

SUBCHAPTER O—CERTAIN BULK DANGEROUS CARGOES

PART 150—COMPATIBILITY OF CARGOES

- Sec.
- 150.105 OMB control numbers assigned pursuant to the Paperwork Reduction Act.
- 150.110 Applicability.
- 150.115 Definitions.
- 150.120 Definition of incompatible cargoes.
- 150.130 Loading a cargo on vessels carrying cargoes with which it is incompatible.
- 150.140 Cargoes not listed in Table I or II.
- 150.150 Exceptions to the compatibility chart.
- 150.160 Carrying a cargo as an exception to the compatibility chart.
- 150.170 Right of appeal.

FIGURE I TO PART 150—COMPATIBILITY CHART
TABLE I TO PART 150—ALPHABETICAL LIST OF CARGOES

TABLE II TO PART 150—GROUPING OF CARGOES
APPENDIX I TO PART 150—EXCEPTIONS TO THE CHART

APPENDIX II TO PART 150—EXPLANATION OF FIGURE I

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

APPENDIX IV TO PART 150—DATA SHEET

AUTHORITY: 46 U.S.C. 3306, 3703; Department of Homeland Security Delegation No. 0170.1. Section 150.105 issued under 44 U.S.C. 3507; Department of Homeland Security Delegation No. 0170.1.

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

EDITORIAL NOTE: Nomenclature changes to part 150 appear at 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 record-keeping 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 I 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]

§ 150.130

§ 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 I 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.

§ 150.140 Cargoes not listed in Table I or II.

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, 1995; CGD 96-041, 61 FR 50731, Sept. 27, 1996; USCG-2006-25697, 71 FR 55746, Sept. 25, 2006]

46 CFR Ch. I (10-1-12 Edition)

§ 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, 1995; 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 GROUPS	REACTIVE 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																					1	
2. SULFURIC ACID	X	X	X																					2
3. NITRIC ACID		X	X																					3
4. ORGANIC ACIDS		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	X	X	6
7. ALIPHATIC AMINES	X	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	X	X	X	X	X	8
9. AROMATIC AMINES	X	X	X	X							X	X	X	X	X	X	X	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														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	X	X	X														13
14. ACRYLATES	X	X	X	X		X	X	X	X	X														14
15. SUBSTITUTED ALLYLS	X	X	X	X		X	X	X	X	X														15
16. ALKYLENE OXIDES	X	X	X	X	X	X	X	X	X	X														16
17. EPICHLOROHYDRIN	X	X	X	X	X	X	X	X	X	X														17
18. KETONES	X	X	X	X		X																		18
19. ALDEHYDES	X	X	X	X		X	X	X	X	X														19
20. ALCOHOLS, GLYCOLS	X	X	X	X		X						X												20
21. PHENOLS, CRESOLS	X	X	X	X		X				X														21
22. CAPROLACTAM SOLUTION	X	X	X	X		X					X													22
30. OLEFINS	X	X																						30
31. PARAFFINS	X	X																						31
32. AROMATIC HYDROCARBONS	X	X																						32
33. MISCELLANEOUS HYDROCARBON MIXTURES	X	X																						33
34. ESTERS	X	X																						34
35. VINYL HALIDES	X	X																						35
36. HALOGENATED HYDROCARBONS	X	X																				X		36
37. NITRILES	X	X																						37
38. CARBON DISULFIDE	X	X				X	X																	38
39. SULFOLANE	X	X																						39
40. GLYCOL ETHERS	X	X										X												40
41. ETHERS	X	X																						41
42. NITROCOMPOUNDS	X	X			X	X	X	X	X															42
43. MISCELLANEOUS WATER SOLUTIONS	X	X									X													43

TABLE I TO PART 150—ALPHABETICAL LIST OF CARGOES

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Acetaldehyde	19	.....	AAD	
Acetic acid	4	2	AAC	
Acetic anhydride	11	.....	ACA	
Acetochlor	10	.....	ACG	
Acetone	18	2	ACT	
Acetone cyanohydrin	0	1, 2	ACY	
Acetonitrile	37	.....	ATN	
Acetophenone	18	.....	ACP	
Acrolein	19	2	ARL	
Acrylamide solution	10	.....	AAM	
Acrylic acid	4	2	ACR	
Acrylonitrile	15	2	ACN	
Acrylonitrile-Styrene copolymer dispersion in Polyether polyol	20	.....	ALE	
Adiponitrile	37	.....	ADN	
Alachlor	33	.....	ALH	
Alcohols (C13+)	20	.....	ALY	
Including:				
Oleyl alcohol (octadecanol)				
Pentadecanol				
Tallow alcohol				
Tetradecanol				
Tridecanol				
Alcoholic beverages	20	.....	
Alcohol polyethoxylates	20	.....		APU/APV/APW/AET

Pt. 150, Table I

46 CFR Ch. I (10–1–12 Edition)

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Alcohol polyethoxylates, secondary	20			AEA/AEB
Alkanes (C6-C9)	31	1	ALK	
Including:				
<i>Heptanes</i>				
<i>Hexanes</i>				
<i>Nonanes</i>				
<i>Octanes</i>				
n-Alkanes (C10+)	31	1	ALJ	
Including:				
<i>Decanes</i>				
<i>Dodecanes</i>				
<i>Heptadecanes</i>				
<i>Tridecanes</i>				
<i>Undecanes</i>				
iso- & cyclo-Alkanes (C10-C11)	31	1	AKI	
iso- & cyclo-Alkanes (C12+)	31	1	AKJ	
Alkane (C14-C17) sulfonic acid, sodium salt solution	34		AKA	
Alkaryl polyether (C9-C20)	41		AKP	
Alkenyl(C11+)amide	11		AKM	
Alkenyl(C16-C20)succinic anhydride	11		AAH	
Alkyl acrylate-Vinyl pyridine copolymer in Toluene	32		AAP	
Alkyl(C8+)amine, Alkenyl (C12+) acid ester mixture	34		AAA	
Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomer).	34		APD	
Alkyl(C3-C4)benzenes	32		AKC	
Including:				
<i>Butylbenzenes</i>				
<i>Cumene</i>				
<i>Propylbenzenes</i>				
Alkyl(C5-C6)benzenes	32		AKD	
Including:				
<i>Amylbenzenes</i>				
<i>Heptylbenzenes</i>				
<i>Hexylbenzenes</i>				
<i>Octylbenzenes</i>				
Alkyl(C9+)benzenes	32		AKB	
Including:				
<i>Decylbenzenes</i>				
<i>Dodecylbenzenes</i>				
<i>Nonylbenzenes</i>				
<i>Tetradecylbenzenes</i>				
<i>Tetrapropylbenzenes</i>				
<i>Tridecylbenzenes</i>				
<i>Undecylbenzenes</i>				
Alkylbenzene, Alkylindane, Alkylindene mixture (each C12-C17)	32		AIH	
Alkylbenzenesulfonic acid	0	1, 2		ABS/ABN
Alkylbenzenesulfonic acid, sodium salt solutions	33		ABT	
Alkyl dithiothiadiazole (C6-C24)	33		ADT	
Alkyl ester copolymer (C4-C20)	34		AES	
Alkyl(C7-C9) nitrates	34	2	AKN	ONE
Alkyl(C7-C11) phenol poly(4-12)ethoxylate	40		APN	
Alkyl(C8-C40) phenol sulfide	34		AKS	
Alkyl(C8-C9) phenylamine in aromatic solvents	9		ALP	
Alkyl(C9-C15) phenyl propoxylate	40			
Alkyl phthalates	34			
Alkyl(C10-C20, saturated and unsaturated) phosphite	34		AKL	
Alkyl polyglucoside solutions	43			AGL/AGN/AGO/AGP/ AGM
Alkyl sulfonic acid ester of phenol	34			
Allyl alcohol	15	2	ALA	
Allyl chloride	15	1	ALC	
Aluminium chloride, Hydrochloric acid solution	0	1	AHS	
Aluminum sulfate solution	43	2	ASX	ALM
2-(2-Aminoethoxy)ethanol	8		AEX	
Aminoethyldiethanolamine, Aminoethylethanolamine solution	8			
Aminoethylethanolamine	8		AEE	
N-Aminoethylpiperazine	7		AEP	
2-Amino-2-hydroxymethyl-1,3-propanediol solution	43		AHL	
2-Amino-2-methyl-1-propanol	8		APQ	APR
Ammonia, anhydrous	6		AMA	
Ammonia, aqueous (28% or less Ammonia) (<i>IMO cargo name</i>), see Ammonium hydroxide.	6			AMH
Ammonium bisulfite solution	43	2	ABX	ASU

Coast Guard, DHS

Pt. 150, Table I

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Ammonium hydrogen phosphate solution	0	1	AMI	
Ammonium hydroxide (28% or less Ammonia)	6		AMH	
Ammonium lignosulfonate solution, <i>see also</i> Lignin liquor	43			
Ammonium nitrate solution	0	1	ANR	AND/AMN
Ammonium nitrate, Urea solution (containing Ammonia)	6		UAS	
Ammonium nitrate, Urea solution (not containing Ammonia)	43		ANU	UAT
Ammonium polyphosphate solution	43		AMO	APP
Ammonium sulfate solution	43		AME	AMS
Ammonium sulfide solution	5		ASS	ASF
Ammonium thiocyanate, Ammonium thiosulfate solution	0	1	ACS	
Ammonium thiosulfate solution	43		ATV	ATF
Amyl acetate	34		AEC	IAT/AML/AAS/AYA
Amyl alcohol	20		AAI	IAA/AAN/ASE/APM
<i>Amylene, see</i> Pentene			AMZ	PTX
tert-Amyl methyl ether (<i>see also</i> , Methyl tert-pentyl ether)	41		AYE	
<i>Amyl methyl ketone, see</i> Methyl amyl ketone			AMK	MAK
Aniline	9		ANL	
Animal and Fish oils, n.o.s.	34		AFN	
<i>Including:</i>				
<i>Cod liver oil</i>				
<i>Lanolin</i>				
<i>Neatsfoot oil</i>				
<i>Pilchard oil</i>				
<i>Sperm oil</i>				
Animal and Fish acid oils and distillates, n.o.s.	34		AFA	
<i>Including:</i>				
<i>Animal acid oil</i>				
<i>Fish acid oil</i>				
<i>Lard acid oil</i>				
<i>Mixed acid oil</i>				
<i>Mixed general acid oil</i>				
<i>Mixed hard acid oil</i>				
<i>Mixed soft acid oil</i>				
Anthracene oil (Coal tar fraction), <i>see</i> Coal tar	33		AHO	COR
Apple juice	43			
Aryl polyolefin (C11-C50)	30		AYF	
Asphalt	33		ASP	ACU
Asphalt blending stocks, roofers flux	33		ARF	
Asphalt blending stocks, straight run residue	33		ASR	
Asphalt emulsion (<i>ORIMULSION</i>)	33		ASQ	
Aviation alkylates	33		AVA	GAV
Barium long chain alkaryl(C11-C50) sulfonate	34		BCA	
Barium long chain alkyl(C8-C14)phenate sulfide	34		BCH	
Behenyl alcohol	20			
Benzene	32		BNZ	
Benzene hydrocarbon mixtures (having 10% Benzene or more)	32		BHB	BHA
Benzenesulfonyl chloride	0	1, 2	BSC	
Benzene, Toluene, Xylene mixtures	32	2	BTX	
Benzene tricarboxylic acid, trioctyl ester	34			
Benzylacetate	34		BZE	
Benzyl alcohol	21		BAL	
Benzyl chloride	36		BCL	
Brake fluid base mixtures	20		BFX	
Bromochloromethane	36		BCM	
Butadiene	30		BDI	
Butadiene, Butylene mixtures (cont. Acetylenes)	30		BBM	
Butane	31	1	BMX	IBT/BUT
<i>1,4-Butanediol, see</i> Butylene glycol			BDO	BUG
<i>2-Butanone, see</i> Methyl ethyl ketone				
<i>Butene, see</i> Butylene				IBL/BTN
Butene oligomer	30		BOL	
Butyl acetate	34		BAX	IBA/BCN/BTA/BYA
Butyl acrylate	14	1	BAR	BAI/BTC
Butyl alcohol	20	2	BAY	IAL/BAN/BAS/BAT
Butylamine	7		BTY	IAM/BAM/BTL/BUA
Butylbenzene, <i>see</i> Alky(C3-C4)benzenes	32		BBE	AKC
Butyl benzyl phthalate	34		BPH	
Butyl butyrate	34		BBA	BUB/BIB
Butylene	30		BTN	IBL
Butylene glycol	20	2	BGN	BDO
<i>1,3-Butylene glycol, see</i> Butylene glycol				BUG
Butylene oxide	16	1	BTO	
Butyl ether	41		BTE	

Pt. 150, Table I

46 CFR Ch. I (10–1–12 Edition)

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Butyl formate	34	.....		BFI/BFN
Butyl heptyl ketone	18	.....	BHK	
Butyl methacrylate	14	1	BMH	BMI/BMN
Butyl methacrylate, Decyl methacrylate, Cetyl-Eicosyl methacrylate mixture.	14	1	DER	
<i>Butyl methyl ketone, see Methyl butyl ketone</i> .....	.....	.....		MBK
Butyl phenol, Formaldehyde resin in Xylene	32	.....	
n-Butyl propionate	34	.....	BPN	
Butyl stearate	34	.....	
Butyl toluene	32	.....	BUE	
Butyraldehyde	19	.....	BAE	BAD/BTR
Butyric acid	4	.....	BRA	IBR
gamma-Butyrolactone	0	1, 2	BLA	
C9 Resinfeed (DSM)	32	2	CNR	
Calcium alkyl(C9)phenol sulfide, polyolefin phosphorosulfide mixture	34	.....	CPX	
<i>Calcium alkyl salicylate, see Calcium long chain alkyl salicylate (C13+)</i> .....	.....	.....		CAK
<i>Calcium bromide solution, see Drilling brines</i> .....	.....	.....		DRB
<i>Calcium bromide, Zinc bromide solution, see Drilling brine (containing Zinc salts).</i>	.....	.....		DZB
Calcium carbonate slurry	34	.....	
Calcium chloride solution	43	.....	CCS	CLC
Calcium hydroxide slurry	5	.....	COH	
Calcium hypochlorite solutions	5	.....		CHZ/CHU/CHY
Calcium lignosulfonate solution, <i>see also</i> Lignin liquor	43	.....	
Calcium long chain alkaryl sulfonate (C11-C50)	34	.....	CAY	
Calcium long chain alkyl phenates	34	.....		CAN/CAW
Calcium long chain alkyl phenate sulfide (C8-C40)	34	.....	CPI	
Calcium long chain alkyl salicylate (C13+)	34	.....	CAK	
Calcium long chain alkyl phenolic amine (C8-C40)	9	.....	CPQ	
Calcium nitrate solution	34	.....	CNU	
Calcium nitrate, Magnesium nitrate, Potassium chloride solution	34	.....	
Calcium sulfonate, Calcium carbonate, Hydrocarbon solvent mixture	33	.....	
Camphor oil	18	.....	CPO	
<i>Canola oil, see rapeseed oil under "oils, edible."</i> .....	.....	.....
Caprolactam solution	22	.....	CLS	
Caramel solutions	43	.....	
Carbolic oil	21	.....	CBO	
Carbon disulfide	38	.....	CBB	
Carbon tetrachloride	36	2	CBT	
Cashew nut shell oil (untreated)	4	.....	OCN	
Catoxid feedstock	36	2	CXF	
Caustic potash solution	5	2	CPS	
Caustic soda solution	5	2	CSS	
<i>Cetyl alcohol (hexadecanol), see Alcohols (C13+)</i> .....	.....	.....		ALY
Cetyl-Eicosyl methacrylate mixture	14	1	CEM	
<i>Cetyl-Stearyl alcohol, see Alcohols (C13+)</i> .....	.....	.....		ALY
Chlorinated paraffins (C10-C13)	36	.....	CLH	
Chlorinated paraffins (C14-C17) (with 52% Chlorine)	36	.....	CLJ	
Chlorine	0	1	CLX	
Chloroacetic acid solution	4	.....	CHM	CHL/MCA
Chlorobenzene	36	.....	CRB	
Chlorodifluoromethane (<i>monochlorodifluoromethane</i>)	36	.....	MCF	
Chloroform	36	.....	CRF	
Chlorohydrins	17	1	CHD	
4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution	9	.....	CDM	
Chloronitrobenzene	42	.....	CNO	
1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one	18	2	CDP	
Chloropropionic acid	4	.....	CPM	CLA/CLP
Chlorosulfonic acid	0	1	CSA	
Chlorotoluene	36	.....	CHI	CTM/CTO/CRN
Choline chloride solutions	20	.....	CCO	
Citric acid	4	.....	CIS	CIT
Clay slurry, <i>see also</i> Kaolin clay slurry	43	.....	
Coal tar	33	.....	COR	OCT
Coal tar distillate	33	.....	CDL	
Coal tar, high temperature	33	.....	CHH	
Coal tar pitch	33	.....	CTP	
Cobalt naphthenate in solvent naphtha	34	.....	CNS	
Coconut oil, fatty acid	34	.....	CFA	
Copper salt of long chain (C17+) alkanolic acid	34	.....	CUS	CFT
Corn syrup	43	.....	CSY	
Cottonseed oil, fatty acid	34	.....	CFY	
Creosote	21	2	CCT	CCW/CWD

Coast Guard, DHS

Pt. 150, Table I

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Cresols	21		CRS	CRL/CSL/CSO
Cresylate spent caustic	5		CSC	
Cresylic acid	21		CRY	
Cresylic acid, dephenolized	21		CAD	
Cresylic acid, sodium salt solution (<i>IMO cargo name</i>), <i>see</i> Cresylate spent caustic.	5			CSC
Cresylic acid tar	21		CRX	
Crotonaldehyde	19	2	CTA	
<i>Cumene (isopropyl benzene)</i> , <i>see</i> Propylbenzene			CUM	PBY
1,5,9-Cyclododecatriene	30		CYT	
Cycloheptane	31	1	CYE	
Cyclohexane	31	1	CHX	
Cyclohexanol	20		CHN	
Cyclohexanone	18		CCH	
Cyclohexanone, Cyclohexanol mixtures	18	2	CYX	
Cyclohexyl acetate	34		CYC	
Cyclohexylamine	7		CHA	
1,3-Cyclopentadiene dimer	30		CPD	DPT
Cyclopentadiene, Styrene, Benzene mixture	30		CSB	
Cyclopentane	31	1	CYP	
Cyclopentene	30		CPE	
Cymene	32		CMP	
Decahydronaphthalene	33		DHN	
Decaldehyde	19			IDA/DAL
<i>Decane</i> , <i>see</i> n-Alkanes (C10+)			DCC	ALJ
Decanoic acid	4		DCO	
Decene	30		DCE	
Decyl acetate	34		DYA	
Decyl acrylate	14	1	DAT	IAI/DAR
Decyl alcohol	20	2	DAX	ISA/DAN
Decylbenzene, <i>see</i> Alkyl(C9+) benzenes	32		DBZ	AKB
Decyloxytetrahydro-thiophene dioxide	0	1, 2	DHT	
Degummed C9 (DOW)	33		DGC	
Dextrose solution, <i>see</i> Glucose solution	43		DTS	GLU
Diacetone alcohol	20	2	DAI	
Dialkyl(C10-C14) benzenes, <i>see</i> Alkyl(C9+) benzenes	32		DAB	AKB
Dialkyl(C8-C9) diphenylamines	9		DAQ	
Dialkyl(C7-C13) phthalates	34		DAH	
<i>Including:</i>				
<i>Diisodecyl phthalate</i>				
<i>Diisononyl phthalate</i>				
<i>Dinonyl phthalate</i>				
<i>Ditridecyl phthalate</i>				
<i>Diundecyl phthalate</i>				
Dibromomethane	36		DBH	
Dibutylamine	7		DBA	
<i>Dibutyl carbinol</i> , <i>see</i> Nonyl alcohol				NNS
Dibutyl hydrogen phosphonate	34		DHD	
Dibutylphenols	21			DBT/DBV, DBW
Dibutyl phthalate	34		DPA	
Dichlorobenzene	36		DBX	DBM/DBO/DBP
3,4-Dichloro-1-butene	36		DCD	DCB
Dichlorodifluoromethane	36		DCF	
1,1-Dichloroethane	36		DCH	
2,2'-Dichloroethyl ether	41		DEE	
1,6-Dichlorohexane	36		DHX	
2,2'-Dichloroisopropyl ether	36		DCI	
Dichloromethane	36		DCM	
2,4-Dichlorophenol	21		DCP	
2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution	43		DDE	
2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution	0	1, 2	DAD	DDA/DSX
2,4-Dichlorophenoxyacetic acid, Triisopropano-lamine salt solution	43	2	DTI	
Dichloropropane	36		DPX	DPB/DPF/DPC/DPL
1,3-Dichloropropene	15	1	DPS	DPU/DPF
Dichloropropene, Dichloropropane mixtures	15	1	DMX	
2,2-Dichloropropionic acid	4		DCN	
Dicyclopentadiene, <i>see also</i> 1,3-Cyclopentadiene dimer	30		DPT	CPD
Diethanolamine	8		DEA	
<i>Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid solution</i> , <i>see</i> 2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution.				DDE
Diethylamine	7		DEN	
Diethylaminoethanol (<i>IMO cargo name</i>), <i>see</i> Diethylethanolamine	8			DAE
2,6-Diethylaniline	9		DMN	

Pt. 150, Table I

46 CFR Ch. I (10–1–12 Edition)

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Diethylbenzene	32		DEB	
Diethylene glycol	40	2	DEG	
<i>Diethylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			DME	PAG
<i>Diethylene glycol butyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate.</i>			DEM	PAF
Diethylene glycol dibenzoate	34		DGZ	
Diethylene glycol dibutyl ether	40		DIG	
Diethylene glycol diethyl ether	40			
<i>Diethylene glycol ethyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether.</i>			DGE	PAG
<i>Diethylene glycol ethyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetates.</i>			DGA	PAF
<i>Diethylene glycol n-hexyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			DHE	PAG
<i>Diethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			DGM	PAG
<i>Diethylene glycol methyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate.</i>			DGR	PAF
Diethylene glycol phenyl ether	40		DGP	
Diethylene glycol phthalate	34		DGL	
<i>Diethylene glycol propyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			DGO	PAG
Diethylenetriamine	7	2	DET	
Diethylenetriamine pentaacetic acid, pentasodium salt solution	43			
Diethylethanolamine	8		DAE	
Diethyl ether (<i>IMO cargo name</i>), <i>see Ethyl ether</i>	41			EET
<i>Diethyl hexanol, see Decyl alcohol</i>				DAX
Di-(2-ethylhexyl)adipate	34		DEH	
Di-(2-ethylhexyl)phosphoric acid	1	1	DEP	
<i>Di-(2-ethylhexyl)phthalate, see Dioctyl phthalate</i>	34		DIE	DOP
Diethyl phthalate	34		DPH	
Diethyl sulfate	34		DSU	
Diglycidyl ether of Bisphenol A	41		BDE	BPA
Diglycidyl ether of Bisphenol F	41		DGF	
Dihexyl phthalate	34		DHP	
Di-n-hexyl adipate	34		DHA	
Dihexyl phthalate	34			
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution	5		DDH	
Diisobutylamine	7		DBU	
Diisobutyl carbinol (<i>commercial cargo name</i>), <i>see Nonyl alcohol</i>	20		DBC	NNS
Diisobutylene	30		DBL	
Diisobutyl ketone	18		DIK	
Diisobutyl phthalate	34		DIT	
<i>Diisodecyl phthalate, see Dialkyl(C7-C13) phthalates</i>			DID	DAH
Diisononyl adipate	34		DNY	
<i>Diisononyl phthalate, see Dialkyl(C7-C13) phthalates</i>			DIN	DAH
Diisooctyl phthalate	34		DIO	
Diisopropanolamine	8		DIP	
Diisopropylamine	7		DIA	
Diisopropylbenzene	32		DIX	
Diisopropyl naphthalene	32		DII	
N,N-Dimethylacetamide	10		DAC	
N,N-Dimethylacetamide solution	10		DLS	
Dimethyl adipate	34		DLA	
Dimethylamine	7		DMA	
Dimethylamine solution	7			DMG/DMY/DMC
<i>Dimethylamine salt of 4-Chloro-2-methylphenoxyacetic acid solution, see 4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution.</i>				CDM
<i>Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution.</i>				DAD/(DDA/DSX)
2,6-Dimethylaniline	9		DMM	
<i>Dimethylbenzene, see Xylenes</i>				XLX
Dimethylcyclosiloxane hydrolyzate	34			
N,N-Dimethylcyclohexylamine	7		DXN	
N,N-Dimethyldodecylamine (<i>IMO cargo name</i>), <i>see Dodecyl dimethylamine</i>	7		DDY	
Dimethylethanolamine	8		DMB	
Dimethylformamide	10		DMF	
Dimethyl furan	41			
Dimethyl glutarate	34		DGT	
Dimethyl hydrogen phosphite	34	2	DPI	
Dimethyl naphthalene sulfonic acid, sodium salt solution	34	2	DNS	
Dimethyloctanoic acid	4		DMO	

Coast Guard, DHS

Pt. 150, Table I

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Dimethyl phthalate	34		DTL	
Dimethylpolysiloxane, <i>see</i> Polydimethylsiloxane	34		DMP	
2,2-Dimethylpropane-1,3-diol	20		DDI	
Dimethyl succinate	34		DSE	
Dinitrotoluene	42		DNM	DTT/DNL/DNU
<i>Dinonyl phthalate, see</i> Dialkyl(C7-C13) phthalates			DIF	DAH
Diocetyl phthalate	34		DOP	DIE
1,4-Dioxane	41		DOX	
Dipentene	30		DPN	
Diphenyl	32		DIL	
Diphenylamine (molten)	9		DAG	DAM/LRM
Diphenylamines, alkylated	7		DAJ	
Diphenylamine, reaction product with 2,2,4-trimethylpentene	7		DAK	
Diphenyl, Diphenyl ether mixture	33		DDO	DTH
Diphenyl ether	41		DPE	
Diphenyl ether, Diphenyl phenyl ether mixture	41		DOB	
Diphenylmethane diisocyanate	12		DPM	
Diphenylol propane-Epichlorohydrin resins	0	1	DPR	
<i>Diphenyl oxide, see as</i> diphenyl ether				
Di-n-propylamine	7		DNA	
Dipropylene glycol	40		DPG	
<i>Dipropylene glycol butyl ether, see</i> Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.			DBG	PAG
Dipropylene glycol dibenzoate	34		DGY	
<i>Dipropylene glycol methyl ether, see</i> Poly (2-8)alkylene glycol monoalkyl(C1-C6) ether.			DPY	PAG
Distillates, flashed feed stocks	33		DFF	
Distillates, straight run	33		DSR	
Dithiocarbamate ester (C7-C35)	34		DHO	
Ditridecyl adipate	34			
<i>Ditridecyl phthalate, see</i> Dialkyl(C7-C13) phthalates			DTP	DAH
<i>Diundecyl phthalate, see</i> Dialkyl(C7-C13) phthalates			DUP	DAH
Dodecane	31	1	DOC	ALJ
tert-Dodecanethiol	0	2	DDL	
Dodecanol	20		DDN	LAL
Dodecene	30		DOZ	DDC/DOD
2-Dodecenylsuccinic acid, dipotassium salt solution	34			DSP
Dodecyl alcohol (<i>IMO cargo name</i>), <i>see</i> Dodecanol				DDN
Dodecylamine, Tetradecylamine mixture	7		DTA	
Dodecylbenzene, <i>see</i> Alkyl(C9+)benzenes	32	2	DDB	AKB
Dodecylbenzenesulfonic acid	0	1, 2	DSA	
Dodecylidimethylamine, Tetradecyldimethylamine mixture	7		DOT	
Dodecyl diphenyl ether disulfonate solution	43		DOS	
Dodecyl hydroxypropyl sulfide	0	1	DOH	
Dodecyl methacrylate	14	1	DDM	
Dodecyl-Octadecyl methacrylate mixture	14	1	DOM	
Dodecyl-Pentadecyl methacrylate mixtures	14	1	DDP	
Dodecyl phenol	21		DOL	
Dodecyl xylene	32	2	DXY	
Drilling brine (containing Calcium, Potassium or Sodium salts)	43			DRB
Drilling brine (containing Zinc salts)	43		DZB	
Drilling mud (low toxicity) (<i>if flammable or combustible</i>)	33			DRM
Drilling mud (low toxicity) (<i>if non-flammable or non-combustible</i>)	43			DRM
Epichlorohydrin	17	1	EPC	
Epoxy resin	18			
<i>ETBE, see</i> Ethyl tert-butyl ether				EBE
Ethane	31	1	ETH	
Ethanolamine (<i>monoethanolamine</i>)	8		MEA	
<i>2-Ethoxyethanol, see</i> Ethylene glycol monoalkyl ethers			EEO	EGC
2-Ethoxyethyl acetate	34		EEA	
<i>Ethoxylated alcohols, C11-C15, see the alcohol polyethoxylates</i>				
Ethoxylated long chain (C16+) alkyloxyalkanamine	8		ELA	
Ethoxy triglycol	40		ETG	
Ethyl acetate	34		ETA	
Ethyl acetoacetate	34		EAA	
Ethyl acrylate	14	1	EAC	
Ethyl alcohol	20	2	EAL	
Ethylamine	7	2	EAM	
Ethylamine solution	7		EAN	
Ethyl amyl ketone	18		EAK	ELK
Ethylbenzene	32		ETB	
Ethyl butanol	20		EBT	
N-Ethyl-n-butylamine	7		EBA	

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Ethyl tert-butyl ether	41	2	EBE	
Ethyl butyrate	34		EBR	
Ethyl chloride	36		ECL	
Ethyl cyclohexane	31	1	ECY	
N-Ethylcyclohexylamine	7		ECC	
Ethylene	30		ETL	
Ethyleneamine EA 1302	7	2	EMX	EDA
Ethylene carbonate	34			
Ethylene chlorohydrin	20		ECH	
Ethylene cyanohydrin	20		ETC	
Ethylenediamine	7	2	EDA	EMX
Ethylenediaminetetraacetic acid, tetrasodium salt solution	43		EDS	
Ethylene dibromide	36		EDB	
Ethylene dichloride	36	2	EDC	
Ethylene glycol	20	2	EGL	
Ethylene glycol acetate	34		EGO	
<i>Ethylene glycol butyl ether, see Ethylene glycol monoalkyl ethers</i>			EGM	EGC
<i>Ethylene glycol tert-butyl ether, see Ethylene glycol monoalkyl ethers</i>				EGC
Ethylene glycol butyl ether acetate	34		EMA	
Ethylene glycol diacetate	34		EGY	
Ethylene glycol dibutyl ether	40		EGB	
<i>Ethylene glycol ethyl ether, see Ethyl glycol monoalkyl ethers</i>			EGE	EGC/EEO
<i>Ethylene glycol ethyl ether acetate, see 2-Ethoxyethyl acetate</i>			EGA	EEA
Ethylene glycol hexyl ether	40		EGH	
<i>Ethylene glycol isopropyl ether, see Ethylene glycol monoalkyl ethers</i>			EGI	EGC
<i>Ethylene glycol methyl butyl ether, see Ethylene glycol monoalkyl ethers</i> ..	40		EMB	EGC
<i>Ethylene glycol methyl ether, see Ethylene glycol monoalkyl ethers</i>			EME	EGC
Ethylene glycol methyl ether acetate	34		EGT	
Ethylene glycol monoalkyl ethers	40		EGC	
<i>Including:</i>				
<i>Ethylene glycol butyl ether</i>				
<i>Ethylene glycol isobutyl ether</i>				
<i>Ethylene glycol tert-butyl ether</i>				
<i>Ethylene glycol ethyl ether</i>				
<i>Ethylene glycol hexyl ether</i>				
<i>Ethylene glycol methyl ether</i>				
<i>Ethylene glycol propyl ether</i>				
<i>Ethylene glycol isopropyl ether</i>				
Ethylene glycol phenyl ether	40		EPE	
Ethylene glycol phenyl ether, Diethylene glycol phenyl ether mixture	40		EDX	
<i>Ethylene glycol propyl ether, see Ethylene glycol monoalkyl ethers</i>			EGP	EGC
<i>Ethylene glycol iso-propyl ether, see Ethylene glycol monoalkyl ethers</i>			EGI	EGC
Ethylene oxide	0	1	EOX	
Ethylene oxide, Propylene oxide mixture	16	1	EPM	
Ethylene-Propylene copolymer	30			
Ethylene-Vinyl acetate copolymer emulsion	43			
Ethyl ether	41		EET	
Ethyl-3-ethoxypropionate	34		EET	
<i>2-Ethylhexaldehyde, see Octyl aldehydes</i>			HA	OAL
<i>2-Ethylhexanoic acid, see Octanoic acids</i>			EHO	OAY
<i>2-Ethylhexanol, see Octanol</i>			EHX	OCX
2-Ethylhexyl acrylate	14	1	EAI	
2-Ethylhexylamine	7		EHM	
Ethyl hexyl phthalate	34		EHE	
<i>Ethyl hexyl tallate</i>	34		EHT	
2-Ethyl-1-(hydroxymethyl)propane-1,3-diol, C8-C10 ester	34		EHD	
Ethylidene norbornene	30	2	ENB	
Ethyl methacrylate	14	1	ETM	
N-Ethylmethylallylamine	7		EML	
2-Ethyl-6-methyl-N-(1'-methyl-2-methoxyethyl)aniline	9		EEM	
o-Ethyl phenol	21		EPL	
Ethyl propionate	34		EPR	
2-Ethyl-3-propylacrolein	19	2	EPA	
Ethyl toluene	32		ETE	
Fatty acids (saturated, C13+), <i>see Fatty acids (saturated, C14+)</i>				
Fatty acids (saturated, C14+)	34		FAD	SRA
Ferric chloride solution	1	1	FCS	FCL
Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution	43	2	FHX	STA
Ferric nitrate, Nitric acid solution	3		FNN	
Fish solubles (<i>water based fish meal extracts</i>)	43		FSO	
Fluorosilicic acid	1	1	FSJ	
Formaldehyde, Methanol mixtures	19	2	MTM	
Formaldehyde solution	19	2	FMS	

Coast Guard, DHS

Pt. 150, Table I

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Formamide	10		FAM	
Formic acid	4	2	FMA	
Fructose solution	43			
Fumaric adduct of Rosin, water dispersion	43		FAR	
Furfural	19		FFA	
Furfuryl alcohol	20	2	FAL	
Gas oil, cracked	33		GOC	
Gasoline blending stock, alkylates	33		GAK	
Gasoline blending stock, reformates	33		GRF	
Gasolines:				
Automotive (not over 4.23 grams lead per gal.)	33		GAT	
Aviation (not over 4.86 grams lead per gal.)	33		GAV	AVA
Casinghead (natural)	33		GCS	
Polymer	33		GPL	
Straight run	33		GSR	
Glucose solution	43		GLU	DTS
Glutaraldehyde solution	19		GTA	
Glycerine	20	2	GCR	
Glycerine, Dioxanedimethanol mixture	20		GDM	
Glycerol monooleate	20		GMO	
Glycerol polyalkoxylate	34			
Glyceryl triacetate	34			
Glycidyl ester of C10 trialkyl acetic acid (IMO cargo name), see Glycidyl ester of tridecyl acetic acid.	34			GLT
Glycidyl ester of tridecylacetic acid	34		GLT	
Glycidyl ester of Versatic acid, see Glycidyl ester of tridecylacetic acid				GLT
Glycine, sodium salt solution	7			EGY
Glycol diacetate, see Ethylene glycol diacetate				
Glycolic acid solution	4		GLC	
Glyoxal solutions	19		GOS	
Glyoxylic acid	4		GAC	
Glyphosate solution (not containing surfactant) (See also ROUNDUP)	7		GIO	
Heptadecane, see n-Alkanes (C10+)				ALJ
Heptane	31	1	HMX	ALK (HPI/HPT)
n-Heptanoic acid	4		HEP	
Heptanol	20		HTX	HTN
Heptene	30		HPX	HTE
Heptyl acetate	34		HPE	
Herbicide (C15-H22-NO2-Cl), see Metolachlor				MCO
Hexadecanol (cetyl alcohol), see Alcohols (C13+)				ALY
1-Hexadecylnaphthalene, 1,4-bis(Hexadecyl)naphthalene mixture	32			
Hexaethylene glycol, see Polyethylene glycol				
Hexamethylene glycol	20			
Hexamethylenediamine	7		HME	HMD/HMC
Hexamethylenediamine solution	7		HMC	HMD/HME
Hexamethylenediamine adipate solution	43		HAM	
Hexamethylene diisocyanate	12		HDI	
Hexamethylenetetramine	7		HMT	
Hexamethylenetetramine solutions	7		HTS	
Hexamethylenimine	7		HMI	
Hexane	31	2	HXS	ALK (IHA/HXA)
Hexanoic acid	4		HXO	
Hexanol	20		HXN	
Hexene	30		HEX	HXE/HXT/MPN/MTN
Hexyl acetate	34		HAE	HSA
Hexylene glycol	20		HXG	
HiTec 321	7		HIT	
Hog grease, see Lard				
Hydrochloric acid	1	1	HCL	
Hydrofluorosilicic acid, see Fluorosilicic acid			HFS	FSJ
bis(Hydrogenated tallow alkyl)methyl amines	7		HTA	
Hydrogen peroxide solutions	0	1		HPN/HPS/HPO
2-Hydroxyethyl acrylate	14	2	HAI	
N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution	43		HET	FHX
N,N-bis(2-Hydroxyethyl) oleamide	10		HOO	
2-Hydroxy-4-(methylthio)butanoic acid	4		HBA	
Hydroxy terminated polybutadiene (IMO cargo name), see Polybutadiene, hydroxy terminated.	20			
alpha-hydro-omega-Hydroxytetradeca(oxytetramethylene), Poly(tetramethylene ether) glycols (mw 950-1050)	see			HTO
Icosa(oxypropane-2,3-diyl)s	20		IOP	
Isophorone	18	2	IPH	
Isophorone diamine	7		IPI	

Pt. 150, Table I

46 CFR Ch. I (10–1–12 Edition)

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Isophorone diisocyanate	12	.....	IPD	
Isoprene	30	.....	IPR	
Isoprene concentrate (Shell)	30	.....	ISC	
<i>Isopropylbenzene (cumene)</i> , see Propylbenzene .....	.....	.....		PBY
Jet fuels:				
JP-4	33	.....	JPF	
JP-5	33	.....	JPV	
JP-8	33	.....	JPE	
Kaolin clay slurry	43	.....	
Kerosene	33	.....	KRS	
Ketone residue	18	.....	KTR	
Kraft black liquor	5	.....		KPL
Kraft pulping liquors (<i>Black, Green, or White</i>)	5	.....	KPL	
Lactic acid	0	1, 2	LTA	
Lactonitrile solution	37	.....	LNI	
Lard	34	.....	
Latex (ammonia inhibited)	30	.....	LTX	
Latex, liquid synthetic	43	.....	LLS	LTX
Lauric acid	34	.....	LRA	
<i>Lauryl polyglucose</i> , see Alkyl(C12 -C14) polyglucoside solution (55% or less) .....	.....	.....	LAP	AGM
Lecithin	34	.....	LEC	
Lignin liquor	43	.....	
<i>Lignin sulfonic acid, sodium salt solution</i> , see Sodium lignosulfonate solution .....	.....	.....
<i>d-Limonene</i> , see Dipentene .....	.....	.....
Liquid Streptomyces solubles	43	.....	
Long chain alkaryl polyether (C11-C20)	41	.....	LCP	
Long chain alkaryl sulfonic acid (C16-C60)	0	1, 2	LCS	
Long chain alkylphenate/Phenol sulfide mixture	21	.....	LPS	
Long chain polyetheramine in alkyl(C2-C4)benzenes	7	.....	LCE	
L-Lysine solution	43	.....	LYS	
Magnesium chloride solution	0	1, 2		
Magnesium hydroxide slurry	5	.....	
Magnesium long chain alkaryl sulfonate (C11-C50)	34	.....	MAS	MSE
Magnesium long chain alkyl phenate sulfide (C8-C20)	34	.....	MPS	
Magnesium long chain alkyl salicylate (C11+)	34	.....	MLS	
<i>Magnesium nonyl phenol sulfide</i> , see Magnesium long chain alkyl phenate sulfide (C8-C20) .....	.....	.....		MPS
<i>Magnesium sulfonate</i> , see Magnesium long chain alkaryl sulfonate (C11-C50) .....	.....	.....	MSE	MAS
Maleic anhydride	11	.....	MLA	
Mercaptobenzothiazol, sodium salt solution (<i>IMO cargo name</i>), see Sodium-2-mercaptobenzothiazol solution	5	.....		SMB
Mesityl oxide	18	2	MSO	
Metam sodium solution	7	.....	MSS	SMD
Methacrylic acid	4	.....	MAD	
Methacrylic resin in Ethylene dichloride	14	1	MRD	
Methacrylonitrile	15	2	MET	
Methane	31	1	MTH	
3-Methoxy-1-butanol	20	.....	
3-Methoxybutyl acetate	34	.....	MOA	
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide (<i>IMO cargo name</i>), see Metolachlor	34	.....		MCO
1-Methoxy-2-propyl acetate	34	.....	MPO	
<i>Methoxy triglycol</i>	40	.....	MTG	
Methyl acetate	34	.....	MTT	
Methyl acetoacetate	34	.....	MAE	
Methyl acetylene, Propadiene mixture	30	.....	MAP	
Methyl acrylate	14	1	MAM	
Methyl alcohol	20	2	MAL	
Methylamine solutions	7	.....	MSZ	
Methyl amyl acetate	34	.....	MAC	
Methyl amyl alcohol	20	.....	MAA	MIC
Methyl amyl ketone	18	.....	MAK	
Methyl bromide	36	.....	MTB	
<i>Methyl butanol</i> , see the amyl alcohols .....	.....	.....		AAI
Methyl butenol	20	.....	MBL	
<i>Methyl butenes (tert-amylenes)</i> , see Pentene .....	.....	.....		PTX
Methyl tert-butyl ether	41	2	MBE	
Methyl butyl ketone	18	2	MBK	
Methylbutynol, see 2-Methyl-2-hydroxy-3-butyne	20	.....	MBY	MHB
3-Methyl butyraldehyde	19	.....	

Coast Guard, DHS

Pt. 150, Table I

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Methyl butyrate	34	.....	MBU	
Methyl chloride	36	.....	MTC	
Methylcyclohexane	31	1	MCY	
Methylcyclopentadiene dimer	30	.....	MCK	
Methyl diethanolamine	8	.....	MDE	MAB
<i>Methylene chloride, see Dichloromethane</i> .....	.....	.....	.....	DCM
2-Methyl-6-ethylaniline	9	.....	MEN	
Methyl ethyl ketone	18	2	MEK	
2-Methyl-5-ethylpyridine	9	.....	MEP	
Methyl formate	34	.....	MFM	
N-Methylglucamine solution	43	.....	MGC	
Methyl heptyl ketone	18	.....	MHK	
2-Methyl-2-hydroxy-3-butyne	20	.....	MHB	
Methyl isoamyl ketone	18	.....	.....	MAK
<i>Methyl isobutyl carbinol, see Methyl amyl alcohol</i> .....	.....	.....	MIC	MAA
Methyl isobutyl ketone	18	2	MIK	
Methyl methacrylate	14	1	MMM	
3-Methyl-3-methoxybutanol	20	.....	.....
3-Methyl-3-methoxybutyl acetate	34	.....	.....
Methyl naphthalene	32	.....	MNA	
Methylolureas	19	.....	MUS	
2-Methyl pentane	31	1	.....	IHA
<i>2-Methyl-1-pentene, see Hexene</i> .....	.....	.....	MPN	HEX
<i>4-Methyl-1-pentene, see Hexene</i> .....	.....	.....	MTN	HEX
Methyl tert-pentyl ether (<i>IMO cargo name</i>), <i>see tert-Amyl methyl ether</i>	41	.....	.....	AYE
2-Methyl-1,3-propanediol	20	.....	MDL	
Methyl propyl ketone	18	.....	MKE	
Methylpyridine	9	.....	.....	MPR/MPE/MPF
N-Methyl-2-pyrrolidone	9	2	MPY	
Methyl salicylate	34	.....	MES	
alpha-Methylstyrene	30	.....	MSR	
3-(Methylthio)propionaldehyde	19	.....	MTP	
Metolachlor	34	.....	MCO	
Milk	43	.....	.....
Mineral spirits	33	.....	MNS	
Molasses	20	.....	.....
Molasses residue	0	1	.....
Monochlorodifluoromethane	36	.....	MCF	
<i>Monoethanolamine, see Ethanolamine</i> .....	.....	.....	.....
<i>Monoisopropanolamine, see Propanolamine</i> .....	.....	.....	.....
Morpholine	7	2	MPL	
Motor fuel antiknock compounds containing lead alkyls	0	1	MFA	
<i>MTBE, see Methyl tert-butyl ether</i> .....	.....	.....	.....	MBE
Myrcene	30	.....	MRE	
Naphtha:				
Aromatic	33	.....	.....
Coal tar solvent	33	.....	NCT	
Heavy	33	.....	.....
Paraffinic	33	.....	.....
Petroleum	33	.....	PTN	
Solvent	33	.....	NSV	
Stoddard solvent	33	.....	NSS	
Varnish Makers' and Painters'	33	.....	NVM	
Naphthalene	32	.....	NTM	
Naphthalene still residue	32	2	NSR	
Naphthalene sulfonic acid-formaldehyde copolymer, sodium salt solution ..	0	1	NFS	
Naphthalene sulfonic acid, sodium salt solution	34	.....	NSA	
Naphthenic acid	4	.....	NTI	
Naphthenic acid, sodium salt solution	43	.....	NTS	
Neodecanoic acid	4	.....	NEA	
NIAX POLYOL APP 240C	0	1, 2	NXP	
Nitrating acid	0	1	NIA	
Nitric acid (70% or less)	3	.....	NCD	
Nitric acid (greater than 70%)	0	1	.....	NAC
Nitrobenzene	42	.....	NTB	
<i>o-Nitrochlorobenzene, see Chloronitrobenzene</i> .....	.....	.....	.....	CNO
Nitroethane	42	.....	NTE	
Nitroethane, 1-Nitropropane mixtures	42	.....	NNO	
<i>o</i> -Nitrophenol	0	1, 2	NTP	NIP/NPH
Nitropropane	42	.....	NPM	NPN/NPP
Nitropropane, Nitroethane mixture	42	.....	.....	NNO (NNM/NNL)
Nitrotoluene	42	.....	NIT	NIE/NTT/NTR
Nonane	31	1	NAX	ALK (NAN)

Pt. 150, Table I

46 CFR Ch. I (10–1–12 Edition)

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Nonanoic acid	4		NNA	NAI/NIN
Nonanoic, Tridecanoic acid mixture	4		NAT	
Nonene	30		NOO	NON/NNE
Nonyl acetate	34		NAE	
Nonyl alcohol	20	2	NNS	NNI/NNN/DBC AKB
<i>Nonylbenzene, see Alkyl(C9+)benzenes</i>				
Nonyl methacrylate	14	1	NMA	
Nonyl phenol	21		NNP	
Nonyl phenol poly(4+)ethoxylates	40		NPE	
<i>Nonyl phenol sulfide solution, see Alkyl phenol sulfide (C8-C40)</i>				AKS/NPS
Noxious Liquid Substance, n.o.s. (NLS's)	0	1		
<i>1-Octadecene, see the olefin or alpha-olefin entries</i>				
Octadecenoamide	10		ODD	
<i>Octadecenol (oleyl alcohol), see Alcohols (C13+)</i>				ALY ALK (IOO/OAN)
Octane	31	1	OAX	OAA/EHO
Octanoic acid	4		OAY	IOA/OTA/EHX
Octanol	20	2	OCX	OTE
Octene	30		OTX	OAE
n-Octyl acetate	34		OAF	OCX IOC/OLX/EHA
<i>Octyl alcohol, see Octanol</i>				
Octyl aldehyde	19		OAL	
Octyl decyl adipate	34		ODA	
<i>Octyl nitrate, see Alkyl(C7-C9) nitrates</i>			ONE	AKN
Octyl phenol	21			
<i>Octyl phthalate, see Dioctyl phthalate</i>				DOP
Oil, edible:				
Beechnut	34		OBN	VEO
Castor	34		OCA	VEO
Cocoa butter	34		OCB	VEO
Coconut	34	2	OCC	VEO
Cod liver	34		OCL	AFN
Corn	34		OCO	VEO
Cottonseed	34		OCS	VEO
Fish	34	2	OFS	AFN
Groundnut	34		OGN	VEO
Hazelnut	34		OHN	VEO
Lard	34		OLD	AFN
Maize	34			VEO (OCO)
Nutmeg butter	34		ONB	VEO
Olive	34		OOL	VEO
Palm	34	2	OPM	VEO
Palm kernel	34		OPO	VEO
Peanut	34		OPN	VEO
Poppy	34		OPY	VEO
Poppy seed	34			VEO
Raisin seed	34		ORA	VEO
Rapeseed	34		ORP	VEO
Rice bran	34		ORB	VEO
Safflower	34		OSF	VEO
Salad	34		OSL	VEO
Sesame	34		OSS	VEO
Soya bean	34		OSB	VEO
Sunflower seed	34		OSN	VEO
Tucum	34		OTC	VEO
Vegetable	34		OVG	VEO
Walnut	34		OWN	VEO
Oil, fuel:				
No. 1	33		OON	
No. 1-D	33		OOD	
No. 2	33		OTW	
No. 2-D	33		OTD	
No. 4	33		OFR	
No. 5	33		OFV	
No. 6	33		OSX	
Oil, misc:				
Aliphatic	33			
Animal	34		OMA	AFN
Aromatic	33			
Clarified	33		OCF	
Coal	33			
Coconut oil, fatty acid methyl ester	34		OCM	
Cotton seed oil, fatty acid	34		CFY	
Crude	33		OIL	

Coast Guard, DHS

Pt. 150, Table I

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Diesel	33	.....	ODS	
Gas, high pour	33	.....	
Gas, low pour	33	.....	
Gas, low sulfur	33	.....	
Heartcut distillate	33	.....	
Lanolin	34	.....	OLL	AFN
Linseed	33	.....	OLS	
Lubricating	33	.....	OLB	
Mineral	33	.....	OMN	
Mineral seal	33	.....	OMS	
Motor	33	.....	OMT	
Neatsfoot	33	.....	ONF	AFN
Oiticica	34	.....	OOI	
Palm oil, fatty acid methyl ester	34	.....	OPE	
Penetrating	33	.....	OPT	
Perilla	34	.....	OPR	
Pilchard	34	.....	OPL	AFN
Pine	33	.....	OPI	PNL
Residual	33	.....	
Road	33	.....	ORD	
Rosin	33	.....	ORN	
Seal	34	.....	
Soapstock	34	.....	OIS	
Soybean (epoxidized)	34	.....		EVO
Sperm	33	.....	OSP	AFN
Spindle	33	.....	OSD	
Tall	34	.....	OTL	
Tall, fatty acid	34	2	TOF	
Transformer	33	.....	OTF	
Tung	34	.....	OTG	
Turbine	33	.....	OTB	
Wood	34	.....	
Olefin/Alkyl ester copolymer (molecular weight 2000+)	34	.....	OCP	
Olefin mixtures	30	.....		OFX/OFY
alpha-Olefins (C6-C18) mixtures	30	.....	OAM	
Olefins (C13+)	30	.....	
Oleic acid	34	.....	OLA	
Oleum	0	1, 2	OLM	
<i>Oleyl alcohol (octadecenol)</i> , see Alcohols (C13+) .....	.....	.....		ALY
Oleylamine	7	.....	OLY	
<i>ORIMULSION</i> , see Asphalt emulsion .....	.....	.....		ASQ
Oxyalkylated alkyl phenol formaldehyde	33	.....	
Palm kernel acid oil	34	.....	PNO	
Palm kernel acid oil, methyl ester	34	.....	PNF	
<i>Palm kernel oil, fatty acid</i> , see Palm kernel acid oil .....	.....	.....		PNO
<i>Palm kernel oil, fatty acid methyl ester</i> , see Palm kernel acid oil, methyl ester .....	.....	.....		PNF
Palm stearin	34	.....	PMS	
<i>n-Paraffins (C10-C20)</i> , see n-Alkanes (C10+) .....	.....	.....	PFN	ALJ
Paraldehyde	19	.....	PDH	
Paraldehyde-Ammonia reaction product	9	.....	PRB	
Pentachloroethane	36	.....	PCE	
Pentacos(oxypropane-2,3-diyl)s	20	.....	POY	
<i>Pentadecanol</i> , see Alcohols (C13+) .....	.....	.....	PDC	ALY
1,3-Pentadiene	30	.....	PDE	PDN
<i>Pentaethylene glycol</i> , see Polyethylene glycols .....	.....	.....
<i>Pentaethylene glycol methyl ether</i> , see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether .....	.....	.....		PAG
Pentaethylenhexamine	7	.....	PEN	
Pentaethylenhexamine, Tetraethylenepentamine mixture	7	.....	PEP	
Pentane	31	1	PTY	IPT/PTA
Pentanoic acid	4	.....	POC	
n-Pentanoic acid, 2-Methyl butyric acid mixture	4	.....	POJ	POC
<i>Pentasodium salt of Diethylenetriamine pentaacetic acid solution</i> , see Diethylenetriamine pentaacetic acid, pentasodium salt solution .....	.....	.....
Pentene	30	.....	PTX	PTE
Pentyl aldehyde	19	.....	
n-Pentyl propionate	34	.....	PPE	
Perchloroethylene	36	2	PER	TTE
Petrolatum	33	.....	PTL	
Phenol	21	.....	PHN	
1-Phenyl-1-xylyl ethane	32	.....	PXE	
Phosphate esters, alkyl(C12-C14)amine	7	.....	PEA	

Pt. 150, Table I

46 CFR Ch. I (10–1–12 Edition)

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Phosphoric acid	1	1	PAC	
Phosphorus	0	1	PPW	PPR/PPB
Phthalate based polyester polyol	0	1, 2	PBE	
Phthalic anhydride	11		PAN	
alpha-Pinene	30		PIO	PIN
beta-Pinene	30		PIP	PIN
Pine oil	33		PNL	OPI
Polyalkyl(C18-C22) acrylate in Xylene	14	1	PIX	
<i>Polyalkylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			PGB	PAG
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	40		PAG	
<i>Including:</i>				
<i>Diethylene glycol butyl ether</i>				
<i>Diethylene glycol ethyl ether</i>				
<i>Diethylene glycol n-hexyl ether</i>				
<i>Diethylene glycol methyl ether</i>				
<i>Diethylene glycol n-propyl ether</i>				
<i>Dipropylene glycol butyl ether</i>				
<i>Dipropylene glycol methyl ether</i>				
<i>Polyalkylene glycol butyl ether</i>				
<i>Polyethylene glycol monoalkyl ether</i>				
<i>Polypropylene glycol methyl ether</i>				
<i>Tetraethylene glycol methyl ether</i>				
<i>Triethylene glycol butyl ether</i>				
<i>Triethylene glycol ethyl ether</i>				
<i>Triethylene glycol methyl ether</i>				
<i>Tripropylene glycol methyl ether</i>				
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate	34		PAF	
<i>Including:</i>				
<i>Diethylene glycol butyl ether acetate</i>				
<i>Diethylene glycol ethyl ether acetate</i>				
<i>Diethylene glycol methyl ether acetate</i>				
Polyalkylene glycols, Polyalkylene glycol monoalkyl ethers mixtures	40		PPX	
Polyalkylene oxide polyol	20		PAO	
<i>Polyalkyl methacrylate (C1-C20)</i>				
Polyalkyl(C10-C20)methacrylate	14	1	PMT	
Polyalkyl(C10-C18)methacrylate/Ethylene propylene copolymer mixture	14	1	PEM	
Polyaluminum chloride solution	1	1		
Polybutadiene, hydroxyl terminated	20			
Polybutene	30		PLB	
Polybutenyl succinimide	10		PBS	
Poly(2+)cyclic aromatics	32		PCA	
Polydimethylsiloxane	34			
Polyether (molecular weight 2000+)	41		PYR	
Polyethylene glycol	40			
Polyethylene glycol dimethyl ether	40			
<i>Polyethylene glycol monoalkyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			PEE	PAG
Polyethylene polyamines	7	2	PEB	
Polyferric sulfate solution	34		PSS	
Polyglycerine, Sodium salts solution (containing less than 3% Sodium hydroxide).	20	2	PGT	
Polyglycerol	20			GCR
Polyisobutenamine in aliphatic (C10-C14) solvent	7		PIB	
Polyisobutenyl anhydride adduct	11			
Poly(4+)isobutylene	30			
Polymethylene polyphenyl isocyanate	12		PPI	
Polymethylsiloxane	34			
Polyolefin (molecular weight 300+)	30			
Polyolefin amide alkeneamine (C17+)	33		POH	
Polyolefin amide alkeneamine (C28+)	33		POD	
Polyolefin amide alkeneamine borate (C28-C250)	33		PAB	
Polyolefin amide alkeneamine/Molybdenum oxysulfide mixture	7			
Polyolefin amide alkeneamine polyol	20		PAP	
Poly(C17+)olefin amine	7		POG	
Polyolefinamine (C28-C250)	33		POM	
Polyolefinamine in alkyl(C2-C4)benzenes	32		POF	
Polyolefin aminoester salt	34		PAE	
Polyolefin anhydride	11		PAR	
Polyolefin ester (C28-C250)	34		POS	
Polyolefin phenolic amine (C28-C250)	7		PPH	
Polyolefin phosphorosulfide, barium derivative (C28-C250)	34		PPS	
Poly(20)oxyethylene sorbitan monooleate	34		PSM	

Coast Guard, DHS

Pt. 150, Table I

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Poly(5+)propylene	30	.....	PLQ	PLP
Polypropylene glycol	40	.....	PGC	
<i>Polypropylene glycol methyl ether, see Propylene glycol monoalkyl ether ..</i>	.....	.....	PGM	PGE
Polysiloxane	34	.....		DMP
Poly(tetramethylene ether) glycols (mw 950-1050) (<i>alpha-hydro-omega-Hydroxytetradeca(oxytetramethylene)</i>).	40	.....	HTO	
Polytetramethylene ether glycol	40	.....	
Potassium chloride solution	43	.....	PCS	(DRB)
Potassium formate solution	34	.....	PFR	
Potassium hydroxide solution (<i>IMO cargo name, see Caustic potash solution.</i>)	5	2		CPS
Potassium oleate	34	.....	POE	
Potassium salt of polyolefin acid	34	.....	
Potassium thiosulfate solution	43	.....	PTF	
Propane	31	1	PRP	
Propanolamine	8	.....	PAX	MPA/PLA
Propionaldehyde	19	.....	PAD	
Propionic acid	4	.....	PNA	
Propionic anhydride	11	.....	PAH	
Propionitrile	37	.....	PCN	
<i>n-Propoxypropanol, see Propylene glycol monoalkyl ether .....</i>	.....	.....	PXP	PGE
Propyl acetate	34	.....		IAC/PAT
Propyl alcohol	20	2		IPA/PAL
Propylamine	7	.....		IPP/PRA
iso-Propylamine solution	7	.....		IPO/IPQ
Propylbenzene	32	2	PBY	PBZ/CUM
n-Propyl chloride	36	.....	PRC	
iso-Propylcyclohexane	31	1	IPX	
Propylene	30	.....	PPL	
Propylene-butylene copolymer	30	.....	PBP	
Propylene carbonate	34	.....	
Propylene dimer	30	.....	PDR	
Propylene glycol	20	2	PPG	
<i>Propylene glycol n-butyl ether, see Propylene glycol monoalkyl ether .....</i>	.....	.....		PGE
<i>Propylene glycol ethyl ether, see Propylene glycol monoalkyl ether .....</i>	.....	.....		PGE
<i>Propylene glycol methyl ether, see Propylene glycol monoalkyl ether .....</i>	.....	.....		PGE
Propylene glycol methyl ether acetate	34	.....	PME	
Propylene glycol monoalkyl ether	40	.....	PGE	
<i>Including:</i>				
<i>n-Propoxypropanol</i>				
<i>Propylene glycol n-butyl ether</i>				
<i>Propylene glycol ethyl ether</i>				
<i>Propylene glycol methyl ether</i>				
<i>Propylene glycol propyl ether</i>				
Propylene glycol phenyl ether	40	.....	PGP	
<i>Propylene glycol propyl ether, see Propylene glycol monoalkyl ether .....</i>	.....	.....		PGE
Propylene oxide	16	1	POX	
Propylene, Propane, MAPP gas mixture	30	2	PPM	
Propylene tetramer	30	.....	PTT	
Propylene trimer	30	.....	PTR	
Propyl ether	41	.....		IPE/PRE
<i>Pseudocumene, see Trimethylbenzene .....</i>	.....	.....		TME/TRE
Pyridine	9	.....	PRD	
<i>Pyridine bases, see Paraldehyde-Ammonia reaction product .....</i>	.....	.....		PRB
Roehm monomer 6615	14	1	RMN	
Rosin oil	33	.....	ORN	
Rosin soap (disproportionated) solution	43	.....	RSP	
ROUNDUP (See also Glyphosate solution)	7	.....	RUP	
<i>Rum, see Alcoholic beverages .....</i>	.....	.....
SAP 7001	0	1	SON	
Sewage sludge	43	.....	
Silica slurry	43	.....	
Sludge, treated	43	.....	
Sodium acetate, Glycol, Water mixture (not containing Sodium hydroxide)	34	2	SAO	SAP
Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide)	5	.....	SAP	SAO
Sodium acetate solution	34	.....	SAN	AKP
Sodium alkyl sulfonate solution	43	.....	SSU	
Sodium alkyl (C14-C17) sulfonates 60-65% solution (<i>IMO cargo name</i>), <i>see Alkane (C14-C17) sulfonic acid, sodium salt solution.</i>	34	.....	AKA	
Sodium aluminate solution	5	.....	SAU	
Sodium aluminosilicate slurry	34	.....	
Sodium benzoate solution	34	.....	SBN	
Sodium borohydride, Sodium hydroxide solution	5	.....	SBX	SBH/SBI

Pt. 150, Table I

46 CFR Ch. I (10–12 Edition)

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Sodium carbonate solutions	5		SCE	
Sodium chlorate solution	0	1, 2	SDD	SDC
Sodium cyanide solution	5		SCS	SCN
Sodium dichromate solution	0	1, 2	SDL	SCR
<i>Sodium dimethyl naphthalene sulfonate solution, see</i> Dimethyl naphthalene sulfonic acid, sodium salt solution.				DNS
Sodium hydrogen sulfide, Sodium carbonate solution	0	1, 2	SSS	
Sodium hydrogen sulfite solution	43		SHX	
Sodium hydrosulfide solution	5	2	SHR	
Sodium hydrosulfide, Ammonium sulfide solution	5	2	SSA	
Sodium hydroxide solution (<i>IMO cargo name</i>), <i>see</i> Caustic soda solution	5	2		CSS
Sodium hypochlorite solution	5			SHP/SHQ/(SHC)
Sodium lignosulfonate solution, <i>see also</i> Lignin liquor	43			
Sodium long chain alkyl salicylate (C13+)	34		SLS	
Sodium 2-mercaptobenzothiazol solution	5		SMB	
<i>Sodium N-methyl dithio carbamate solution, see</i> Metam sodium solution				MSS
<i>Sodium naphthalene sulfonate solution, see</i> Naphthalene sulfonic acid, sodium salt solution.			SNS	NSA
<i>Sodium naphthenate solution, see</i> Naphthenic acid, sodium salt solution				NTS
Sodium nitrite solution	5		SNI	SNT
Sodium petroleum sulfonate	33		SPS	
Sodium polyacrylate solution	43	2		
<i>Sodium salt of Ferric hydroxyethylethylenediaminetriacetic acid solution, see</i> Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution.			STA	FHX
Sodium silicate solution	43	2	SSN	SSC
Sodium sulfide, Hydrosulfide solution	0	1, 2		SSH/SSI/SSJ
Sodium sulfide solution	43		SDR	
Sodium sulfite solution	43		SUP	SUS
Sodium tartrates, Sodium succinates solution	43		STM	
Sodium thiocyanate solution	0	1, 2	STS	SCY
Sorbitol solutions	20			SBT
Soyabean oil (expoxidized)	34			OSC/EVO
<i>Stearic acid, see</i> Fatty acids (saturated, C14+)			SRA	FAD
Stearyl alcohol	20			
Styrene	30		STY	STX
Styrene monomer	30		STY	STX
Sulfohydrocarbon (C3-C88)	33		SFO	
Sulfohydrocarbon, long chain (C18+) alkylamine mixture	7		SFX	
Sulfolane	39		SFL	
Sulfonated polyacrylate solutions	43	2		
Sulfur	0	1	SXX	
Sulfuric acid	2	2	SFA	
Sulfuric acid, spent	2		SAC	
Sulfurized fat (C14-C20)	33		SFT	
Sulfurized polyolefinamide alkene(C28-C250) amine	33		SPO	
Tall oil	34		OTL	
Tall oil fatty acid (<i>Resin acids less than 20%</i>)	34	2	TOF	
Tall oil fatty acid, barium salt	0	1, 2	TOB	
Tall oil soap (disproportionated) solution	43		TOS	
Tallow	34	2	TLO	
Tallow fatty acid	34	2	TFD	
<i>Tallow fatty alcohol, see</i> Alcohols (C13+)			TFA	ALY
Tallow nitrile	37		TAN	
<i>TAME, see</i> tert-Amyl methyl ether				AYE
1,1,2,2-Tetrachloroethane	36		TEC	
<i>Tetrachloroethylene, see</i> Perchloroethylene			TTE	PER
<i>Tetradecanol, see</i> Alcohols (C13+)			TTN	ALY
<i>Tetradecene, see the olefins entries</i>			TTD	
Tetradecylbenzene, <i>see</i> Alkyl(C9+) benzenes	32		TDB	AKB
Tetraethylene glycol	40		TTG	
<i>Tetraethylene glycol methyl ether, see</i> Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.				PAG
Tetraethylenepentamine	7	2	TTP	
Tetrahydrofuran	41		THF	
Tetrahydronaphthalene	32		THN	
<i>1,2,3,5-Tetramethylbenzene, see</i> Tetramethylbenzene			TTB	TTC
Tetramethylbenzene	32		TTC	TTB
<i>Tetrapropylbenzene, see</i> Alkyl(C9+)benzenes				AKB
<i>Tetrasodium salt of EDTA solution, see</i> Ethylenediaminetetraacetic acid, tetrasodium salt solution.				EDS
Titanium dioxide slurry	43		TDS	
Titanium tetrachloride	2		TTT	

Coast Guard, DHS

Pt. 150, Table I

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Toluene	32		TOL	
Toluenediamine	9		TDA	
Toluene diisocyanate	12		TDI	
o-Toluidine	9		TLI	
<i>Triarylphosphate, see Triisopropylated phenyl phosphates</i>			TRA	TPL
Tributyl phosphate	34		TBP	
1,2,4-Trichlorobenzene	36		TCB	
1,1,1-Trichloroethane	36	2	TCE	
1,1,2-Trichloroethane	36		TCM	
Trichloroethylene	36	2	TCL	
1,2,3-Trichloropropane	36	2	TCN	
1,1,2-Trichloro-1,2,2-trifluoroethane	36		TTF	
Tricresyl phosphate	34			TCO/TCP
<i>Tridecane, see n-Alkanes (C10+)</i>			TRD	ALJ
Tridecanoic acid	34		TDO	
<i>Tridecanol, see Alcohols (C13+)</i>			TDN	ALY
<i>Tridecene, see Olefins (C13+)</i>			TDC	
Tridecyl acetate	34		TAE	
Tridecylbenzene, <i>see Alkyl(C9+) benzenes</i>	32	2	TRB	AKB
Triethanolamine	8	2	TEA	
Triethylamine	7		TEN	
Triethylbenzene	32	2	TEB	
Triethylene glycol	40		TEG	
<i>Triethylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>				PAG
Triethylene glycol butyl ether mixture	40			
Triethylene glycol dibenzoate	34		TGB	
Triethylene glycol di-(2-ethylbutyrate)	34		TGD	
Triethylene glycol ether mixture	40			
<i>Triethylene glycol ethyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			TGE	PAG
<i>Triethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			TGY	PAG
Triethylenetetramine	7	2	TET	
Triethyl phosphate	34		TPS	
Triethyl phosphite	34	2	TPI	
Triisobutylene	30		TIB	
Triisooctyl trimellitate	34			
Triisopropanolamine	8		TIP	
<i>Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution.</i>				DTI
Triisopropylated phenyl phosphates	34		TPL	
Trimethylacetic acid	4		TAA	
Trimethylamine solution	7		TMT	
Trimethylbenzene	32	2	TRE	TME/TMB/TMD
Trimethylhexamethylenediamine (2,2,4- and 2,4,4-)	7		THA	
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-)	12		THI	
<i>Trimethyl nonanol, see Dodecanol</i>				DDN
Trimethylol propane polyethoxylate	20		TPR	
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	34		TMQ	
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate	34		TMP	
2,2,4-Trimethyl-3-pentanol-1-isobutyrate	34			
Trimethyl phosphite	34	2	TPP	
1,3,5-Trioxane	41	2	TRO	
Triphenylborane, Caustic soda solution	5		TPB	
<i>Tripropylene, see Propylene trimer</i>				PTR
Tripropylene glycol	40		TGC	
<i>Tripropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether.</i>			TGM	PAG
Trisodium nitrioltriacetate	34			
Trisodium phosphate solution	5		TSP	
<i>Trisodium salt of N-(Hydroxyethyl)ethylenediaminetriacetic acid solution, see N-(Hydroxyethyl)ethylenediaminetriacetic acid, trisodium salt solution.</i>				HET
Trixylyl phosphate (<i>IMO cargo name</i>), <i>see Trixylenyl phosphate</i>	34			TRP
Trixylenyl phosphate	34		TRP	
Turpentine	30		TPT	
Ucarsol CR Solvent 302 SG	8		UCS	
Undecanoic acid	4		UDA	
<i>Undecanol, see Undecyl alcohol</i>				UND
Undecene	30		UDC	
Undecyl alcohol	20		UND	
Undecylbenzene, <i>see Alkyl(C9+) benzenes</i>			UDB	AKB

Pt. 150, Table I

46 CFR Ch. I (10–1–12 Edition)

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Urea, Ammonium mono- and di-hydrogen phosphate, Potassium chloride solution.	0	1	UPX	
Urea, Ammonium nitrate solution (containing Ammonia)	6		UAS	
Urea, Ammonium nitrate solution (not containing Ammonia)	43		UAT	ANU
Urea, Ammonium phosphate solution	43		UAP	
Urea solution	43			URE
Valeraldehyde	19		VAK	IVA/VAL
Vanillin black liquor	5		VBL	
Vegetable oils, n.o.s.	34		VEO	
<i>Including:</i>				
<i>Beechnut oil</i>				
<i>Castor oil</i>				
<i>Cocoa butter</i>				
<i>Coconut oil</i>				
<i>Corn oil</i>				
<i>Cottonseed oil</i>				
<i>Groundnut oil</i>				
<i>Hazelnut oil</i>				
<i>Linseed oil</i>				
<i>Nutmeg butter</i>				
<i>Oiticica oil</i>				
<i>Olive oil</i>				
<i>Palm kernel oil</i>				
<i>Palm oil</i>				
<i>Peel oil (oranges and lemons)</i>				
<i>Perilla oil</i>				
<i>Poppy oil</i>				
<i>Raisin seed oil</i>				
<i>Rapeseed oil</i>				
<i>Rice bran oil</i>				
<i>Safflower oil</i>				
<i>Salad oil</i>				
<i>Sesame oil</i>				
<i>Soya bean oil</i>				
<i>Sunflower seed oil</i>				
<i>Tucum oil</i>				
<i>Tung oil</i>				
<i>Walnut oil</i>				
Vegetable acid oils and distillates, n.o.s.	34		VAO	
<i>Including:</i>				
<i>Corn acid oil</i>				
<i>Cottonseed acid oil</i>				
<i>Dark mixed acid oil</i>				
<i>Groundnut acid oil</i>				
<i>Mixed acid oil</i>				
<i>Mixed general acid oil</i>				
<i>Mixed hard acid oil</i>				
<i>Mixed soft acid oil</i>				
<i>Rapeseed acid oil</i>				
<i>Safflower acid oil</i>				
<i>Soya acid oil</i>				
<i>Sunflower seed acid oil</i>				
Vegetable protein solution	43			
Vinyl acetate	13	1	VAM	
Vinyl chloride	35		VCM	
Vinyl ethyl ether	13	1	VEE	
Vinylidene chloride	35		VCI	
Vinyl neodecanate	13	1	VND	
Vinyltoluene	13	1	VNT	
Water	43			
Waxes:				
<i>Candelilla</i>	34		WDC	
<i>Carnauba</i>	34		WCA	
<i>Paraffin</i>	31	1	WPF	
<i>Petroleum</i>	33			
<i>Wine, see Alcoholic beverages</i>				
White spirit (low (15-20%) aromatic)	33		WSL	WSP
Xylene	32		XLX	XML/XLO/XLP
Xylenes, Ethylbenzene mixture	32		XEB	
Xylenols	21		XYL	
Zinc alkaryl dithiophosphate (C7-C16)	34		ZAD	
Zinc alkenyl carboxamide	10		ZAA	
Zinc alkyl dithiophosphate (C3-C14)	34		ZAP	

Chemical name	Group No.	Foot-note	CHRIS Code	Related CHRIS Codes
Zinc bromide, Calcium bromide solution, see Drilling brine (containing Zinc salts).		DZB

1. Because of very high reactivity or unusual conditions of carriage or potential compatibility problems, this commodity is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (CG-ENG-5), Hazardous Materials Division, U.S. Coast Guard, 2100 2nd Street, SW., Stop 7126, Washington, DC 20593-7126. Telephone 202-372-1420; email: hazmatstandards@uscg.mil.

2. See Appendix I—Exceptions to the Chart.

[USCG 2000-7079, 65 FR 67162, Nov. 8, 2000, as amended by USCG-2006-25697, 71 FR 55746, Sept. 25, 2006; USCG-2008-0906, 73 FR 56510, Sept. 29, 2008; USCG-2009-0702, 74 FR 49236, Sept. 25, 2009; USCG-2010-0759, 75 FR 60003, Sept. 29, 2010; USCG-2012-0832, 77 FR 59783, Oct. 1, 2012]

TABLE II TO PART 150—GROUPING OF CARGOES

0. UNASSIGNED CARGOES

Acetone cyanohydrin^{1,2}
 Alkylbenzenesulfonic acid^{1,2}
 Aluminium chloride, Hydrochloric acid solution¹
 Ammonium hydrogen phosphate solution¹
 Ammonium nitrate solution¹
 Ammonium thiocyanate, Ammonium thiosulfate solution¹
 Benzenesulfonyl chloride^{1,2}
 gamma-Butyrolactone^{1,2}
 Chlorine¹
 Chlorosulfonic acid¹
 Decyloxytetrahydro-thiophene dioxide²
 tert-Dodecanethiol²
 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution^{1,2}
 Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid solution^{1,2}
 Diphenylol propane-Epichlorohydrin resins¹
 Dodecylbenzenesulfonic acid^{1,2}
 Dodecyl hydroxypropyl sulfide²
 Ethylene oxide¹
 Hydrogen peroxide solutions¹
 Lactic acid²
 Long chain alkaryl sulfonic acid (C16-C60)²
 Magnesium chloride solution^{1,2}
 Molasses residue¹
 Motor fuel antiknock compounds containing Lead alkyls¹
 Naphthalene sulfonic acid-formaldehyde copolymer, sodium salt solution¹
 NIAx POLYOL APP 240C^{1,2}
 Nitrating acid¹
 Nitric acid (greater than 70%)¹
 o-Nitrophenol^{1,2}
 Noxious Liquid Substance, n.o.s. (NLS's)¹
 Oleum^{1,2}
 Phosphorus¹
 Phthalate based polyester polyol²
 SAP 7001¹
 Sodium chlorate solution^{1,2}
 Sodium dichromate solution^{1,2}
 Sodium hydrogen sulfide, Sodium carbonate solution^{1,2}
 Sodium sulfide, Hydrosulfide solution^{1,2}
 Sodium thiocyanate solution^{1,2}

Sulfur¹
 Tall oil fatty acid, barium salt²
 Urea, Ammonium mono- and di-hydrogen phosphate, Potassium chloride solution

1. NON-OXIDIZING MINERAL ACIDS

Di-(2-ethylhexyl)phosphoric acid
 Ferric chloride solution
 Fluorosilicic acid
 Hydrochloric acid
 Phosphoric acid
 Polyaluminum chloride solution

2. SULFURIC ACIDS

Sulfuric acid²
 Sulfuric acid, spent
 Titanium tetrachloride

3. NITRIC ACID

Ferric nitrate, Nitric acid solution
 Nitric acid (70% or less)

4. ORGANIC ACIDS

Acetic acid²
 Acrylic acid²
 Butyric acid
 Cashew nut shell oil (untreated)
 Citric acid
 Chloroacetic acid solution
 Chloropropionic acid
 Decanoic acid
 2,2-Dichloropropionic acid
 2,2-Dimethyloctanoic acid
 2-Ethylhexanoic acid
 Formic acid²
 Glycolic acid
 Glyoxylic acid
 n-Heptanoic acid
 Hexanoic acid
 2-Hydroxy-4-(methylthio)butanoic acid
 Methacrylic acid
 Naphthenic acid
 Neodecanoic acid
 Nonanoic acid
 Nonanoic, Tridecanoic acid mixture
 Octanoic acid
 n-Pentanoic acid, 2-Methyl butyric acid mixture
 Pentanoic acid
 Propionic acid
 Trimethylacetic acid

Pt. 150, Table II

46 CFR Ch. I (10–12 Edition)

Undecanoic acid

5. CAUSTICS

Ammonium sulfide solution
 Calcium hypochlorite solutions
 Caustic potash solution²
 Caustic soda solution²
 Cresylate spent caustic
 Cresylic acid, sodium salt solution
 Kraft black liquor
 Kraft pulping liquors
 Mercaptobenzothiazol, sodium salt solution
 Potassium hydroxide solution²
 Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide)
 Sodium aluminate solution
 Sodium borohydride, Sodium hydroxide solution
 Sodium carbonate solutions
 Sodium cyanide solution
 Sodium hydrosulfide solution²
 Sodium hydrosulfide, Ammonium sulfide solution²
 Sodium hydroxide solution²
 Sodium hypochlorite solution
 Sodium 2-mercaptobenzothiazol solution
 Sodium naphthenate solution
 Sodium nitrite solution
 Triphenylborane, Caustic soda solution
 Trisodium phosphate solution
 Vanillin black liquor

6. AMMONIA

Ammonia, anhydrous
 Ammonia, aqueous
 Ammonium hydroxide (28% or less Ammonia)
 Ammonium nitrate, Urea solution (containing Ammonia)
 Urea, Ammonium nitrate solution (containing Ammonia)

7. ALIPHATIC AMINES

N-Aminoethylpiperazine
 Butylamine
 Cyclohexylamine
 Dibutylamine
 Diethylamine²
 Diethylenetriamine²
 Diisobutylamine
 Diisopropylamine
 Dimethylamine
 Dimethylamine solution
 N,N-Dimethylcyclohexylamine
 N,N-Dimethyldodecylamine
 Di-n-propylamine
 Diphenylamine, reaction product with 2,2,4-Trimethylpentene
 Diphenylamines, alkylated
 Dodecylamine, Tetradecylamine mixture²
 Dodecyldimethylamine,
 Tetradecyldimethylamine mixture
 Ethylamine²
 Ethylamine solution
 Ethyleneamine EA 1302²

N-Ethyl-n-butylamine
 N-Ethyl cyclohexylamine
 Ethylenediamine²
 2-Ethyl hexylamine
 N-Ethylmethylallylamine
 Glyphosate solution (not containing surfactant)
 Hexamethylenediamine
 Hexamethylenediamine solution
 Hexamethylenetetramine
 Hexamethylenetetramine solutions
 Hexamethylenimine
 HiTec 321
 bis-(Hydrogenated tallow alkyl)methyl amines
 Isophorone diamine
 Long chain polyetheramine in alkyl(C2–C4)benzenes
 Metam sodium solution
 Methylamine solutions
 Morpholine²
 Oleylamine
 Pentaethylenehexamine
 Pentaethylenehexamine,
 Tetraethylenepentamine mixture
 Phosphate esters, alkyl (C12–C14) amine
 Polyethylene polyamines²
 Polyolefin amide alkeneamine (C28+)
 Polyisobutenamine in aliphatic (C10–C14) solvent
 Poly (C17+) olefin amine
 Polyolefin amide alkeneamine/Molybdenum oxysulfide mixture
 Propanil, Mesityl oxide, Isophorone mixture
 Propylamine
 iso-Propylamine solution
 Roundup
 Sulfohydrocarbon, long chain (C18+) alkylamine mixture
 Tetraethylenepentamine²
 Triethylamine
 Triethylenetetramine²
 Trimethylamine solution
 Trimethylhexamethylene diamine (2,2,4- and 2,4,4-)

8. ALKANOLAMINES

2-(2-Aminoethoxy)ethanol
 Aminoethyldiethanolamine,
 Aminoethylethanolamine solution
 Aminoethylethanolamine
 2-Amino-2-methyl-1-propanol
 Diethanolamine
 Diethylaminoethanol
 Diethylethanolamine
 Diisopropanolamine
 Dimethylethanolamine
 Ethanolamine
 Ethoxylated long chain (C16+) alkyloxyalkanamine
 Methyl diethanolamine
 Propanolamine
 Triethanolamine²
 Triisopropanolamine
 Ucarsol CR Solvent 302 SG

Coast Guard, DHS

Pt. 150, Table II

9. AROMATIC AMINES

Alkyl (C8-C9) phenylamine in aromatic solvents
 Aniline
 Calcium long chain alkyl phenolic amine (C8-C40)
 4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution
 Dialkyl (C8-C9) diphenylamines
 2,6-Diethylaniline
 Dimethylamine salt of 4-Chloro-2-methylphenoxyacetic acid solution
 2,6-Dimethylaniline
 Diphenylamine
 2-Ethyl-6-methyl-N-(1'-methyl-2-methoxyethyl)aniline
 2-Methyl-6-ethyl aniline
 2-Methyl-5-ethyl pyridine
 Methyl pyridine
 3-Methylpyridine
 N-Methyl-2-pyrrolidone²
 Paraldehyde-Ammonia reaction product
 Pyridine
 Pyridine bases
 Toluenediamine
 p-Toluidine

10. AMIDES

Acetochlor
 Acrylamide solution
 Alkenyl(C11+)amide
 N,N-Dimethylacetamide
 N,N-Dimethylacetamide solution
 Dimethylformamide
 Formamide
 N,N-bis(2-Hydroxyethyl) oleamide
 Octadecenoamide
 Zinc alkenyl carboxamide

11. ORGANIC ANHYDRIDES

Acetic anhydride
 Alkenylsuccinic anhydride
 Maleic anhydride
 Phthalic anhydride
 Polyisobutenyl anhydride adduct
 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 ACETATE

Vinyl acetate
 Vinyl ethyl ether
 Vinyl neodecanate
 Vinyl toluene

14. ACRYLATES

Butyl acrylate

Butyl methacrylate
 Butyl methacrylate, Decyl methacrylate, 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 acrylate²
 Methacrylic resin in Ethylene dichloride
 Methyl acrylate
 Methyl methacrylate
 Nonyl methacrylate
 Polyalkyl(C18 - C22) acrylate in Xylene
 Polyalkyl (C10-C18) methacrylate/Ethylene
 Polyalkyl (C10-C20) methacrylate
 Propylene copolymer mixture
 Rohm monomer 6615

15. SUBSTITUTED ALLYLS

Acrylonitrile²
 Allyl alcohol²
 Allyl chloride
 1,3-Dichloropropene
 Dichloropropene, Dichloropropane mixtures
 Methacrylonitrile

16. ALKYLENE OXIDES

Butylene oxide
 Ethylene oxide, Propylene oxide mixtures
 Propylene oxide

17. EPICHLOROHYDRIN

Chlorohydrins
 Epichlorohydrin

18. KETONES

Acetone²
 Acetophenone
 Amyl methyl ketone
 Butyl heptyl ketone
 Camphor oil
 1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one²
 Cyclohexanone
 Cyclohexanone, Cyclohexanol mixtures²
 Diisobutyl ketone
 Ethyl amyl ketone
 Epoxy resin
 Ketone residue
 Isophorone²
 Mesityl oxide²
 Methyl amyl ketone
 Methyl butyl ketone
 Methyl butyl ketone
 Methyl ethyl ketone²
 Methyl heptyl ketone
 Methyl isoamyl ketone
 Methyl isobutyl ketone²
 Methyl propyl ketone
 Trifluralin in Xylene

Pt. 150, Table II

46 CFR Ch. I (10–1–12 Edition)

19. ALDEHYDES

Acetaldehyde
 Acrolein²
 Butyraldehyde
 Crotonaldehyde²
 Decaldehyde
 Ethylhexaldehyde
 2-Ethyl-3-propylacrolein²
 Formaldehyde, Methanol mixtures²
 Formaldehyde solution²
 Furfural
 Glutaraldehyde solution
 Glyoxal solutions
 3-Methyl butyraldehyde
 Methylolureas
 3-(Methylthio)propionaldehyde
 Octyl aldehyde
 Paraldehyde
 Pentyl aldehyde
 Propionaldehyde
 Valeraldehyde

20. ALCOHOLS, GLYCOLS

Acrylonitrile-Styrene copolymer dispersion in Polyether polyol
 Alcoholic beverages
 Alcohol polyethoxylates
 Alcohol polyethoxylates, secondary
 Alcohols (C13+)
 Amyl alcohol
 Behenyl alcohol
 Brake fluid base mixtures
 1,4-Butanediol
 Butyl alcohol²
 Butylene glycol²
 Cetyl-Stearyl alcohol
 Choline chloride solutions
 Cyclohexanol
 Decyl alcohol²
 Diacetone alcohol²
 Diethyl hexanol
 Diisobutyl carbinol
 2,2-Dimethylpropane-1,3-diol
 Dodecanol
 Dodecyl alcohol
 Ethoxylated alcohols, C11-C15
 2-Ethoxyethanol
 Ethyl alcohol²
 Ethyl butanol
 Ethylene chlorohydrin
 Ethylene cyanohydrin
 Ethylene glycol²
 2-Ethylhexanol
 Furfuryl alcohol²
 Glycerine²
 Glycerine, Dioxanedimethanol mixture
 Glycerol monooleate
 Heptanol
 Hexamethylene glycol
 Hexanol
 Hexylene glycol
 Hydroxy terminated polybutadiene
 Icosa(oxypropane-2,3-diyl)s
 Lauryl polyglucose (50% or less)
 3-Methoxy-1-butanol
 Methyl alcohol²

Methyl amyl alcohol
 Methyl butenol
 Methylbutynol
 2-Methyl-2-hydroxy-3-butyne
 Methyl isobutyl carbinol
 3-Methyl-3-methoxybutanol
 2-Methyl-1,3-propanediol
 Molasses
 Nonyl alcohol²
 Octanol²
 Octyl alcohol²
 Penacosa(oxypropane-2,3-diyl)s
 Pentadecanol
 Polyalkylene oxide polyol
 Polybutadiene, hydroxy terminated
 Polyglycerol
 Polyglycerine, Sodium salts solution (containing less than 3% Sodium hydroxide)²
 Polyolefin amide alkeneamine polyol
 Propyl alcohol²
 Propylene glycol²
 Rum
 Sorbitol solutions
 Stearyl alcohol
 Tallow fatty alcohol
 Tetradecanol
 Tridecanol
 Trimethyl nonanol
 Trimethylol propane polyethoxylate
 Undecanol
 Undecyl alcohol

21. PHENOLS, CRESOLS

Benzyl alcohol
 Carbolic oil
 Creosote²
 Cresols
 Cresylic acid
 Cresylic acid dephenolized
 Cresylic acid, tar
 Dibutylphenols
 2,4-Dichlorophenol
 Dodecyl phenol
 o-Ethylphenol
 Long chain alkylphenate/phenol sulfide mixture
 Nonyl phenol
 Octyl phenol
 Phenol
 Xylenols

22. CAPROLACTAM SOLUTIONS

Caprolactam solution

23–29. UNASSIGNED

30. OLEFINS

Amylene
 Aryl polyolefin (C11–C50)
 Butadiene
 Butadiene, Butylene mixtures (cont. Acetylenes)
 Butene
 Butene oligomer
 Butylene
 1,5,9-Cyclododecatriene

Coast Guard, DHS

Pt. 150, Table II

1,3-Cyclopentadiene dimer
 Cyclopentadiene, Styrene, Benzene mixture
 Cyclopentene
 Decene
 Dicyclopentadiene
 Diisobutylene
 Dipentene
 Dodecene
 Ethylene
 Ethylene-Propylene copolymer
 Ethylidene norbornene²
 1-Heptene
 Hexene
 Isoprene
 Isoprene concentrate (Shell)
 Latex (ammonia (1% or less) inhibited)
 Methyl acetylene, Propadiene mixture
 Methyl butene
 Methylcyclopentadiene dimer
 2-Methyl-1-pentene
 4-Methyl-1-pentene
 alpha-Methyl styrene
 Myrcene
 Nonene
 1-Octadecene
 Octene
 Olefin mixtures
 alpha-Olefins (C6 - C18) mixtures
 alpha-Olefins (C13+)
 1,3-Pentadiene
 Pentene
 alpha-Pinene
 beta-Pinene
 Polybutene
 Poly(4+)isobutylene
 Polyolefin (molecular weight 300+)
 Polypropylene
 Poly(5+)propylene
 Propylene
 Propylene-butylene copolymer
 Propylene dimer
 Propylene, Propane, MAPP gas mixture
 Propylene tetramer
 Propylene trimer
 Styrene monomer
 Tetradecene
 Tridecene
 Triisobutylene
 Tripropylene
 Turpentine
 Undecene

31. PARAFFINS

Alkanes (C6-C9)
 n-Alkanes (C10+)
 iso- & cyclo-Alkanes (C10-C11)
 iso- & cyclo-Alkanes (C12+)
 Butane
 Cycloheptane
 Cyclohexane
 Cyclopentane
 Decane
 Dodecane
 Ethane
 Ethyl cyclohexane
 Heptane

Hexane²
 Methane
 Methylcyclohexane
 2-Methyl pentane
 Nonane
 Octane
 Pentane
 Propane
 iso-Propylcyclohexane
 Tridecane
 Waxes:
 Paraffin

32. AROMATIC HYDROCARBONS

Alkyl(C3-C4)benzenes
 Alkyl(C5-C8)benzenes
 Alkyl(C9+)benzenes
 Alkyl acrylate-Vinyl pyridine copolymer in Toluene
 Alkylbenzene, Alkylindane, Alkylindene mixture (each C12-C17)
 Benzene
 Benzene hydrocarbon mixtures (having 10% Benzene or more)
 Benzene, Toluene, Xylene mixtures
 Butylbenzene
 Butyl phenol, Formaldehyde resin in Xylene
 Butyl toluene
 Cumene
 Cymene
 Decylbenzene
 Dialkyl(C10 - C14) benzenes
 Diethylbenzene
 Diisopropylbenzene
 Diisopropyl naphthalene
 Diphenyl
 Dodecylbenzene
 Dodecyl xylene
 Ethylbenzene
 Ethyl toluene
 1-Hexadecylnaphthalene, 1,4-bis(Hexadecyl)
 Isopropylbenzene
 Methyl naphthalene
 Naphthalene
 Naphthalene mixture
 Naphthalene still residue
 1-Phenyl-1-xylyl ethane
 Poly(2+)cyclic aromatics
 Polyolefin amine in alkylbenzenes (C2-C4)
 Propylbenzene
 Pseudocumene
 C9 Resinfeed (DSM)²
 Tetradecylbenzene
 Tetrahydronaphthalene
 1,2,3,5-Tetramethylbenzene
 Toluene
 Tridecylbenzene
 Triethylbenzene
 Trimethylbenzene
 Undecylbenzene
 Xylene
 Xylenes, Ethylbenzene mixture

33. MISCELLANEOUS HYDROCARBON MIXTURES

Alachlor

Pt. 150, Table II

46 CFR Ch. I (10–1–12 Edition)

Alkylbenzenesulfonic acid, sodium salt solutions
 Alkyl dithiothiadiazole (C6–C24)
 Asphalt blending stocks, roofers flux
 Asphalt blending stocks, straight run residue
 Asphalt emulsion
 Aviation alkylates
 Calcium sulfonate, Calcium carbonate, Hydrocarbon solvent mixture
 Coal tar
 Coal tar distillate
 Coal tar, high temperature
 Coal tar pitch
 Decahydronaphthalene
 Degummed C9 (DOW)
 Diphenyl, Diphenyl ether
 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
 Gasolines:
 Automotive (*not over 4.23 grams lead per gal.*)
 Aviation (*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:
 Coal tar solvent
 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, high pour
 Heartcut distillate
 Linseed
 Lubricating
 Mineral
 Mineral seal
 Motor
 Neatsfoot
 Penetrating

Pine
 Rosin
 Sperm
 Spindle
 Turbine
 Residual
 Road
 Transformer
 Oxyalkylated alkyl phenol formaldehyde
 Petrolatum
 Pine oil
 Polyolefin amine (C28–C250)
 Polyolefin amide alkeneamine (C17+)
 Polyolefin amide alkeneamine borate (C28–C250)
 Sodium petroleum sulfonate
 Sulfohydrocarbon (C3–C88)
 Waxes:
 Petroleum
 Sulfurized fat (C14–C20)
 Sulfurized polyolefinamide alkeneamines (C28–C250)
 White spirit (low (15–20%) aromatic)

34. ESTERS

Alkane (C14–C17) sulfonic acid, sodium salt solution
 Alkyl(C8+)amine, Alkenyl (C12+) acid ester mixture
 Alkyl ester copolymer (C6–C18)
 Alkyl(C7–C9) nitrates²
 Alkyl (C8–C40) phenol sulfide
 Alkyl (C10–C20, saturated and unsaturated) phosphite
 Alkyl sulfonic acid ester of phenol
 Alkylaryl phosphate mixtures (more than 40%)
 Amyl acetate
 Animal and Fish oils, n.o.s.
 Animal and Fish acid oils and distillates, n.o.s.
 Barium long chain alkaryl (C11–C50) sulfonate
 Barium long chain alkyl(C8–C14)phenate sulfide
 Benzene tricarboxylic acid trioctyl ester
 Benzyl acetate
 Butyl acetate
 Butyl benzyl phthalate
 n-Butyl butyrate
 Butyl formate
 iso-Butyl isobutyrate
 n-Butyl propionate
 Calcium alkyl(C9)phenol sulfide, polyolefin phosphorusulfide mixture
 Calcium long chain alkaryl sulfonate (C11–C50)
 Calcium long chain alkyl phenate sulfide (C8–C40)
 Calcium long chain alkyl phenates
 Calcium long chain alkyl salicylate (C13+)
 Calcium nitrate, Magnesium nitrate, Potassium chloride solution
 Calcium nitrate solution
 Cobalt naphthenate in solvent naphtha
 Coconut oil, fatty acid
 Copper salt of long chain alkanic acids

Coast Guard, DHS

Pt. 150, Table II

Cottonseed oil, fatty acid	Magnesium long chain alkyl phenate sulfide (C8-C20)
Cyclohexyl acetate	Magnesium long chain alkyl salicylate (C11+)
Decyl acetate	3-Methoxybutyl acetate
Dialkyl(C7 - C13) phthalates	1-Methoxy-2-propyl acetate
Dibutyl hydrogen phosphonate	Methyl acetate
Dibutyl phthalate	Methyl acetoacetate
Diethylene glycol butyl ether acetate	Methyl amyl acetate
Diethylene glycol dibenzoate	Methyl butyrate
Diethylene glycol ethyl ether acetate	Methyl formate
Diethylene glycol methyl ether acetate	3-Methyl-3-methoxybutyl acetate
Diethylene glycol phthalate	Methyl salicylate
Di-(2-ethylhexyl)adipate	Metolachlor
Di-(2-ethylhexyl)phthalate	Naphthalene sulfonic acid, sodium salt solution (40% or less)
Diethyl phthalate	Nonyl acetate
Diethyl sulfate	n-Octyl acetate
Diheptyl phthalate	Octyl decyl adipate
Dihexyl phthalate	Oil, edible:
Di-n-hexyl adipate	Beechnut
Diisobutyl phthalate	Castor
Diisodecyl phthalate	Cocoa butter
Diisononyl adipate	Coconut ²
Diisononyl phthalate	Cod liver
Diisooctyl phthalate	Corn
Dimethyl adipate	Cotton seed
Dimethylcyclicsiloxane hydrolyzate	Fish ²
Dimethyl glutarate	Groundnut
Dimethyl hydrogen phosphite ²	Hazelnut
Dimethyl naphthalene sulfonic acid, sodium salt solution ²	Lard
Dimethyl phthalate	Lanolin
Dimethyl polysiloxane	Nutmeg butter
Dimethyl succinate	Olive
Dinonyl phthalate	Palm ²
Diocetyl phthalate	Palm kernel
Diphenyl tolyl phosphate, less than 0.02% (ortho-isomer)	Peanut
Dipropylene glycol dibenzoate	Poppy
Dithiocarbamate ester (C7-C35)	Poppy seed
Ditridecyl adipate	Raisin seed
Ditridecyl phthalate	Rapeseed
2-Dodecenylsuccinic acid, dipotassium salt solution	Rice bran
Diundecyl phthalate	Safflower
2-Ethoxyethyl acetate	Salad
Ethyl acetate	Sesame
Ethyl acetoacetate	Soya bean
Ethyl butyrate	Sunflower
Ethylene carbonate	Sunflower seed
Ethylene glycol acetate	Tucum
Ethylene glycol butyl ether acetate	Vegetable
Ethylene glycol diacetate	Walnut
Ethylene glycol ethyl ether acetate	Oil, misc:
Ethylene glycol methyl ether acetate	Animal
Ethyl-3-ethoxypropionate	Coconut oil, fatty acid methyl ester
Ethyl hexyl phthalate	Cotton seed oil, fatty acid
Ethyl propionate	Lanolin
Ethyl propionate	Palm kernel oil, fatty acid methyl ester
Fatty acids (saturated, C14+)	Palm oil, methyl ester
Glycerol polyalkoxylate	Pilchard
Glyceryl triacetate	Perilla
Glycidyl ester of C10 trialkyl acetic acid	Soapstock
Glycidyl ester of tridecylacetic acid	Soyabean (epoxidized)
Heptyl acetate	Tall
Hexyl acetate	Tall, fatty acid ²
Lauric acid	Tung
Lecithin	Olefin/Alkyl ester copolymer (molecular weight 2000+)
Magnesium long chain alkaryl sulfonate (C11-C50)	

Pt. 150, Table II

Oleic acid
 Palm kernel acid oil
 Palm kernel acid oil, methyl ester
 Palm stearin
 n-Pentyl propionate
 Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate
 Polydimethylsiloxane
 Polyferric sulfate solution
 Polymethylsiloxane
 Poly(20)oxyethylene sorbitan monooleate
 Polysiloxane
 Polyolefin aminoester salt
 Polyolefin ester (C28-C250)
 Polyolefin phosphorosulfide, barium derivative (C28-C250)
 Potassium formate solution
 Potassium oleate
 Potassium salt of polyolefin acid
 Propyl acetate
 Propylene carbonate
 Propylene glycol methyl ether acetate
 Sodium acetate, Glycol, Water mixture (not containing Sodium hydroxide)²
 Sodium acetate solution
 Sodium benzoate solution
 Sodium dimethyl naphthalene sulfonate solution²
 Sodium long chain alkyl salicylate (C13+)
 Sodium naphthalene sulfonate solution
 Soyabean oil (epoxidized)
 Stearic acid
 Tall oil
 Tall oil fatty acid (*Resin acids less than 20%*)²
 Tallow²
 Tallow fatty acid²
 Tributyl phosphate
 Tricresyl phosphate
 Tridecanoic acid
 Tridecyl acetate
 Triethylene glycol dibenzoate
 Triethylene glycol di-(2-ethylbutyrate)
 Triethyl phosphate
 Triethyl phosphite²
 Triisooctyl trimellitate²
 Triisopropylated phenyl phosphates
 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
 Trimethyl phosphite²
 Trisodium nitrilotriacetate
 Trixylyl phosphate
 Trixylenyl phenyl phosphate
 Vegetable acid oils and distillates, n.o.s.
 Vegetable oils, n.o.s.
 Waxes:
 Carnauba
 Zinc alkaryl dithiophosphate (C7-C16)
 Zinc alkyl dithiophosphate (C3-C14)

35. VINYL HALIDES

Vinyl chloride
 Vinylidene chloride

46 CFR Ch. I (10-1-12 Edition)

36. HALOGENATED HYDROCARBONS

Benzyl chloride
 Bromochloromethane
 Carbon tetrachloride²
 Catoxid feedstock²
 Chlorinated paraffins (C10 - C13)
 Chlorinated paraffins (C14 - C17)
 Chlorobenzene
 Chlorodifluoromethane
 Chloroform
 Chlorotoluene
 Dibromomethane
 Dibutylphenols
 3,4-Dichloro-1-butene
 Dichlorobenzene
 Dichlorodifluoromethane
 1,1-Dichloroethane
 1,6-Dichlorohexane
 2,2'-Dichloroisopropyl ether
 Dichloromethane
 Dichloropropane
 Ethyl chloride
 Ethylene dibromide
 Ethylene dichloride²
 Methyl bromide
 Methyl chloride
 Monochlorodifluoromethane
 n-Propyl chloride
 Pentachloroethane
 Perchloroethylene
 1,1,2,2-Tetrachloroethane
 1,2,3-Trichlorobenzene
 1,2,4-Trichlorobenzene
 1,1,1-Trichloroethane²
 1,1,2-Trichloroethane
 Trichloroethylene²
 1,2,3-Trichloropropane
 1,1,2-Trichloro-1,2,2-trifluoroethane

37. NITRILES

Acetonitrile
 Adiponitrile
 Lactonitrile solution
 Propionitrile
 Tallow nitrile

38. CARBON DISULFIDE

Carbon disulfide

39. SULFOLANE

Sulfolane

40. GLYCOL ETHERS

Alkyl (C7-C11) phenol poly(4-12)ethoxylate
 Alkyl (C9-C15) phenyl propoxylate
 Diethylene glycol²
 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
 Diethylene glycol phenyl ether
 Diethylene glycol propyl ether
 Dipropylene glycol

Coast Guard, DHS

Pt. 150, Table II

Dipropylene glycol butyl ether
 Dipropylene glycol methyl ether
 Ethoxy triglycol
 Ethylene glycol hexyl ether
 Ethylene glycol methyl butyl ether
 Ethylene glycol monoalkyl ethers
 Ethylene glycol tert-butyl ether
 Ethylene glycol butyl ether
 Ethylene glycol dibutyl ether
 Ethylene glycol ethyl ether
 Ethylene glycol isopropyl ether
 Ethylene glycol methyl ether
 Ethylene glycol phenyl ether
 Ethylene glycol phenyl ether, Diethylene glycol phenyl ether mixture
 Ethylene glycol propyl ether
 Hexaethylene glycol
 Methoxy triglycol
 Nonyl phenol poly(4+)ethoxylates
 Pentaethylene glycol methyl ether
 Polyalkylene glycol butyl ether
 Polyalkylene glycols, Polyalkylene glycol monoalkyl ethers mixtures
 Polyethylene glycols
 Polyethylene glycol dimethyl ether
 Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether
 Polyethylene glycol monoalkyl ether
 Polypropylene glycol methyl ether
 Polypropylene glycols
 Poly(tetramethylene ether) glycols (mw 950-1050)
 Polytetramethylene ether glycol
 n-Propoxypropanol
 Propylene glycol monoalkyl ether
 Propylene glycol ethyl ether
 Propylene glycol methyl ether
 Propylene glycol n-butyl ether
 Propylene glycol phenyl ether
 Propylene glycol propyl ether
 Tetraethylene glycol
 Tetraethylene glycol methyl ether
 Triethylene glycol
 Triethylene glycol butyl ether
 Triethylene glycol butyl ether mixture
 Triethylene glycol ether mixture
 Triethylene glycol ethyl ether
 Triethylene glycol methyl ether
 Tripropylene glycol
 Tripropylene glycol methyl ether

41. ETHERS

Alkaryl polyether (C9-C20)
 tert-Amyl methyl ether
 Butyl ether
 2,2'-Dichloroethyl ether
 Diethyl ether
 Diglycidyl ether of Bisphenol A
 Diglycidyl ether of Bisphenol F
 Dimethyl furan
 1,4-Dioxane
 Diphenyl ether
 Diphenyl ether, Diphenyl phenyl ether mixture
 Ethyl tert-butyl ether²
 Ethyl ether
 Long chain alkaryl polyether (C11-C20)

Methyl-tert-butyl ether²
 Methyl tert-pentyl ether
 Propyl ether
 Tetrahydrofuran
 1,3, 5-Trioxane
 Polyether (molecular weight 2000+)

42. NITROCOMPOUNDS

o-Chloronitrobenzene
 Dinitrotoluene
 Nitrobenzene
 Nitroethane
 Nitroethane, 1-Nitropropane mixture
 Nitropropane
 Nitropropane, Nitroethane mixtures
 Nitrotoluene

43. MISCELLANEOUS WATER SOLUTIONS

Alkyl polyglucoside solutions
 Aluminum sulfate solution²
 2-Amino-2-hydroxymethyl-1,3-propanediol solution
 Ammonium bisulfite solution²
 Ammonium lignosulfonate solution
 Ammonium nitrate, Urea solution (not containing Ammonia)
 Ammonium polyphosphate solution
 Ammonium sulfate solution
 Ammonium thiosulfate solution
 Sulfonated polyacrylate solutions²
 Calcium bromide solution
 Calcium chloride solution
 Calcium lignosulfonate solution
 Caramel solutions
 Clay slurry
 Corn syrup
 Dextrose solution
 2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution
 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution²
 Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid solution
 Diethylenetriamine pentaacetic acid, pentasodium salt solution
 Dodecyl diphenyl ether disulfonate solution
 Drilling brine (containing Calcium, Potassium, or Sodium salts)
 Drilling brine (containing Zinc salts)
 Drilling mud (low toxicity) (if non-flammable or non-combustible)
 Ethylenediaminetetracetic acid, tetrasodium salt solution
 Ethylene-Vinyl acetate copolymer emulsion
 Ferric hydroxyethylethylenediamine triacetic acid, trisodium salt solution²
 Fish solubles (water based fish meal extracts)
 Fructose solution
 Fumaric adduct of Rosin, water dispersion
 Hexamethylenediamine adipate solution
 N-(Hydroxyethyl)ethylene diamine triacetic acid, trisodium salt solution
 Kaolin clay slurry
 Latex, liquid synthetic

Lignin liquor
 Liquid Streptomyces solubles
 l-Lysine solution
 N-Methylglucamine solution
 Naphthenic acid, sodium salt solution
 Potassium chloride solution
 Potassium thiosulfate solution
 Rosin soap (disproportionated) solution
 Sewage sludge, treated
 Sodium alkyl sulfonate solution
 Sodium hydrogen sulfite solution
 Sodium lignosulfonate solution
 Sodium polyacrylate solution²
 Sodium salt of Ferric hydroxyethylethylenediamine triacetic acid solution
 Sodium silicate solution²
 Sodium sulfide solution
 Sodium sulfite solution
 Sodium tartrates, Sodium succinates solution
 Sulfonated polyacrylate solutions²
 Tall oil soap (disproportionated) solution
 Tetrasodium salt of EDTA solution
 Titanium dioxide slurry
 Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution
 Urea, Ammonium nitrate solution (not containing Ammonia)
 Urea, Ammonium phosphate solution
 Urea solution
 Vegetable protein solution (hydrolysed)
 Water

FOOTNOTES TO TABLE II

¹Because of very high reactivity or unusual conditions of carriage or potential compatibility problems, this product is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (CG-ENG-5), Hazardous Materials Division, U.S. Coast Guard, 2100 2nd Street, SW., Stop 7126, Washington, DC 20593-7126. Telephone 202-372-1420; email: *hazmatstandards@uscg.mil*.

²See Appendix I—Exceptions to the Chart.

[CGD 88-100, 54 FR 40012, Sept. 29, 1989]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting Table II to part 150, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at *www.fdsys.gov*.

APPENDIX I TO PART 150—EXCEPTIONS TO THE CHART

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

Member of reactive group	Compatible with
Acetone (18)	Diethylenetriamine (7)

Member of reactive group	Compatible with
Acetone cyanohydrin (0)	Acetic acid (4)
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).	Isobutyl alcohol (20)
	Ethyl alcohol (20)
	Ethylene glycol (20)
	Isopropyl alcohol (20)
	Methyl alcohol (20)
	iso-Octyl alcohol (20)
Caustic soda, 50% or less (5)	Butyl alcohol (20)
	tert-Butyl alcohol, Methanol mixtures
	Decyl alcohol (20)
	iso-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)
	Methyl alcohol (20)
	Nonyl alcohol (20)
	iso-Nonyl alcohol (20)
	Propyl alcohol (20)
	iso-Propyl alcohol (20)
	Propylene glycol (20)
	Sodium chlorate solution (0)
	iso-Tridecanol (20)
tert-Dodecanethiol (0)	Acrylonitrile (15)
	Diisodecyl phthalate (34)
	Methyl ethyl ketone (18)
	iso-Nonyl alcohol (20)
	Perchloroethylene (36)
	iso-Propyl alcohol (20)
	Tall oil, crude
Dodecyl and Tetradecylamine mixture (7).	Tall oil, fatty acid (34)
Ethylenediamine (7)	Butyl alcohol (20)
	tert-Butyl alcohol (20)
	Butylene glycol (20)
	Creosote (21)
	Diethylene glycol (40)
	Ethyl alcohol (20)
	Ethylene glycol (20)
	Ethyl hexanol (20)
	Glycerine (20)
	Isononyl alcohol (20)
	Isophorone (18)
	Methyl butyl ketone (18)
	Methyl iso-butyl ketone (18)
	Methyl ethyl ketone (18)
	Propyl alcohol (20)
	Propylene glycol (20)
Oleum (0)	Hexane (31)
	Dichloromethane (36)
	Perchloroethylene (36)
1,2-Propylene glycol (20)	Diethylenetriamine (7)
	Polyethylene polyamines (7)
	Triethylenetetramine (7)
Sodium dichromate, 70% (0)	Methyl alcohol (20)
Sodium hydrosulfide solution (5).	Methyl alcohol (20)
	Iso-Propyl alcohol (20)

Member of reactive group	Compatible with
Sulfuric acid (2)	Coconut oil (34) Coconut oil acid (34) Palm oil (34) Tallow (34)
Sulfuric acid, 98% or less (2)	Choice white grease tallow (34)

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

Acetone cyanohydrin (0) is not compatible with Groups 1-12, 16, 17 and 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).

Alkylbenzenesulfonic acid (0) is not compatible with Groups 1-3, 5-9, 15, 16, 18, 19, 30, 34, 37, and strong oxidizers.

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

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

Aluminum sulfate solution (43) is not compatible with Groups 5-11.

Ammonium bisulfite solution (43) is not compatible with Groups 1, 3, 4, and 5.

Benzenesulfonyl chloride (0) is not compatible with Groups 5-7, and 43.

1,4-Butylene glycol (20) is not compatible with Caustic soda solution, 50% or less (5). gamma-Butyrolactone (0) is not compatible with Groups 1-9.

C9 Resinfeed (DSM) (32) is not compatible with Group 2, Sulfuric acid.

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

Catoxid feedstock (36) is not compatible with Group 1, 2, 3, 4, 5, or 12.

Caustic soda solution, 50% or less (5) is not compatible with 1,4-Butylene glycol (20).

1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one (18) is not compatible with Group 5 (Caustics) or 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, Triisopropanolamine salt solution (43) is not compatible with Group 3, Nitric Acid.

2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (0) is not compatible with Groups 1-5, 11, 12, and 16.

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

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

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

Dodecylbenzenesulfonic acid (0) is not compatible with oxidizing agents and Groups 1, 2, 3, 5, 6, 7, 8, 9, 15, 16, 18, 19, 30, 34, and 37.

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 and 5-8.

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

Ethyl tert-butyl ether (41) is not compatible with Group 1, Non-oxidizing mineral acids.

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

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

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

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

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

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

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

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

NIAX POLYOL APP 240C (0) is not compatible with Group 2, 3, 5, 7, or 12.

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

Octyl nitrates (all isomers), *see* Alkyl(C7-C9) nitrates.

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

Phthalate based polyester polyol (0) is not compatible with group 2, 3, 5, 7 and 12.

Polyglycerine, Sodium salts solution (20) is not compatible with Groups 1, 4, 11, 16, 17, 19, 21 and 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), nitrogen dioxide, oxidizing materials, or molten sulfur.

Sodium acetate, Glycol, Water mixture (1% or less Sodium hydroxide) (34) 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 and 20.

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

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

Sodium hydrogen sulfide, Sodium carbonate solution (0) is not compatible with Groups 6 (Ammonia) and 7 (Aliphatic amines).

Sodium hydrosulfide (5) is not compatible with Groups 6 (Ammonia) and 7 (Aliphatic amines).

Sodium hydrosulfide, Ammonium sulfide solution (5) is not compatible with Groups 6 (Ammonia) and 7 (Aliphatic amines).

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

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

Sodium sulfide, hydrosulfide solution (0) is not compatible with Groups 6 (Ammonia) and 7 (Aliphatic amines).

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

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

Sulfuric 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.

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

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

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

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 Groups 1, and 4.

Trimethyl phosphite (34) is not compatible with Groups 1 and 4.

1,3,5-Trioxane (41) is not compatible with Group 1 (non-oxidizing mineral acids) and Group 4 (Organic acids).

[CGD 88–100, 54 FR 40012, Sept. 29, 1989 as amended by CGD 88–100, 55 FR 17277, Apr. 24, 1990; CDG 92–100, 59 FR 17026, Apr. 11, 1994; CGD 94–902, 60 FR 34043, June 29, 1995; CGD 95–900, 60 FR 34050, June 29, 1995; USCG 2000–7079, 65 FR 67182, Nov. 8, 2000]

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 25x150mm 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 capillary 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 (G-ENG-5), U.S. Coast Guard, 2100 2nd Street SW., Stop 7126, Washington, DC 20593-7126 (CG-ENG-5).

[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, 1988; CGD 96-041, 61 FR 50731, Sept. 27, 1996; USCG-2012-0832, 77 FR 59783, Oct. 1, 2012]

APPENDIX IV TO PART 150—DATA SHEET

CHEMICAL REACTIVITY TEST DATA

Chemicals: A _____ B _____

Synonyms: _____

Formula: _____

Description of Products:

Manufacturer

Sample Source

Composition (by weight %)

Inhibitors or Stabilizers

Deviations from Prescribed Method
(including special equipment)

A	B

--

Step Number 1

Products miscible? _____ Gases evolved? _____

Other Observations:

Step Number 2

A/B Ratio:

Initial Temperature

Maximum ΔT

Time to reach Max. Temp.

Products miscible?

Gases evolved?

Other Observations

	2/18	10/10	18/2

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.
- 151.01-1 Applicability.
- 151.01-2 Incorporation by reference.
- 151.01-3 [Reserved]
- 151.01-5 [Reserved]
- 151.01-10 Application of vessel inspection regulations.
- 151.01-15 Dangerous cargoes not specifically named.
- 151.01-20 Use of minimum requirements.
- 151.01-25 Existing barges.
- 151.01-30 Effective date.
- 151.01-35 Right of appeal.

Subpart 151.02—Equivalents

- 151.02-1 Conditions under which equivalents may be used.
- 151.02-5 Design of unmanned barges.

Subpart 151.03—Definitions

- 151.03-1 Definitions of terms.
- 151.03-3 Angle of downflooding.
- 151.03-5 Approved.
- 151.03-7 Barge.
- 151.03-9 Cargo.
- 151.03-11 Coastwise.
- 151.03-13 Cofferdam.
- 151.03-15 Commandant.
- 151.03-17 Compatible.
- 151.03-19 Environment.
- 151.03-21 Filling density.
- 151.03-23 Flame arrestor.
- 151.03-25 Flame screen.