl
	Dodecyl xylene
	Ethylbenzene
	Ethyl toluene
	1-Hexadecylnaphthalene/1,4-bis (Hexadecyl) naphthalene mixture
	1,n-Hexadecylnaphthalene (90%)/1,4-Di-n-(Hexadecyl) naphthalene (10%)
	Hexylbenzenes
	Methyl naphthalene (molten)
	Naphthalene crude (molten)
	Naphthalene (molten)
	Naphthalene still residue
	Parachlorobenzotrifluoride
	1-Phenyl-1-xylyl ethane
	Poly(2+) cyclic aromatics
	Polyolefinamine in alkyl (C2–C4) benzenes
	Polyolefinamine in aromatic solvent
	Pyrolysis gasoline (containing Benzene)
	Tetrahydronaphthalene
	Tetramethylbenzene (all isomers)
	C9 Resinfeed (DSM)[2]
	1,2,3,5-Tetramethylbenzene
	Toluene
	Tridecylbenzene
	Triethylbenzene
	Trimethylbenzene (all isomers)
	Xylenes
	Xylenes/Ethylbenzene (10% or more) mixture
33. Miscellaneous Hydrocarbon Mixtures.	Alachlor technical (90% or more)
	Alkylbenzene sulfonic (alternately sulphonic) acid, sodium salt solution
	Alkyl dithiothiadiazole (C6–C24)
	Alkyl (C18–C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, high overbase
	Alkyl (C18–C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, low overbase
	Asphalt
	Asphalt blending stocks, roofers flux
	Asphalt blending stocks, straight run residue
	Asphalt emulsion
	Asphalt, kerosene, and other components
	Aviation alkylates (C8 paraffins and isoparaffins BPT 95 to 120 °C)
	Bio-fuel blends of Diesel/gas oil and Alkanes (C10–C26), linear and branched with a flash point >60 °C (>25% but <99% by volume)
	Bio-fuel blends of Diesel/gas oil and Alkanes (C10–C26), linear and branched with a flash point ≤60 °C (>25% but <99% by volume)
	Calcium sulfonate (alternately sulphonate)/Calcium carbonate/Hydrocarbon solvent mixture
	Coal tar
	Coal tar crude bases
	Coal tar distillate
	Coal tar pitch (molten)
	Coal tar, high temperature
	Decahydronaphthalene
	Diphenyl/Diphenyl ether mixture
	Distillates, flashed feed stocks
	Distillates, straight run
	Drilling mud (low toxicity) (if flammable or combustible)
	Gas oil, cracked
	Gasoline blending stock, alkylates
	Gasoline blending stock, reformates

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Gasolines:
	Automotive (containing not over 4.23 grams lead per gal.)
	Aviation (containing not over 4.86 grams lead per gal.)
	Casinghead (natural)
	Polymer
	Straight run
	Jet Fuels:
	JP–4
	JP–5
	JP–8
	Kerosene
	Mineral spirits
	Naphtha:
	Aromatic
	Coal tar solvent
	Heavy
	Paraffinic
	Petroleum
	Solvent
	Stoddard solvent
	Varnish Makers' and Painters'
	Oil, fuel:
	No. 1
	No. 1–D
	No. 2
	No. 2–D
	No. 4
	No. 5
	No. 6
	Oil, misc.:
	Aliphatic
	Aromatic
	Clarified
	Coal
	Crude
	Diesel
	Gas, cracked
	Gas, high pour
	Gas, low pour
	Gas, low sulfur (alternately sulphur)
	Heartcut distillate
	Lubricating
	Mineral
	Mineral seal
	Motor
	Neatsfoot
	Penetrating
	Pine
	Residual
	Road
	Rosin
	Spindle
	Transformer
	Turbine
	Vacuum gas oil
	Oxyalkylated alkyl phenol formaldehyde
	Petrolatum
	Petroleum wax
	Polybutene
	Polyolefin (molecular weight 300+)
	Polyolefin amide alkeneamine (C17+)
	Polyolefin amide alkeneamine (C28+)
	Polyolefin amide alkeneamine borate (C28–C250)
	Polyolefin amide alkeneamine in mineral oil
	Polyolefinamine (C28–C250)
	Sulfohydrocarbon (alternately Sulphohydrocarbon) (C3–C88)
	Sulfurized (alternately Sulphurized) fat (C14–C20)
	Sulfurized (alternately Sulphurized) polyolefinamide alkene (C28–C250) amine
	Waxes: Petroleum
	White spirit
	White spirit (low (15–20%) aromatic)
34. Esters	Alkenyl (C8+) amine, Alkenyl (C12+) acid ester mixture

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Alkyl dithiocarbamate (C19–C35)
	Alkyl ester copolymer (C4–C20)
	Alkyl ester copolymer in mineral oil
	Alkyl (C7–C9) nitrates[1]
	Alkyl (C8–C40) phenol sulfide (alternately sulphide)
	Alkyl (C10–C20), (saturated and unsaturated) phosphite
	Alkyl sulfonic (alternately sulphonic) acid ester of phenol
	Alkyl (C18–C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, borated
	Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomer)
	Amyl acetate (all isomers)
	Amyl acid phosphate
	Animal and Fish oils, n.o.s.:
	Cod liver oil
	Lanolin
	Neatsfoot oil
	Pilchard oil
	Sperm oil
	Animal and Fish acid oils and distillates, n.o.s.:
	Animal acid oil
	Fish acid oil
	Lard acid oil
	Mixed acid oil
	Mixed general acid oil
	Mixed hard acid oil
	Mixed soft acid oil
	Barium long-chain (C11–C50) alkaryl sulfonate (alternately sulphonate)
	Barium long-chain alkyl (C8–C14) phenate sulfide (alternately sulphide)
	Benzenetricarboxylic acid trioctyl ester
	Benzyl acetate
	Bio-fuel blends of Diesel/gas oil and FAME (>25% but <99% by volume)
	Bio-fuel blends of Diesel/gas oil and vegetable oil (>25% but <99% by volume)
	Boronated calcium sulfonate
	Bis (2-ethylhexyl) terephthalate
	Boronated calcium sulfonate (alternately sulphonate)
	Butyl acetate (all isomers)
	Butyl benzyl phthalate
	Butyl butyrate (all isomers)
	n-Butyl formate
	n-Butyl propionate
	Butyl stearate
	Calcium alkyl (C10–C28) salicylate
	Calcium alkyl (C9) phenol sulfide (alternately sulphide), polyolefin phosphorosulfide (alternately phosphorosulphide) mixture
	Calcium carbonate slurry
	Calcium long-chain alkaryl sulfonate (alternately sulphonate) (C11–C50)
	Calcium long-chain alkyl (C5–C10) phenate
	Calcium long-chain alkyl (C5–C20) phenate
	Calcium long-chain alkyl (C11–C40) phenate
	Calcium long-chain alkyl (C18–C28) salicylate
	Calcium long-chain alkyl phenate sulfide (alternately sulphide) (C8–C40)
	Calcium long-chain alkyl salicylate (C13+)
	Calcium nitrate solutions (50% or less)
	Calcium nitrate/Magnesium nitrate/Potassium chloride solution
	Calcium salts of fatty acids
	Calcium stearate
	Cobalt naphthenate in solvent naphtha
	Copper salt of long-chain (C17+) alkanoic acid
	Copper salt of long-chain (C3–C16) fatty acid
	Cyclohexane-1,2-dicarboxylic acid,diisononyl ester
	Cyclohexyl acetate
	Decyl acetate
	Dialkyl (C7–C13) phthalates:
	2,6-Diaminohexanoic acid phosphonate mixed salts solution
	Di-(2-ethylhexyl) phthalate
	Diheptyl phthalate
	Dihexyl phthalate
	Diisooctyl phthalate
	Dioctyl phthalate
	Diisodecyl phthalate
	Diisononyl phthalate
	Dinonyl phthalate

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Ditridecyl phthalate
	Diundecyl phthalate
	Dialkyl thiophosphates sodium salts solution
	Dibutyl hydrogen phosphonate
	Dibutyl phthalate
	Dibutyl terephthalate
	Di-(2-ethylhexyl) adipate
	Di-(2-ethylhexyl) terephthalate
	Diethylene glycol dibenzoate
	Diethylene glycol phthalate
	Diethyl phthalate
	Diethyl sulfate (alternately sulphate)
	Di-n-hexyl adipate
	Diisobutyl phthalate
	Dimethyl adipate
	Dimethylcyclicsiloxane hydrolyzate
	Dimethyl glutarate
	Dimethyl hydrogen phosphite[1]
	Dimethyl naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution[1]
	Dimethyl phthalate
	Dimethylpolysiloxane
	Dimethyl succinate
	Dipropylene glycol dibenzoate
	Dithiocarbamate ester (C7–C35)
	Ditridecyl adipate
	2-Dodecenylsuccinic acid, dipotassium salt solution
	2-Ethoxyethyl acetate
	Ethyl acetate
	Ethyl acetoacetate
	Ethyl butyrate
	2-Ethyl-2-(2,4-dichlorophenoxy) acetate
	2-Ethyl-2-(2,4-dichlorophenoxy) propionate
	S-Ethyl dipropylthiocarbamate
	Ethylene carbonate
	Ethylene glycol acetate
	Ethylene glycol butyl ether acetate
	Ethylene glycol diacetate
	Ethylene glycol methyl ether acetate
	Ethyl-3-ethoxypropionate
	Ethyl hexyl phthalate
	Ethyl hexyl tallate
	2-Ethyl-2-(hydroxymethyl) propane-1,3-diol (C8–C10) ester
	Ethyl lactate
	Ethyl propionate
	Fatty acid methyl esters
	Fatty acids (C8–C10)
	Fatty acids (C12+)
	Fatty acids (saturated, C13+)
	Fatty acids (C16+)
	Fatty acids, essentially linear (C6–C18) 2-ethylhexyl ester
	Glyceryl triacetate
	Glycidyl ester of C10 trialkyl acetic acid
	Glycidyl ester of tertiary carboxylic acid
	Glycidyl ester of tridecyl acetic acid
	Glycidyl ester of Versatic acid
	Glycol diacetate
	Glycol triacetate
	Heptyl acetate
	Herbicide (C15-H22-NO2-Cl)
	Hexyl acetate
	Hog grease
	Isobutyl formate
	Isopropyl acetate
	Lauric acid
	Lauric acid methyl ester/Myristic acid methyl ester mixture
	Lecithin
	Magnesium long-chain alkaryl sulfonate (alternately sulphonate) (C11–C50)
	Magnesium long-chain alkyl phenate sulfide (alternately sulphide) (C8–C20)
	Magnesium long-chain alkyl salicylate (C11+)
	Magnesium nonyl phenol sulfide (alternately sulphide)
	Magnesium sulfonate (alternately sulphonate)
	3-Methoxybutyl acetate

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	1-Methoxy-2-propyl acetate
	Methyl acetate
	Methyl acetoacetate
	Methyl amyl acetate
	Methyl butyrate
	Methyl formate
	3-Methyl-3-methoxybutyl acetate
	Methyl salicylate
	N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide
	Metolachlor
	Naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution
	Nitrilotriacetic acid, trisodium salt solution
	Nonyl acetate
	Nonyl phenol sulfide (90% or less) solution
	Octamethylcyclotetrasiloxane
	n-Octyl acetate
	Octyl decyl adipate
	Octyl nitrate
	Octyl phthalate
	Oil, edible:
	Beechnut
	Castor
	Cocoa butter
	Coconut
	Cod liver
	Corn
	Cotton seed
	Fish
	Grape seed
	Groundnut
	Hazelnut
	Illipe
	Lard
	Maize
	Mango kernel
	Nutmeg butter
	Olive
	Palm
	Palm kernel
	Palm kernel olein
	Palm kernel stearin
	Palm mid fraction
	Palm olein
	Palm stearin
	Peanut
	Poppy
	Poppy seed
	Raisin seed
	Rapeseed
	Rapeseed, (low erucic acid containing less than 4% free fatty acids)
	Rice bran
	Safflower
	Salad
	Sesame
	Shea butter
	Soyabean
	Sunflower
	Sunflower seed
	Tucum
	Vegetable
	Walnut
	Oil, misc.:
	Acid mixture from soyabean, corn (maize) and sunflower oil refining
	Animal
	Camelina
	Cashew nut shell oil (untreated)
	Coconut fatty acid
	Coconut, fatty acid methyl ester
	Cottonseed oil, fatty acid
	Lanolin
	Linseed
	Oiticica

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Palm acid
	Palm fatty acid distillate
	Palm oil, fatty acid methyl ester
	Palm kernel acid
	Palm kernel fatty acid distillate
	Palm, non-edible industrial grade
	Perilla
	Pilchard
	Rapeseed fatty acid methyl esters
	Seal
	Soapstock
	Soyabean (epoxidized)
	Soyabean fatty acid methyl ester
	Tall
	Tall, crude
	Tall, distilled
	Tall, fatty acid
	Tall, fatty acid (resin acids less than 20%)
	Tall pitch
	Tung
	Used cooking oil
	Used cooking oil (triglycerides, C16–C18 and C18 unsaturated)
	n-Pentyl propionate
	Phosphate esters
	[[(Phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]]tetrakisphosphonic acid, ammonium salt solution (60% or less)
	Poly(2–8)alkylene glycol monoalkyl (C1–C6) ether acetate:
	Diethylene glycol butyl ether acetate
	Diethylene glycol ethyl ether acetate
	Diethylene glycol methyl ether acetate
	Polycarboxylic ester (C9+)
	Polyferric sulfate (alternately sulphate) solution
	Polymerized esters
	Polymethylsiloxane
	Polyolefin aminoester salts (molecular weight 2000+)
	Polyolefin ester (C28–C250)
	Polyolefin phosphorosulfide (alternately phosphorosulphide), barium derivative (C28–C250)
	Poly(20)oxyethylene sorbitan monooleate
	Polysiloxane
	Polysiloxane/White spirit, low (15–20%) aromatic
	Potassium formate solutions
	Potassium formate solution (75% or more)
	Potassium oleate
	Potassium salt of polyolefin acid
	n-Propyl acetate
	Propylene carbonate
	Propylene glycol methyl ether acetate
	Shea butter
	Siloxanes
	Sodium acetate solution
	Sodium acetate/Glycol/Water mixture (not containing Sodium hydroxide)
	Sodium alkyl (C14–C17) sulfonates (alternately sulphonates) 60–65% solution
	Sodium aluminosilicate slurry
	Sodium benzoate
	Sodium bicarbonate solution (less than 10%)
	Sodium dimethyl naphthalene sulfonate (alternately sulphonate) solution[2]
	Sodium long-chain alkyl salicylate (C13+)
	Sodium naphthalene sulfonate (alternately sulphonate) solution
	Sodium petroleum sulfonate (alternately sulphonate)
	Sodium sulfate (alternately sulphate) solution
	Tall oil soap, crude
	Tallow
	Tallow fatty acid
	Tributyl phosphate
	Tricresyl phosphate (containing 1% or more ortho-isomer)
	Tricresyl phosphate (containing less than 1% ortho-isomer)
	Tridecanoic acid
	Tridecyl acetate
	Triethylene glycol di-(2-ethylbutyrate)
	Triethylene glycol dibenzoate
	Triethyl phosphate
	Triethyl phosphite[1]

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Triisooctyl trimellitate[1]
	Triisopropylated phenyl phosphates
	Trimethyl phosphite[1]
	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate
	2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate
	2,2,4-Trimethyl-3-pentanol-1-isobutyrate
	Trisodium nitrilotriacetate solution
	Trixylyl phosphate
	Trixylenyl phosphate
	Vegetable acid oils, n.o.s.:
	Corn acid oil
	Cottonseed acid oil
	Dark mixed acid oil
	Groundnut acid oil
	Mixed acid oil
	Mixed general acid oil
	Mixed hard acid oil
	Mixed soft acid oil
	Rapeseed acid oil
	Safflower acid oil
	Soya acid oil
	Sunflower seed acid oil
	Vegetable oil mixtures, containing less than 15% free fatty acid (m)
	Vegetable fatty acid distillates, n.o.s.:
	Palm kernel fatty acid distillate
	Palm oil fatty acid distillate
	Tall fatty acid distillate
	Tall oil fatty acid distillate
	Vegetable oils, n.o.s.:
	Beechnut oil
	Camelina oil
	Cashew nut shell
	Castor oil
	Cocoa butter
	Coconut oil
	Corn oil
	Cotton seed oil
	Croton oil
	Grape seed oil
	Groundnut oil
	Hazelnut oil
	Illipe oil
	Linseed oil
	Mango kernel oil
	Nutmeg butter
	Oiticica oil
	Olive oil
	Palm kernel oil
	Palm kernel olein
	Palm kernel stearin
	Palm mid fraction
	Palm, non-edible industrial grade
	Palm oil
	Palm olein
	Palm stearin
	Peanut oil
	Peel oil (oranges and lemons)
	Perilla oil
	Pine oil
	Poppy seed oil
	Poppy oil
	Raisin seed oil
	Rapeseed oil
	Rapeseed (low erucic acid containing less than 4% free fatty acids)
	Rice bran oil
	Rosin oil
	Safflower oil
	Salad oil.
	Sesame oil
	Shea butter
	Soyabean oil
	Sunflower seed oil

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Tall
	Tall, crude
	Tall, distilled
	Tall, pitch
	Tucum oil
	Tung oil
	Walnut oil
	Waxes:
	Candelilla
	Carnauba
	Zinc alkaryl dithiophosphate (C7–C16)
	Zinc alkyl dithiophosphate (C3–C14)
35. Vinyl Halides	Vinyl chloride
	Vinylidene chloride
36. Halogenated Hydrocarbons	Benzyl chloride
	Bromochloromethane
	Carbon tetrachloride[1]
	Catoxid feedstock[1]
	Chlorinated paraffins (C10–C13)
	Chlorinated paraffins (C14–C17) (with 50% Chlorine or more, and less than 1% C13 or shorter chains)
	Chlorinated paraffins (C14–C17) (with 52% Chlorine)
	Chlorinated paraffins (C18+) with any level of Chlorine
	Chlorobenzene
	Chloroform
	m-Chlorotoluene
	o-Chlorotoluene
	p-Chlorotoluene
	Chlorotoluenes (mixed isomers)
	Dibromomethane
	Dichlorobenzene (all isomers)
	3,4-Dichloro-1-butene
	Dichlorodifluoromethane
	1,1-Dichloroethane
	1,6-Dichlorohexane
	Dichloromethane
	Dichloropropane
	1,1-Dichloropropane
	1,2-Dichloropropane
	1,3-Dichloropropane
	Ethyl chloride
	Ethylene dibromide
	Ethylene dichloride[1]
	Methyl bromide
	Methyl chloride
	Methylene chloride
	Monochlorodifluoromethane
	Pentachloroethane
	Perchloroethylene
	n-Propyl chloride
	Sym-trichlorobenzene
	Tetrachloroethane
	1,1,2,2-Tetrachloroethane
	1,2,3-Trichlorobenzene (molten)
	1,2,4-Trichlorobenzene
	1,2,3-Trichlorobenzol
	1,1,1-Trichloroethane[1]
	1,1,2-Trichloroethane
	Trichloroethylene[1]
	1,1,2-Trichloro-1,2,2-trifluoroethane
	1,2,3-Trichloropropane
37. Nitriles	Acetonitrile
	Acetonitrile (low purity grade)
	Adiponitrile
	Lactonitrile solution (80% or less)
	2-Methylglutaronitrile
	2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less)
	Propionitrile
	Tallow alkyl nitrile
38. Carbon Disulfide (Alternately Disulfide).	Carbon disulfide (alternately disulphide)
39. Sulfolane (Alternately Sulfolane).	Sulfolane (alternately Sulpholane)

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
40. Glycol Ethers	Alkyl (C7–C11) phenol poly(4–12) ethoxylates
	Alkyl (C9–C15) phenyl propoxylate
	Alkyl (C10–C15, C12 rich) phenol poly(4–12)ethoxylate
	Diethylene glycol[1]
	Diethylene glycol butyl ether
	Diethylene glycol dibutyl ether
	Diethylene glycol diethyl ether
	Diethylene glycol ethyl ether
	Diethylene glycol methyl ether
	Diethylene glycol n-hexyl ether
	Diethetylene glycol phenyl ether
	Diethylene glycol propyl ether
	Dipropylene glycol
	Dipropylene glycol butyl ether
	Dipropylene glycol methyl ether
	2-Ethoxyethanol
	Ethoxy triglycol (crude)
	Ethylene glycol dibutyl ether
	Ethylene glycol monoalkyl ethers:
	Ethylene glycol butyl ether
	Ethylene glycol tert-butyl ether
	Ethylene glycol ethyl ether
	Ethylene glycol hexyl ether
	Ethylene glycol isopropyl ether
	Ethylene glycol methyl butyl ether
	Ethylene glycol methyl ether
	Ethylene glycol propyl ether
	Ethylene glycol n-propyl ether
	Ethylene glycol phenyl ether
	Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture
	Glucitol/Glycerol blend propoxylated (containing less than 10% amines)
	Glucitol/Glycerol blend propoxylated (containing 10% or more amines)
	Glycerol, ethoxylated
	Glycerol polyalkoxylate
	Glycerol, propoxylated
	Glycerol, propoxylated and ethoxylated
	Glycerol/Sucrose blend propoxylated and ethoxylated
	alpha-Hydro-omega-hydroxytetradeca (oxytetramethylene)
	Methoxy triglycol
	Nonyl phenol poly(4+)ethoxylates
	Pentaethylene glycol methyl ether
	Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures
	Poly(2–8)alkylene glycol monoalkyl (C1–C6) ethers:
	Diethylene glycol butyl ether
	Diethylene glycol ethyl ether
	Diethylene glycol n-hexyl ether
	Diethylene glycol methyl ether
	Diethylene glycol propyl ether
	Dipropylene glycol butyl ether
	Dipropylene glycol methyl ether
	Polyalkylene glycol butyl ether
	Polyethylene glycol monoalkyl ether
	Polypropylene glycol methyl ether
	Tetraethylene glycol methyl ether
	Triethylene glycol butyl ether
	Triethylene glycol ethyl ether
	Triethylene glycol methyl ether
	Tripropylene glycol methyl ether
	Polyethylene glycol
	Polyalkylene glycol butyl ether
	Polyethylene glycol dimethyl ether
	Poly (ethylene glycol) methylbutenyl ether (molecular weight >1000)
	Polypropylene glycol
	Poly (tetramethylene ether) glycols (molecular weight 950–1050)
	Polytetramethylene ether glycol
	Propylene glycol monoalkyl ethers:
	n-Propoxypropanol
	Propylene glycol n-butyl ether
	Propylene glycol ethyl ether
	Propylene glycol methyl ether
	Propylene glycol propyl ether
	Propylene glycol phenyl ether

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Tetraethylene glycol
	Triethylene glycol
	Triethylene glycol butyl ether mixture
	Triethylene glycol ether mixture
	Tripropylene glycol
41. Ethers	Alcohol (C12–C13, branched and linear) poly(4–8)propoxy sulfates (alternately sulphates), sodium salt 25–30% solution
	Alkaryl polyethers (C9–C20)
	tert-Amyl ethyl ether
	tert-Amyl methyl ether
	n-Butyl ether
	Dichloroethyl ether
	2,2′-Dichloroisopropyl ether
	Diethyl ether
	Dimethyl ether
	Dimethyl furan
	1,4-Dioxane
	Diphenyl ether
	Diphenyl ether/Diphenyl phenyl ether mixture
	Ethyl tert-butyl ether[1]
	Isopropyl ether
	Long chain alkaryl polyether (C11–C20)
	Methyl-tert-butyl ether[1]
	Methyl tert-pentyl ether
	Polyether, borated
	Polyether (molecular weight 1350+)
	Polyether polyols
	Poly(oxyalkylene) alkenyl ether (molecular weight >1000)
	Polyoxybutylene alcohol
	Propyl ether
	Tetrahydrofuran
	1,3,5-Trioxane
42. Nitrocompounds	*o*-Chloronitrobenzene
	Dinitrotoluene (molten)
	Nitrobenzene
	o-Nitrochlorobenzene
	Nitroethane
	Nitroethane (80%)/Nitropropane (20%)
	Nitroethane/1-Nitropropane (each 15% or more) mixture
	Nitrophenol (mixed isomers)
	Nitropropane (60%)/Nitroethane (40%) mixtures
	1- or 2-Nitropropane
	o- or *p*-Nitrotoluenes
43. Miscellaneous Water Solutions.	Alkyl (C8–C10) polyglucoside solution (65% or less)
	Alkyl (C8–C10)/(C12–C14):(40% or less/60% or more) polyglucoside solution (55% or less)
	Alkyl (C8–C10)/(C12–C14):(50%/50%) polyglucoside solution (55% or less)
	Alkyl (C8–C10)/(C12–C14):(60% or more/40% or less) polyglucoside solution (55% or less)
	Alkyl (C12–C14) polyglucoside solution (55% or less)
	Aluminum sulfate (alternately Aluminium sulphate) solution[1]
	2-Amino-2-hydroxymethyl-1,3-propanediol solution
	Ammonium bisulfite (alternately bisulphite) solution (70% or less)[1]
	Ammonium chloride solution (less than 25%)
	Ammonium polyphosphate solution
	Ammonium sulfate (alternately sulphate) solution
	Ammonium sulfate (alternately sulphate) solution (20% or less)
	Ammonium thiosulfate (alternately thiosulphate) solution (60% or less)
	Apple juice
	Caramel solutions
	Cesium formate solution
	Clay slurry
	Coal slurry
	Corn syrup
	Cyclohexane oxidation products, sodium salts solution
	Dextrose solution
	2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution
	2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution[1]
	Diethylenetriaminepentaacetic acid, pentasodium salt solution
	Dodecyl diphenyl ether disulfonate (alternately disulphonate) solution
	Drilling brines (containing Calcium, Potassium, or Sodium salts)
	Drilling brines (containing Zinc salts)
	Drilling brines, including: Calcium bromide solution, Calcium chloride solution, and Sodium chloride solution

TABLE 2 TO PART 150—GROUPING OF CARGOES—Continued

Group	Cargo
	Drilling mud (low toxicity) (if non-flammable or non-combustible) Ethylenediaminetetracetic acid/tetrasodium salt solution Ethylene-Vinyl acetate copolymer (emulsion) Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution[1] Fish solubles (water-based fish meal extracts) Fructose solution Fumaric adduct of Rosin, water dispersion Glucose solution Hexamethylenediamine adipate (50% in water) Hexamethylenediamine adipate solution N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution Kaolin clay solution/suspension Kaolin slurry Latex, liquid synthetic Latex: Carboxylated Styrene-Butadiene copolymer; Styrene-butadiene rubber Lauryl polyglucose Lauryl polyglucose (50% or less) Lignin liquor Ligninsulfonic (alternately Ligninsulphonic) acid, magnesium salt solution Ligninsulfonic (alternately Ligninsulphonic) acid, sodium salt solution Liquid Streptomyces solubles L-Lysine solution (60% or less) Magnesium nitrate solution (66.7%) Microsilica slurry Milk N-Methylglucamine solution Naphthenic acid, sodium salt solution Pentasodium salt of Diethylenetriaminepentaacetic acid solution Phenol solutions (2% or less) Polyacrylic acid solution (40% or less) Potassium chloride solution Potassium chloride solution (10% or more) Potassium chloride solution (less than 26%) Potassium thiosulfate (alternately thiosulphate) (50% or less) Rosin soap (disproportionated) solution Sewage sludge Silica slurry Sludge, treated Sodium bromide solution (less than 50%) Sodium hydrogen sulfite (alternately sulphite) solution (45% or less) Sodium lignosulfonate (alternately lignosulphonate) solution *Sodium naphthalene sulfonate solution (40% or less), see* Naphthalene sulphonic acid, sodium salt solution (40% or less) *Sodium naphthenate solution,* see Naphthenic acid, sodium salt solution Sodium poly(4+)acrylate solution Sodium polyacrylate solution[1] Sodium salt of Ferric hydroxyethylethylenediaminetriacetic acid solution Sodium silicate solution[1] Sodium sulfide (alternately sulphide) solution (15% or less) Sodium sulfite (alternately sulphite) solution (25% or less) Sodium tartrates/Sodium succinates solution Sulfonated (alternately Sulphonated) polyacrylate solution[1] Tall oil soap (disproportionated) solution Tetrasodium salt of ethylenediaminetetraacetic acid solution Titanium dioxide slurry Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution Trisodium salt of N-(Hydroxyethyl)ethylenediaminetriacetic acid solution Urea solution Urea/Ammonium nitrate solution (containing less than 1% free Ammonia) Urea/Ammonium phosphate solution Vegetable protein solution (hydrolyzed) Water

Notes:
[1] Due to potential compatibility issues, see Appendix I to 46 CFR part 150 (Exceptions to the Chart).

[USCG–2022–0327, 88 FR 81213, Nov. 21, 2023]

APPENDIX I TO PART 150—EXCEPTIONS TO THE CHART

(a) The binary combinations listed below have been tested as prescribed in Appendix III to part 150 and found not to be dangerously reactive. These combinations are exceptions to Figure 1 of part 150 (Compatibility Chart) and may be stowed in adjacent tanks.

Member of reactive group	Compatible with
Acetone (18)	Diethylenetriamine (7).
Acetone cyanohydrin (0)	Acetic acid (4).
	Acrylates (14).
	Alcohols, Glycols (20).
	Aldehydes (19).
	Aromatic Hydrocarbon Mixtures (32).
	Carbon Disulfide (alternately Disulphide) (38).
	Esters (34).
	Ethers (41).
	Glycol Ethers (40).
	Halogenated Hydrocarbons (36).
	Ketones (18).
	Miscellaneous Hydrocarbon Mixtures (33).
	Nitriles (37).
	Nitrocompounds (42).
	Olefins (30).
	Paraffins (31).
	Phenols, Cresols (21).
	Substituted Allyls (15).
	Sulfolane (alternately Sulpholane) (39).
	Vinyl Acetate (13).
	Vinyl Halides (35).
Acrylonitrile (15)	Triethanolamine (8).
1,3-Butylene glycol (20)	Morpholine (7).
1,4-Butylene glycol (20)	Ethylamine (7).
	Triethanolamine (8).
gamma-Butyrolactone (0)	N-Methyl-2-pyrrolidone (9).
Caustic potash, 50% or less (5)	Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume) (20).
	n-Butyl alcohol (20).
	Cetyl alcohol (Hexadecanol) (20).
	Ethyl alcohol (20).
	Ethylene glycol (20).
	Isobutyl alcohol (20).
	Isooctyl alcohol (20).
	Isopropyl alcohol (20).
	Methyl alcohol (20).
	Propylene glycol (20).
Caustic soda, 50% or less (5)	Acrylonitrile/Styrene copolymer dispersion in Polyether polyol (20).
	Alcohol (C12–C16) poly(1–6)ethoxylates (20).
	Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume) (20).
	Butyl alcohol (20).
	tert-Butyl alcohol, Methanol mixtures (20).
	Cetyl alcohol (Hexadecanol) (20).
	Decyl alcohol (20).
	Diacetone alcohol (20).
	Diethylene glycol (40).
	Dodecyl alcohol (20).
	Ethyl alcohol (20).
	Ethyl alcohol (40% whiskey) (20).
	Ethylene glycol (20).
	Ethylene glycol, Diethylene glycol mixture (20).
	Ethyl hexanol (Octyl alcohol) (20).
	Isobutyl alcohol (20).
	Isodecyl alcohol (20).
	Isononyl alcohol (20).
	Isopropyl alcohol (20).
	Isotridecanol (20).
	Methyl alcohol (20).
	Nonyl alcohol (20).
	Propyl alcohol (20).
	Propylene glycol (20).
	Sodium chlorate solution (0).
2,4, D Dimethyl amine salt (DMA 806) (0)	Acetone (18)
	Ethyl Acrylate (14)
	Methyl Alcohol (20)

Member of reactive group	Compatible with
Dimethyl disulfide (alternately disulfide) (0)	Toluene (32) Acrylates (14). Alcohols, Glycols (20). Aromatic Hydrocarbon Mixtures (32). Esters (34). Halogenated Hydrocarbons (36). Ketones (18). Methyl tert-butyl ether (41). Olefins (30). Organic Acids (4). Organic Anhydrides (11). Paraffins (31). Phenols, Cresols (21).
Diphenylmethane diisocyanate (12)	2,2-Dimethylpropane-1,3-diol (20). Polypropylene glycol (40).
tert-Dodecanethiol (20)	Caustic soda solution (50%) (5). Isopropylamine solution (70%) (7). Polymethylene polyphenyl isocyanate (12). Toluene diisocyanate (12).
tert-Dodecanethiol (Sulfole 120) (0)	Acetone (18) Ethyl Acrylate (14) Methyl Alcohol (20) Polymeric methylene diphenyl diisocyanate (Papi 27) (12) Toluene (32)
tert-Dodecanethiol (0)	All Chemicals in Group 33 Acetone (18)
n-Dodecyl-mercaptan (0)	All chemicals in Group 33
Dodecyl and Tetradecylamine mixture (7)	Tall oil, fatty acid (34).
Ethylenediamine (7)	Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume) (20). Butyl alcohol (20). tert-Butyl alcohol (20). Butylene glycol (20). Creosote (21). Diethylene glycol (40). Diisobutyl ketone (18). Ethyl alcohol (20). Ethylene glycol (20). Ethyl hexanol (20). Fatty alcohols (C12–C14)(20). Glycerine (20). Isononyl alcohol (20). Isophorone (18). Methyl butyl ketone (18). Methyl ethyl ketone (18). Methyl isobutyl ketone (18). Propyl alcohol (20). Propylene glycol (20).
Hexamethylenediamine (7)	Ethyl Alcohol (Ethanol) (20)
Hexamethylenediamine (molten) (HMD 98%, molten) (7)	n-Butyl Alcohol (20) Isobutyl Alcohol (20) Isopropyl Alcohol (20)
Hexamethylenediamine solution (7)	CepSinol™ 1216 (Alcohols (C12+), primary, linear) (20).
Hexamethylenediamine solution (HMD 90%) (7)	n-Butyl Alcohol (20) Isobutyl Alcohol (20) Isopropyl Alcohol (20)
Lactic acid (0)	Acetic acid (4). Benzene (32). Ethanol (20). Polypropylene glycol (40). Vinyl acetate (13).
Oleum (0)	Hexane (31). Dichloromethane (36). Perchloroethylene (36).
Phenol (90% hydrated) (21)	Toluene diisocyante (12)
1,2-Propylene glycol (20)	Diethylenetriamine (7). Polyethylene polyamines (7). Triethylenetetramine (7).
Sodium cresylate as Cresylate spent caustic (5)	Methyl alcohol (20).
Sodium dichromate solution (70% or less) (0)	Acetone (18). n-Butyl alcohol (20). Ethyl acetate (34). 1-Hexene (30). Methyl alcohol (20).

Member of reactive group	Compatible with
	Octene (all isomers) (30).
	Phosphoric acid (1).
Sodium hydrosulfide (alternatively hydrosulphide) solution (5) ..	Ethyl Alcohol (Ethanol) (20)
Sodium hydrosulfide (alternately hydrosulphide) solution (45% or less) (5).	Isopropyl alcohol (20).
	Methyl alcohol (20).
Sodium Methylate 21–30% in methanol (0)	1,2-Dichloropropane (36).
	Chlorobenzene (36).
	Cyclohexanone (18).
	Cyclohexanone, Cyclohexanol mixtures (18).
	Diethanolamine (8).
	Diisononyl phthalate (34).
	Dimethylformamide (10).
	Ethyl alcohol (20).
	Ethylene glycol (20).
	Furfuryl alcohol (20).
	Heptene (all isomers) (30).
	Isobutyl alcohol (20).
	Isopropyl alcohol (20).
	Lubricating oil (33).
	Methyl ethyl ketone (18).
	Nonene (all isomers) (30).
	Nonyl alcohol (all isomers) (20).
	Octene (all isomers) (30).
	Perchloroethylene (36).
	Polyisobutenamine in aliphatic (C10–C14) solvent (7).
	o-Toluidine (9).
	Xylene (32).
Sodium Methylate, 30% solution in Methanol (0)	n-Butyl Alcohol (20)
	Decene (30)
	Decyl Alcohol (20)
	Dialkyl (C9–C10) phthalates (34)
	Dichloromethane (36)
	Ethanolamine (8) (including Monoethanolamine)
	Hexene (all isomers) (30)
	Methyl Isobutyl Ketone (18)
	Olefin mixtures (C5–C15) (30)
	Olefins (C13+ all isomers) (30)
	Phenol (21)
	n-Propyl Alcohol (20)
	Propylheptanol (20)
	C9-Resinfeed (32)
	Sodium Borohydride (15% or less)/Sodium hydroxide solution (5)
	Solvent Naphtha (33)
	Styrene Monomer (30)
	Toluene (32)
	Xylenes (Incl. *m*-Xylene) (32)
Sulfuric (alternately Sulphuric) acid (2)	Coconut oil (34).
	Coconut oil, fatty acid (34).
	Palm oil (34).
	Soyabean oil (34).
	Tallow (34).
Sulfuric (alternately Sulphuric) acid, 98% or less (2)	Choice white grease tallow (34).
Sulfuric (alternatively Sulphuric) acid (95–98%) (Group 2)	Methyl ester fatty acid (34)
	Soybean oil (34)
Urea/Ammonium Nitrate solution (containing less than 1% free Ammonia) (43).	Magnesium chloride solutions (0).

(b) The binary combinations listed below have been determined to be dangerously reactive, based either on data obtained in the literature or on laboratory testing that has been carried out in accordance with procedures prescribed in Appendix III. These combinations are exceptions to Figure 1 of part 150 (Compatibility Chart) and may not be stowed in adjacent tanks.

Acetone cyanohydrin (0) is not compatible with Groups 1–12, 16, 17 or 22.

Acrolein (19) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Acrylic acid (4) is not compatible with Group 9, Aromatic Amines.

Acrylonitrile (15) is not compatible with Group 5, Caustics.

Alkyl (C7–C9) nitrates (34) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Alkylbenzene sulfonic (alternately sulphonic) acid (less than 4%) (0) is not compatible with Groups 1–3, 5–9, 15, 16, 18, 19, 30, 34, 37, or strong oxidizers.

Allyl alcohol (15) is not compatible with Group 12, Isocyanates.

Aluminum sulfate (alternately Aluminium sulphate) solution (43) is not compatible with Groups 5–11.

Ammonium bisulfite (alternately bisulphite) solution (70% or less) (43) is not compatible with Groups 1 or 3–5.

Benzenesulfonyl (alternately Benzenesulphonyl) chloride (0) is not compatible with Groups 5–7, or 43.

Butylene glycol (20) is not compatible with Caustic soda solution (5).

gamma-Butyrolactone (0) is not compatible with Groups 1–9.

C9 Resinfeed (DSM) (32) is not compatible with Group 2, Sulfuric (alternately Sulphuric) Acids.

Carbon tetrachloride (36) is not compatible with Tetraethylenepentamine or Triethylenetetramine, both Group 7, Aliphatic Amines.

Catoxid feedstock (36) is not compatible with Groups 1–5, or 12.

Caustic soda solution (5) is not compatible with Butylene glycol (20).

1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one (18) is not compatible with Group 5, Caustics, or Group 10, Amides.

Crotonaldehyde (19) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Cyclohexanone/Cyclohexanol mixture (18) is not compatible with Group 12, Isocyanates.

2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (70% or less) (0) is not compatible with Groups 1–5, 11, 12, or 16.

2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution (43) is not compatible with Group 3, Nitric Acids.

Diethylenetriamine (7) is not compatible with 1,2,3-Trichloropropane, Group 36, Halogenated Hydrocarbons.

Dimethyl hydrogen phosphite (34) is not compatible with Groups 1 or 4.

Dimethyl naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution (34) is not compatible with Group 12, or Formaldehyde, or with strong oxidizing agents.

Dodecylbenzenesulfonic (alternately Dodecylbenzenesulphonic) acid (0) is not compatible with oxidizing agents or Groups 1–3, 5–9, 15, 16, 18, 19, 30, 34, or 37.

Ethyl tert-butyl ether (41) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Ethylenediamine (7) and Ethyleneamine EA 1302 (7) are not compatible with either Ethylene dichloride (36) or 1,2,3-Trichloropropane (36).

Ethylene dichloride (36) is not compatible with Ethylenediamine (7) or Ethyleneamine EA 1302 (7).

Ethylidene norbornene (30) is not compatible with Groups 1–3 or 5–8.

2-Ethyl-3-propylacrolein (19) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Fatty acids, essentially linear (C6–C18) 2-ethylhexyl ester (34) is not compatible with Group 3, Nitric Acids.

Ferric hydroxyethylethylenediamine triacetic acid, Triodium salt solution (43) is not compatible with Group 3, Nitric Acids.

Fish oil (34) is not compatible with Sulfuric (alternately Sulphuric) acid (2).

Formaldehyde (50% or more) in Methyl alcohol (over 30%) (19) is not compatible with Group 12, Isocyanates.

Formic acid (4) is not compatible with Furfuryl alcohol (20).

Furfuryl alcohol (20) is not compatible with Group 1, Non-Oxidizing Mineral Acids, or with Formic acid (4).

Glycol Ethers (Group 40) are not compatible with Acrylonitrile (Group 15);

1,6-Hexanediol distillation overheads (4) is not compatible with Group 3, Nitric Acids, or Group 9, Aromatic Amines.

2-Hydroxyethyl acrylate (14) is not compatible with Groups 5, 6, or 12.

Isophorone (18) is not compatible with Group 8, Alkanolamines.

Lactic acid (0) is not compatible with Caustic soda solution (5).

Magnesium chloride solution (0) is not compatible with Groups 2, 3, 5, 6, or 12.

Mesityl oxide (18) is not compatible with Group 8, Alkanolamines.

Methacrylonitrile (15) is not compatible with Group 5, Caustics.

Methyl tert-butyl ether (41) is not compatible with Group 1, Non-Oxidizing Mineral Acids.

Nitroethane/1-Nitropropane (each 15% or more) mixture (42) is not compatible with Group 7, Aliphatic Amines; Group 8, Alkanolamines; or Group 9, Aromatic Amines.

o-Nitrophenol (0) is not compatible with Groups 2, 3, or 5–10.

Nitropropane (60%)/Nitroethane (40%) mixture (42) is not compatible with Group 7, Aliphatic Amines; Group 8, Alkanolamines; or Group 9, Aromatic Amines.

Oleum (0) is not compatible with Sulfuric (alternately Sulphuric) acid (2) or 1,1,1-Trichloroethane (36).

Phthalate-based polyester polyol (0) is not compatible with Groups 2, 3, 5, 7, or 12.

Polyglycerine, Sodium salts solution (containing less than 3% sodium hydroxide) (20) is not compatible with Groups 1, 4, 11, 16, 17, 19, 21, or 22.

Propylene, Propane, MAPP gas mixture (containing 12% or less MAPP gas) (30) is not

compatible with Group 1, Non-Oxidizing Mineral Acids, Group 36, Halogenated Hydrocarbons, or with nitrogen dioxide, oxidizing agents, or molten sulfur (alternately sulphur) (0).

Sodium acetate, Glycol, Water mixture (containing 1% or less Sodium hydroxide) (5) is not compatible with Group 12, Isocyanates.

Sodium chlorate solution (50% or less) (0) is not compatible with Groups 1–3, 5, 7, 8, 10, 12, 13, 17, or 20.

Sodium dichromate solution (70% or less) (0) is not compatible with Groups 1–3, 5, 7, 8, 10, 12, 13, 17, or 20.

Sodium dimethyl naphthalene sulfonate solution (34) is not compatible with Group 12, or Formaldehyde, or strong oxidizing agents.

Sodium hydrogen sulfide (alternately sulphide) (6% or less)/Sodium carbonate solution (3% or less) (0) is not compatible with Group 6, Ammonia, or Group 7, Aliphatic Amines.

Sodium hydrosulfide (alternately hydrosulphide) solution (45% or less) (5) is not compatible with Group 6, Ammonia, or Group 7, Aliphatic Amines.

Sodium hydrosulfide (alternately hydrosulphide), Ammonium sulfide (alternately sulphide) solution (5) is not compatible with Group 6, Ammonia, or Group 7, Aliphatic Amines.

Sodium polyacrylate solution (43) is not compatible with Group 3, Nitric Acids.

Sodium silicate solution (43) is not compatible with Group 3, Nitric Acids.

Sodium sulfide, hydrosulfide (alternately sulphide, hydrosulphide) solution (0) is not compatible with Group 6, Ammonia, or Group 7, Aliphatic Amines.

Sodium thiocyanate (56% or less) (0) is not compatible with Groups 1–4.

Sulfonated (alternately Sulphonated) polyacrylate solution (43) is not compatible with Group 5, Caustics.

Sulfuric (alternately Sulphuric) acid (2) is not compatible with Fish oil (34), or Oleum (0).

Tall oil fatty acid (Resin acids less than 20%) (34) is not compatible with Group 5, Caustics.

Tallow fatty acid (34) is not compatible with Group 5, Caustics.

Tetraethylenepentamine (7) is not compatible with Carbon tetrachloride, Group 36, Halogenated Hydrocarbons.

Toluene diisocyanate (TDI) (12) is not compatible with Alkylbenzene sulphonic acid, sodium salt solution (Group 33), Calcium nitrate solutions (50% or less) (Group 34), Calcium nitrate/Magnesium nitrate/Potassium chloride solution (Group 34), Formaldehyde solutions (45% or less) (Group 19), Glutaraldehyde solutions (50% or less) (Group 19), Lactonitrile solution (80% or less) (Group 37), Nitrilotriacetic acid, trisodium salt solution (Group 34), Sodium acetate solutions (Group 34), Sodium sulphate solutions (Group 34), Polyferric sulphate solution (Group 34).

1,1,1-Trichloroethane (36) is not compatible with Oleum (0).

Trichloroethylene (36) is not compatible with Group 5, Caustics.

1,2,3-Trichloropropane (36) is not compatible with Diethylenetriamine, Ethylenediamine, Ethyleaneamine EA 1302, or Triethylenetetramine, all Group 7, Aliphatic Amines.

Triethylenetetramine (7) is not compatible with Carbon tetrachloride, or 1,2,3-Trichloropropane, both Group 36, Halogenated Hydrocarbons.

Triethyl phosphite (34) is not compatible with Group 1, Non-Oxidizing Mineral Acids, or Group 4, Organic Acids.

Trimethyl phosphite (34) is not compatible with Group 1, Non-Oxidizing Mineral Acids, or Group 4, Organic Acids.

1,3,5-Trioxane (41) is not compatible with Group 1, Non-Oxidizing Mineral Acids, or Group 4, Organic Acids.

Vinyl neodecanoate (13) is not compatible with Group 5, Caustics.

[78 FR 50205, Aug. 16, 2013, as amended by USCG–2013–0423, 85 FR 21700, Apr. 17, 2020; 86 FR 42741, Aug. 5, 2021; USCG–2022–0327, 88 FR 81233, Nov. 21, 2023]

EDITORIAL NOTE: At 88 FR 81234, Nov. 21, 2023, Appendix I to Part 150 was amended in paragraph (a) by adding an entry for ≥Dimethyl disulfide (alternately disulphide) (0)≥; however, the amendment could not be incorporated because the text was not provided.

APPENDIX II TO PART 150—EXPLANATION OF FIGURE 1

Definition of a hazardous reaction— As a first approximation, a mixture of two cargoes is considered hazardous when, under specified condition, the temperature rise of the mixture exceeds 25 °C or a gas is evolved. It is possible for the reaction of two cargoes to produce a product that is significantly more flammable or toxic than the original cargoes even though the reaction is non-hazardous from temperature or pressure considerations, although no examples of such a reaction are known at this time.

Chart format— There are different degrees of reactivity among the various cargoes. Many of them are relatively non-reactive: For example, aromatic hydrocarbons or paraffins. Others will form hazardous combinations with many groups: For example, the inorganic acids.

The cargo groups in the compatibility chart are separated into two categories: 1 through 22 are ''Reactive Groups'' and 30 through 43 are ''Cargo Groups''. Left unassigned and available for future expansion are

groups 23 through 29 and those past 43. Reactive Groups contain products which are chemically the most reactive; dangerous combinations may result between members of different Reactive Groups and between members of Reactive Groups and Cargo Groups. Products assigned to Cargo Groups, however, are much less reactive; dangerous combinations involving these can be formed only with members of certain Reactive Groups. Cargo Groups do not react hazardously with one another.

Using the Compatibility Chart— The following procedure explains how the compatibility chart should be used to find compatibility information:

(1) Determine the group numbers of the two cargoes by referring to the alphabetical listing of cargoes and the corresponding groups (Table I). Many cargoes are listed under their parent names; unless otherwise indicated, isomers or mixtures of isomers of a particular cargo are assigned to the same group. For example, to find the group number for Isobutyl Alcohol, look under the parent name Butyl Alcohol. Similarly, the group number for para-Xylene is found under the entry Xylene. If a cargo cannot be found in this listing, contact the Coast Guard for a group determination (see §150.140).

(2) If both group numbers are between 30 and 43 inclusive, the products are compatible and the chart need not be used.

(3) If both group numbers do not fall between 30 and 43 inclusive, locate one of the numbers on the left of the chart (Cargo Groups) and the other across the top (Reactive Groups). (Note that if a group number is between 30 and 43, it can only be found on the left side of the chart.) The box formed by the intersection of the column and row containing the two numbers will contain one of the following:

(a) Blank—The two cargoes are compatible.

(b) ''X''—The two cargoes are not compatible.

(Note that reactivity may vary among the group members. Refer to Table I or Table II to find whether the products in question are referenced by a footnote which indicates that exceptions exist and are listed in Appendix I. Unless the combination is specifically mentioned in Appendix I, it is compatible.)

EXAMPLES

Combination	Groups	Compatible
Butyraldehyde/Acetic Acid	19/4	Yes.
Allyl Alcohol/Toluene Diisocyanate	15/12	No.
Decene/Ethyl Benzene	30/32	Yes.
Ethanolamine/Acetone	8/18	Yes.
Ammonia/Dimethylformamide	6/10	No.

[CGD 75–59, 45 FR 70263, Oct. 23, 1980, as amended by CGD 83–047, 50 FR 33046, Aug. 16, 1985]

APPENDIX III TO PART 150—TESTING PROCEDURES FOR DETERMINING EXCEPTIONS TO THE CHART

EXPERIMENTAL PROCEDURE FOR EVALUATING BINARY CHEMICAL REACTIVITY

General safety precautions—Chemical reactivity tests have, by their nature, serious potential for injuring the experimenter or destroying equipment. The experimenter should 1) have knowledge of the magnitude of the reactivity to be expected, 2) use adequate facilities and protective equipment to prevent injury from splatter of materials or release of fumes, and 3) start on a small scale so that unexpected reactions can be safely contained. All tests should be performed in a well-ventilated laboratory hood provided with shields.

Testing chemicals other than liquids—The procedure outlined below was developed for chemicals which are liquids at ambient temperatures. If one or both chemicals are normally shipped at elevated temperatures, the same procedure may be followed except the chemicals are tested at their respective shipping temperatures and the oil bath in Step 3 is maintained at a level 25 °C above the higher temperature. This information is then indicated on the data sheet. If one of the chemicals is a gas at ambient temperatures, consult the Coast Guard for additional instructions before proceeding with the compatibility test.

Step 1

Objective—To determine if the test chemicals react violently and present a safety hazard in further tests.

Procedure—Place 0.5ml of one (A) of the test chemicals in a 25 × 150mm test tube. Clamp the test tube to a stand behind a safety shield (in a hood). Carefully add from a dropper 0.5ml of the other substance (B). Shake to induce mixing. If no immediate reaction occurs, retain the mixture for at least 10 minutes to check for a delayed reaction.

Results—If a violent reaction occurs, such as sputtering, boiling of reactants or release of fumes, record the results on the Data Sheet (appendix IV) and do not proceed to Step 2. If no reaction or a minor reaction occurs, proceed to Step 2.

Step 2

Objective—To determine the heat of reaction of two chemicals on mixing under specified conditions.

Procedure—These separate mixes of the proposed binary combination will be tested. These are 2 ml : 18 ml, 10 ml : 10 ml, and 18

ml : 2 ml, respectively, to result in a final mixture of about 20 ml in each case.

A reference-junctioned thermocouple is prepared by inserting two lengths of 20 gauge or finer iron-constantan or chromelalumel duplex thermocouple wire into glass capilary sheaths. The common wire of each probe is joined, while the other wire of each is connected to a strip-chart recorder. The thermocouple probe which produces a negative pen deflection upon warming is the reference junction and is placed in a test tube of water at ambient laboratory temperature. The other probe is placed near the bottom of a Dewar flask of about 300ml capacity, such that the thermocouple will be below the surface of the test mixture. The Dewar flask is equipped with a magnetic stirrer having a stirring bar coated with an inert material such as a fluorinated hydrocarbon.

Start the temperature recorder and stirrer. Deliver the test chemicals to the Dewar Flask simultaneously from separate graduated syringes. If an exothermic reaction occurs, continue the test until the maximum temperature is reached and begins to subside. If no apparent reaction occurs, continue the test for at least 30 minutes to check for a delayed reaction. Stop agitation and observe the mixture at five-minute intervals to determine if the mixture is miscible, if gases are evolved, or if other visible changes occur. In the interest of safety, a mirror can be used for these observations. Repeat the above test for the other mixture combinations.

Results—Record the results in the appropriate places on the Data Sheet. If no reaction occurs or if the temperature rise is less than 25 °C, proceed to Step 3. If the observed temperature rise exceeds 25 °C or gases are evolved, do not proceed to Step 3.

Step 3

Objective—To determine if exothermic reactions occur at temperatures up to 50 °C.

Procedure—If a non-hazardous reaction occurred in Step 2, the ratio of chemicals which resulted in the greatest temperature rise will be tested. Fresh chemicals will be used with a total volume for this test of about 10ml (a ratio of 1ml:9ml, 5ml:5ml, or 9ml:1ml). If no reaction was observed in Step 2, use a ratio of 5ml:5ml. Using the thermocouple prepared for Step 2, insert the reference probe into a 25 × 150mm test tube containing 10ml of water. Place the other probe into an empty test tube. Start the temperature recorder and add the two chemicals of the combination, one at a time, to the empty test tube. Lower the two test tubes into an oil bath maintained at 50 ±2 °C. Hold the samples in the oil bath until the maximum temperature differential is recorded, and in all cases at least 15 minutes. Observe the test mixture to determine if gases are evolved or if other visible changes occur. Follow prescribed safety precautions.

Results—Record the maximum differential temperature measured, the time required to reach this temperature, and any other observations in the proper space on the Data Sheet.

Send a copy of the Data Sheet for each binary chemical mixture tested to: Commandant (CG–ENG–5), Attn: Hazardous Materials Division, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593–7509.

[CGD 75–59, 45 FR 70263, Oct. 23, 1980, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983; CGD 83–047, 50 FR 33046, Aug. 16, 1985; CGD 88–070, 53 FR 34535, Sept. 7, 19885; CGD 96–041, 61 FR 50731, Sept. 27, 1996; USCG–2012–0832, 77 FR 59783, Oct. 1, 2012; USCG–2013–0671, 78 FR 60155, Sept. 30, 2013; USCG–2014–0688, 79 FR 58284, Sept. 29, 2014]

APPENDIX IV TO PART 150—DATA SHEET

CHEMICAL REACTIVITY TEST DATA

Chemicals: A _____ B _____

Synonyms: _____ _____

Formula: _____ _____

Description of Products:	A	B
Manufacturer		
Sample Source		
Composition (by weight %)		
Inhibitors or Stabilizers		

Deviations from Prescribed Method (including special equipment)	

Step Number 1

Products miscible? _____ Gases evolved? _____

Other Observations:

Step Number 2

A/B Ratio:	2/18	10/10	18/2
Initial Temperature			
Maximum ΔT			
Time to reach Max. Temp.			
Products miscible?			
Gases evolved?			
Other Observations			

Size of Dewar Flask (inside measurements): Width _____mm Height _____mm

Step Number 3

A/B Ratio	
Oil Bath Temperature	
Maximum ΔT	
Time to reach Max. Temp.	
Gases evolved?	
Other Observations	

Date of Test: _____

Submitting Organization: _____

Test Data Approved By: _____

PART 151—BARGES CARRYING BULK LIQUID HAZARDOUS MATERIAL CARGOES

Subpart 151.01—General

Sec.

Subpart 151.02—Equivalents

Subpart 151.03—Definitions