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Title 46 – Shipping

Chapter I – Coast Guard, Department of Homeland Security

Subchapter O – Certain Bulk Dangerous Cargoes

Part 150 Compatibility of Cargoes

§ 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 1 or 2.

§ 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 1 to Part 150

Compatibility Chart

Table 1 to Part 150

Alphabetical List of Cargoes

Table 2 to Part 150

Grouping of Cargoes

Appendix I to Part 150

Exceptions to the Chart

Appendix II to Part 150

Explanation of Figure 1

Appendix III to Part 150

Testing Procedures for Determining Exceptions to the Chart

Appendix IV to Part 150

Data Sheet

PART 150—COMPATIBILITY OF CARGOES

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

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

Editorial Note: Nomenclature changes to part 150 appear by USCG-2012-0832, 77 FR 59783, Oct. 1, 2012.

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

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

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

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

§ 150.110 Applicability.

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

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

§ 150.115 Definitions.

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

- (a) A flammable liquid as defined in § 30.10-22 or a combustible liquid as defined in § 30.10-15 of this chapter;
- (b) A material listed in Table 151.05, Table 1 of part 153, or Table 4 of part 154 of this chapter; or
- (c) A liquid, liquefied gas, or compressed gas listed in 49 CFR 172.101.

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

§ 150.120 Definition of incompatible cargoes.

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

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

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

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

- (a) The containment system must separate the hazardous material or its residue from any cargo in table 1 with which it is incompatible by two barriers such as formed by a:
 - (1) Cofferdam;
 - (2) Empty tank;
 - (3) Void space;
 - (4) Cargo handling space;
 - (5) Tank containing a compatible cargo; or
 - (6) Piping tunnel.
- (b) In this subpart, isolation across a cruciform joint is equivalent to isolation by two barriers.
- (c) The containment system for the hazardous material must not have a piping or venting system that connects to a containment system carrying a cargo with which the hazardous material is incompatible. Any such piping or venting system must have been separated from the containment system carrying the incompatible cargo by:
 - (1) Removing a valve or spool piece and blanking off the exposed pipe ends, or
 - (2) Installing two spectacle flanges in series with a means of detecting leakage into the pipe between the spectacle flanges.

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

§ 150.140 Cargoes not listed in Table 1 or 2.

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

[CGD 83-047, 50 FR 33038, Aug. 16, 1985, CGD 86-100, 52 FR 21037, June 4, 1987; CGD 95-072, 60 FR 50465, Sept. 29, 1995; CGD 96-041, 61 FR 50731, Sept. 27, 1996; USCG-2006-25697, 71 FR 55746, Sept. 25, 2006; USCG;-2013-0423, 85 FR 21674, Apr. 17, 2020]

§ 150.150 Exceptions to the compatibility chart.

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

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

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

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

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

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

- (a) The Commandant (CG-ENG-5) has authorized by letter or message the cargo pair as an exception to the compatibility chart; and
- (b) A copy of the letter or message is on the vessel.

[CGD 75-59, 45 FR 70263, Oct. 23, 1980, as amended by CGD 82-063b, 48 FR 4781, Feb. 3, 1983; CGD 83-047, 50 FR 33038, Aug. 16, 1985; CGD 95-072, 60 FR 50465, Sept. 29, 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 I - Compatibility chart

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

Table 1 to Part 150—Alphabetical List of Cargoes

TABLE 1 TO PART 150—ALPHABETICAL LIST OF CARGOES

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Acetaldehyde	19		75-07-0	AAD	
Acetic acid	4	2	64-19-7	AAC	
Acetic anhydride	11	2	108-24-7	ACA	
Acetochlor	10		34256-82-1	ACG	
Acetone	18	2	67-64-1	ACT	
Acetone cyanohydrin	0	1, 2	75-86-5	ACY	
Acetonitrile	37		75-05-8	ATN	
Acetonitrile (low purity grade)	37	3	75-05-8	AIL	
Acetophenone	18		98-86-2	ACP	
<i>Acid oil mixture from soyabean, corn (maize) and sunflower oil refining, see Oil, misc.: Acid mixture from soyabean, corn (maize), and sunflower oil refining</i>		3			AOM
Acrolein	19	2	107-02-8	ARL	
Acrylamide solution (50% or less)	10	3	79-06-1	AAM	AAO
Acrylic acid	4	2	79-10-7	ACR	
Acrylic acid/ethenesulfonic (alternately ethenesulphonic) acid copolymer with phosphonate groups, sodium salt solution	30	3		APG	
Acrylonitrile	15	2	107-13-1	ACN	
Acrylonitrile-Styrene copolymer dispersion in Polyether polyol	20		9003-54-7	ALE	

NOTES:

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

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

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

FOOTNOTES:

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

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

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

Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Adiponitrile	37		111-69-3	ADN	
Alachlor technical (90% or more)	33	3	15972-60-8	ALH	ALI
Alcohol (C12-C13, branched and linear) poly (4-8) propoxy sulfates (alternately sulphates), sodium salt 25-30% solution	41	3		ABL	
Alcohol (C9-C11) poly (2.5-9) ethoxylates	20	3	* 68439-46-3	AET	ALY/APV/ APW
Alcohol (C10-C18) poly (7) ethoxylates	20		85422-93-1	ALE	ALY/APV/ APW
Alcohol (C6-C17) (secondary) poly (3-6) ethoxylates	20	3	* 84133-50-6	AEA	AEB
Alcohol (C6-C17) (secondary) poly (7-12) ethoxylates	20	3	* 84133-50-6	AEB	AEA
Alcohol (C12-C16) poly (1-6) ethoxylates	20	3	* 68551-12-2	AED	AET/ALY/ APW
Alcohol (C12-C16) poly (7-19) ethoxylates	20	3	* 68551-12-2	APV	AET/ALY/ APV
Alcohol (C12-C16) poly (20+) ethoxylates	20	3	* 68551-12-2	APW	AET/ALY
<i>Alcohol (C12-C15) poly (. . .) ethoxylate, see</i> Alcohol (C12-C16) poly (. . .) ethoxylate			* 68131-39-2		
Alcohol polyethoxylates	20		* 68439-50-9		AEA/AEB/ AED/AET/ APV/APW
Alcohol polyethoxylates, secondary	20		* 84133-50-6		AEA/AEB
Alcoholic beverages, n.o.s.	20	3	64-17-5	ABV	
Alcohols (C12+), primary, linear	20	3	* 112-53-8	ASY	ALR/AYK/

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Alcohols (C8-C11), primary, linear, and essentially linear	20		* 111-87-5	ALR	AYL AYK/AYL
Alcohols (C12-C13), primary, linear, and essentially linear	20	3	* 112-53-8	AYK	ALR/ASY/ AYL
Alcohols (C14-C18), primary, linear, and essentially linear	20	3	* 112-72-1	AYL	ALR/ASY/ AYK
Alcohols (C13+)	20		* 112-70-9	ALY	ASY/AYK
<i>Including:</i>					
<i>Cetyl alcohol (Hexadecanol)</i>	20		36653-82-4		
<i>Oleyl alcohol (Octadecenol)</i>	20		112-92-5		
<i>Pentadecanol</i>	20		629-76-5		
<i>Tallow alcohol</i>	20		99561-04-3		
<i>Tetradecanol</i>	20		112-72-1		
<i>Tridecanol</i>	20		112-70-9		
Alkanes (C10-C26), linear and branched (flash point >60 °C)	31	3	* 124-18-5	ABD	
Alkanes (C10-C26), linear and branched (flash point ≤ 60 °C)	31	3	* 124-18-5	ABE	
Alkanes (C6-C9)	31		* 110-54-3	ALK	
<i>Including:</i>					
<i>Heptanes</i>	31		142-82-5		
<i>Hexanes</i>	31		110-54-3		
<i>Nonanes</i>	31		111-84-2		
<i>Octanes</i>	31		111-65-9		
iso- & cyclo-Alkanes (C10-C11)	31		* 34464-38-5	AKI	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
iso- & cyclo-Alkanes (C12+)	31		* 31807-55-3	AKJ	
n-Alkanes (C9-C11)	31	3	* 111-84-2		
n-Alkanes (C10+) (all isomers)	31		* 124-18-5	ALV	ALJ
<i>Including:</i>					
<i>Decanes</i>	31		124-18-5		
<i>Dodecanes</i>	31		112-40-3		
<i>Heptadecanes</i>	31		629-78-7		
<i>n-Paraffins (C10-C20)</i>	31		* 124-18-5	PFN	ALJ
<i>Tridecanes</i>	31		629-50-5		
<i>Undecanes</i>	31		1120-21-4		
<i>Alkane (C14-C17) sulfonic (alternately sulphonic) acid, sodium salt solutions, see Sodium alkyl (C14-C17) sulfonates (alternately sulphonates) (60-65% solution)</i>			85711-69-9	AKA	SAA (AKE/SSU)
Alkaryl polyethers (C9-C20)	41			AKP	
Alkenoic acid, polyhydroxy ester borated	0	1, 3		AAY	
Alkenyl (C11+) amide	10			AKM	
Alkenyl (C8+) amine, Alkenyl (C12+) acid ester mixture	34			AAA	
Alkenyl (C16-C20) succinic anhydride	11		* 32072-96-1	AAH	
Alkyl acrylate-Vinyl pyridine copolymer in Toluene	32			AAP	
Alkyl amine (C17+)	7		* 4200-95-7	AKY	
Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomers)	34		78-31-9	ADP	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Alkylated (C4-C9) hindered phenols	21	3	* 98-54-4	AYO	
Alkyl (C3-C4) benzenes	32		* 103-65-1	AKC	
<i>Including:</i>					
<i>Butylbenzenes</i>	32	3	104-51-8		
<i>Cumene</i>	32		98-82-8		
<i>Propylbenzenes</i>	32		103-65-1		
Alkyl (C5-C8) benzenes	32		* 538-68-1	AKD	
<i>Including:</i>					
<i>Amylbenzenes</i>	32		538-68-1		
<i>Heptylbenzenes</i>	32		2132-85-6		
<i>Hexylbenzenes</i>	32		1077-16-3		
<i>Octylbenzenes</i>	32		2189-60-8		
Alkyl (C9+) benzenes	32		* 1081-77-2	AKB	
<i>Including:</i>					
<i>Decylbenzenes</i>	32		104-72-3		
<i>Dodecylbenzenes</i>	32		29986-57-0		
<i>Nonylbenzenes</i>	32		1081-77-2		
<i>Tetradecylbenzenes</i>	32		1459-10-5		
<i>Tetrapropylbenzenes</i>	32		635-11-0		
<i>Tridecylbenzenes</i>	32		123-02-4		
<i>Undecylbenzenes</i>	32		6742-54-7		
Alkyl benzene distillation bottoms	0	1, 3		ABB	
Alkylbenzene mixtures (containing at least 50% of Toluene)	32	3	* 108-88-3	AZT	
Alkylbenzenes mixtures (containing naphthalene)	20			ALB	AZT
Alkylbenzene, Alkylindane, Alkylindene mixture	32			AIH	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
(each C12-C17)					
Alkyl (C11-C17) benzene sulfonic (alternately sulphonic) acid	0	1, 3	* 50854-94-9	ABN	ABS/ABQ
Alkylbenzene sulfonic (alternately sulphonic) acid (less than 4%)	0	1, 2	* 104-15-4	ABQ	ABS/ABN
Alkylbenzene sulfonic (alternately sulphonic) acid, sodium salt solution	33		* 657-84-1	ABT	
Alkyl/cyclo (C4-C5) alcohols	20			AAL	
Alkyl (C12+) dimethylamine	7	3	* 112-18-5	ADM	
Alkyl dithiocarbamate (C19-C35)	34	3		ADB	
Alkyl dithiothiadiazole (C6-C24)	33			ADT	
Alkyl ester copolymer (C4-C20)	34			AES	AEQ
Alkyl ester copolymer in mineral oil	34			AEQ	AES
Alkyl (C7-C9) nitrates	34	2	* 20633-12-9	AKN	ONE
Alkyl (C7-C11) phenol poly (4-12) ethoxylate	40			APN	NPE
Alkyl (C10-C15, C12 rich) phenol poly (4-12) ethoxylate	40			APX	APN
Alkyl (C4-C9) phenols	21		* 1638-22-8	AYI	BLT/BTP/ NNP/OPH
Alkylphenols (C10-C18, C12 rich)	21			ALP	AYI/DOL AKS
<i>Alkyl phenol sulfide (alternately sulphide) (C8-C40), see Alkyl (C8-C40) phenol sulfide (alternately sulphide)</i>					
Alkyl (C8-C40) phenol sulfide (alternately sulphide)	34			AKS	
Alkyl (C9-C15) phenyl propoxylate	40		* 9064-15-7	AXL	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Alkyl (C8-C9) phenylamine in aromatic solvents <i>n-Alkyl phthalates</i> , see individual phthalates <i>Alkyl polyglucoside solution</i> , see individual polyglucoside solutions	9			ALP AYS AGD	AGL/ AGM/ AGN/ AGO/AGP
Alkyl (C8-C10) polyglucoside solution (65% or less)	43	3	* 29836-26-8	AGL	AGD/ AGM/ AGN/ AGO/AGP
Alkyl (C8-C10)/(C12-C14): (40% or less/60% or more) polyglucoside solution (55% or less)	43	3	* 29836-26-8	AGN	AGD/AGL AGM/ AGO/AGP
Alkyl (C8-C10)/(C12-C14): (50%/50%) polyglucoside solution (55% or less)	43	3	* 29836-26-8	AGO	AGD/AGL/ AGN/AGP
Alkyl (C8-C10)/(C12-C14): (60% or more/40% or less) polyglucoside solution (55% or less)	43	3	* 29836-26-8	AGP	AGD/AGL/ AGM/ AGN/AGO
Alkyl (C12-C14) polyglucoside solution (55% or less)	43	3	* 59122-55-3	AGM	AGD/AGL/ AGN/ AGO/AGP
Alkyl (C12-C16) propoxyamine ethoxylates	8	3		AXE	LPE
Alkyl (C10-C20), saturated and unsaturated phosphite	34			AKL	
Alkyl succinic anhydride	11		* 4100-80-5	AUA	
Alkyl sulfonic (alternately sulphonic) acid ester of phenol	34		91082-17-6	AKH	
Alkyl toluene	32		* 95-47-6	AYL	AUS

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Alkyl (C18+) toluenes	32	3	* 94135-42-9	AUS	AYL
Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid	0	1, 3	* 3386-32-1	AUU	
Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, borated	34	3		AUB	
Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, high overbase	33	3		AUC	
Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, low overbase	33	3		AUL	
Allyl alcohol	15	2	107-18-6	ALA	
Allyl chloride	15		107-05-1	ALC	
<i>Aluminum</i> (alternately, <i>Aluminium</i>) chloride/ <i>Hydrochloric acid solution</i> , see "Aluminum (alternately, Aluminium) chloride/ Hydrogen chloride solution"		1		AHS	AHG
Aluminum (alternately Aluminium) chloride/ Hydrogen chloride solution	0	1, 3		AHG	AHS
Aluminum (alternately Aluminium) hydroxide/ sodium hydroxide/sodium carbonate solution (40% or less)	5	3		AHN	
Aluminum sulfate (alternately Aluminium sulphate) solution	43	2	10043-01-3	ASX	ALM
Amine C-6, morpholine process residue	9			AOI	
Aminoethyldiethanolamine/ Aminoethylethanolamine solution	8			ADY	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
2-(2-Aminoethoxy) ethanol	8		929-06-6	AEX	
Aminoethylethanolamine	8		111-41-1	AEE	
N-Aminoethylpiperazine	7		140-31-8	AEP	
2-Amino-2-hydroxymethyl-1,3-propanediol solution	43		77-86-1	AHL	
2-Amino-2-methyl-1-propanol	8		124-68-5	APZ	APQ/APR
Ammonia, anhydrous	6		7664-41-7	AMA	
<i>Ammonia, aqueous (28% or less Ammonia), see Ammonium hydroxide</i>			1336-21-6		AMH
Ammonium bisulfite (alternately bisulphite) solution (70% or less)	43	2	10192-30-0	ABX	ASU
Ammonium chloride solution (less than 25%)	43	3	12125-02-9	AIS	AMC
Ammonium hydrogen phosphate solution	0	1	7783-28-0	AMI	
Ammonium hydroxide (28% or less Ammonia)	6		1336-21-6	AMH	
<i>Ammonium lignosulfonate (alternately lignosulphonate) solution, see also Lignin liquor</i>			8061-53-8	ALG	LNL
Ammonium nitrate solution (45% or less)	0	1	6484-52-2	AND	AMN/ ANR/ANW
Ammonium nitrate solution (93% or less)	0	1	6484-52-2	ANW	AMN/ AND/ANR
<i>Ammonium nitrate/Urea solution (containing Ammonia), see Urea/Ammonium nitrate solution (containing 1% or more Ammonia)</i>					UAS (ANU/ UAT/UAU/ UAV)
<i>Ammonium nitrate/Urea solution (not containing Ammonia), see Urea/Ammonium nitrate solution (containing less than 1% Ammonia)</i>					UAU (ANU/ UAS/UAT/

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
<i>Ammonium phosphate/Urea solution, see Urea/Ammonium phosphate solution</i>					UAV) UAP (APP/URE)
Ammonium polyphosphate solution	43		68333-79-9	AMO	
Ammonium sulfate (alternately sulphate) solution	43		7783-20-2	ASW	AME/AMS
Ammonium sulfate (alternately sulphate) solution (20% or less)	43		7783-20-2	AME	AMS/ASW
Ammonium sulfide (alternately sulphide) solution (45% or less)	5	3	12135-76-1	ASS	ASF
Ammonium thiocyanate/Ammonium thiosulfate (alternately thiosulphate) solution	0	1		ACV	ACS
Ammonium thiosulfate (alternately thiosulphate) solution (60% or less)	43	3	7783-18-8	ATV	ATF
Amyl acetate (all isomers)	34	3	628-63-7	AEC	IAT/AML/AAS/AYA
Amyl acid phosphate	34		12789-46-7	AIA	
Amyl alcohol, primary	20	3	71-41-0	APM	AAI/AAL/AAN/APM/IAA
n-Amyl alcohol	20	3	71-41-0	AAN	AAI/AAL/APM/ASE/IAA
sec-Amyl alcohol	20	3	584-02-1	ASE	AAI/AAL/AAN/APM/IAA
tert-Amyl alcohol	20	3	75-85-4	AAL	AAI/APM/ASE/IAA
tert-Amyl ethyl ether	41		919-94-8	AER	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
tert-Amyl methyl ether	41		994-05-8	AYE	
<i>Amyl methyl ketone</i> , see Methyl amyl ketone			110-43-0	AMJ	MAK (AMK)
<i>Amylene</i> , see Pentene (all isomers)			109-67-1	AMW	PTX (AMX/AMZ/PTE)
<i>tert-Amylenes</i> , see Pentene (all isomers)			513-35-9	AMZ	PTX (AMW)
Aniline	9		62-53-3	ANL	
Animal and Fish oils, n.o.s.	34			AFN	
<i>Including:</i>					
<i>Cod liver oil</i>	34		8001-69-2		
<i>Lanolin</i>	34		8006-54-0		
<i>Neatsfoot oil</i>	34		8002-64-0		
<i>Pilchard oil</i>	34				
<i>Sperm oil</i>	34		8002-24-2		
Animal and Fish acid oils and distillates, n.o.s.	34			AFA	
<i>Including:</i>					
<i>Animal acid oil</i>	34				
<i>Fish acid oil</i>	34				
<i>Lard acid oil</i>	34				
<i>Mixed acid oil</i>	34				
<i>Mixed general acid oil</i>	34				
<i>Mixed hard acid oil</i>	34				
<i>Mixed soft acid oil</i>	34				
<i>Anthracene oil (Coal tar fraction)</i> , see Coal tar			65996-91-0	AHO	COR
Apple juice	43			APJ	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Argon, liquefied	0	1	7440-37-1	ARG	
Aryl polyolefin (C11-C50)	30			AYF	
Asphalt	33		8052-42-4	ASP	ACU
Asphalt blending stocks, roofers flux	33			ARF	
Asphalt blending stocks, straight run residue	33			ASR	
Asphalt emulsion	33			ASQ	
Asphalt, Kerosene, and other components	33			AKO	
Aviation alkylates (C8 paraffins and isoparaffins BPT 95-120 °C)	33	3	111-65-9	AVA	GAK/GAV
Barium long-chain (C11-C50) alkaryl sulfonate (alternately sulphonate)	34			BCA	
Barium long-chain alkyl (C8-C14) phenate sulfide (alternately sulphide)	34			BCH	
Behenyl alcohol	20		661-19-8	BHY	
Benzene	32	2	71-43-2	BNZ	BHA/BHB/ PYG
Benzene and mixtures having 10% Benzene or more	32			BHB	BHA/BNZ/ PYG
Benzene hydrocarbon mixtures (containing Acetylenes) (having 10% Benzene or more)	32			BHA	BHB/BNZ/ PYG
Benzene/Toluene/Xylene mixtures (having 10% Benzene or more)	32			BTX	BHB/BNZ/ PYG/TOL/ XLX/XLM/ XLO/XLP
Benzenesulfonyl (alternately Benzenesulphonyl) chloride	0	1, 2	98-09-9	BSC	
Benzenetricarboxylic acid, trioctyl ester	34		89-04-3	BCE	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Benzyl acetate	34		140-11-4	BZE	
Benzyl alcohol	21		100-51-6	BAL	
Benzyl chloride	36		100-44-7	BCL	
Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flash point >60 °C (>25% but <99% by volume)	33	3		BIF	BIG/BIH/ BII/BIJ/ BIK
Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flash point ≤60 °C (>25% but <99% by volume)	33	3		BIG	BIF/BIH/ BII/BIJ/ BIK
Bio-fuel blends of Diesel/gas oil and FAME (>25% but <99% by volume)	34	3		BIH	BIF/BIG/ BII/BIJ/ BIK
Bio-fuel blends of Diesel/gas oil and vegetable oil (>25% but <99% by volume)	34	3		BII	BIF/BIG/ BIH/BIJ/ BIK
Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume)	20	2, 3		BIJ	BIF/BIG/ BIH/BII/ BIK
Bis (2-ethylhexyl) terephthalate	34		6422-86-2	DHH	
Boronated Calcium sulfonate (alternately sulphonate)	34			BCU	
Brake fluid base mix: Poly (2-8) alkylene (C2-C3) glycols/Polyalkylene (C2-C10) glycols monoalkyl (C1-C4) ethers and their borate esters	20	3		BFY	
Brominated Epoxy Resin in Acetone	16			BER	
Bromochloromethane	36		74-97-5	BCM	
Butadiene (all isomers)	30		106-99-0	BDI	
Butadiene/Butylene mixtures (containing	30			BBM	BBX/BDI/

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Acetylenes)					BTN/IBL
Butane (all isomers)	31		106-97-8	BMX	IBT/BUT
Butane/Propane mixture	31			BUP	LPG
<i>1,4-Butanediol</i> , see Butylene glycol			110-63-4	BDO	BUG
<i>2-Butanone</i> , see Methyl ethyl ketone		2	78-93-3		MEK
Butene oligomer	30			BOL	
<i>Butene</i> , see Butylenes (all isomers)			106-98-9		BUT/IBL
2-Butoxyethanol (58%)/Hyperbranched polyesteramide (42%) (mixture)	20				
Butyl acetate (all isomers)	34	3	123-86-4	BAX	BCN/BTA/ BYA/IBA
Butyl acrylate (all isomers)	14	3	141-32-2	BAR	BAI/BTC
Butyl alcohol (all isomers)	20	2, 3	71-36-3	BAY	BAN/BAS/ BAT/IAL
<i>Butyl alcohol (iso-, n-, sec-, tert-)</i> , see Butyl alcohol (all isomers)		2	71-36-3		BAN/BAS/ BAT/BAY/ IAL
Butylamine (all isomers)	7	3	109-73-9	BTY	BAM/BTL/ BUA/IAM
<i>Butylbenzene (all isomers)</i> , see Alkyl (C3-C4) benzenes		3	104-51-8	BBE	AKC
Butyl benzyl phthalate	34		85-68-7	BPH	
Butyl butyrate (all isomers)	34	3	109-21-7	BBA	BIB/BUB
Butylene glycol	20	2	107-88-0	BUG	BDO
1,2-Butylene oxide	16		106-88-7	BTO	
Butylenes (all isomers)	30		106-98-9	BTN	IBL
n-Butyl ether	41	3	142-96-1	BTE	

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n *-Butyl ether	41		142-96-1	BTE	
<i>iso-Butyl formate</i> , see Isobutyl formate		3	542-55-2	BFI	BFN/BFO
n-Butyl formate	34		592-84-7	BFN	BFI/BFO
Butyl heptyl ketone	18		19780-10-0	BHK	
Butyl methacrylate	14		97-88-1	BMH	BMI/BMN
<i>Butyl methacrylate, Decyl methacrylate, Cetyl-Eicosyl methacrylate mixture</i> , see Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture		3			DER (BMH/ BMI/BMN/ CEM)
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture	14	3		DER	BMH/BMI/ BMN/CEM
<i>Butyl methyl ketone</i> , see Methyl butyl ketone		2	591-78-6		MBJ (MBK/ MIK)
Butyl phenol, Formaldehyde resin in Xylene	32				
n-Butyl propionate	34		209-669-5	BPN	
Butyl stearate	34		123-95-5	BST	
Butyl toluene	32		1595-05-7	BUE	
Butyraldehyde (all isomers)	19	3	123-72-8	BAE	BAD/BTR
Butyric acid	4		107-92-6	BRA	IBR
gamma-Butyrolactone	0	1, 2	96-48-0	BLA	
C9 Resinfeed (DSM)	32	2		CNR	
<i>Calcium alkaryl sulfonate</i> (alternately <i>sulphonate</i>) (C11-C50), see Calcium long-chain alkaryl sulfonate (alternately <i>sulphonate</i>) (C11-C50)		3		CAE	CAY
Calcium alkyl (C9) phenol sulfide (alternately sulphide), polyolefin phosphorosulfide (alternately	34			CPX	

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phosphorosulphide) mixture					
Calcium alkyl (C10-C28) salicylate	34	3		CAJ	
<i>Calcium bromide solution</i> , see Drilling brines			7789-41-5	CBI	DRB
<i>Calcium alkyl salicylate</i> , see Calcium long-chain alkyl salicylate (C13+), Calcium long-chain alkyl (C18-C28) salicylate, or Calcium alkyl (C10-C28) salicylate	34				CAJ/CAK/CAZ
<i>Calcium bromide solution</i> , see Drilling brines			7789-41-5	CBI	DRB
<i>Calcium bromide/Zinc bromide solution</i> , see Drilling brine (containing Zinc salts)					DZB
Calcium carbonate slurry	34		471-34-1	CSR	
<i>Calcium chloride solution</i> , see Drilling brines			10043-52-4	CCS	CLC
Calcium hydroxide slurry	5		1305-62-0	COH	CAH
Calcium hypochlorite solution (15% or less)	5	3	7778-54-3	CHU	CHY/CHZ
Calcium hypochlorite solution (more than 15%)	5	3	7778-54-3	CHZ	CHU/CHY
<i>Calcium lignosulfonate</i> (alternately <i>lignosulphonate</i>) solution, see also Lignin liquor			8061-52-7	CLL	LNL
Calcium long-chain alkaryl sulfonate (alternately sulphonate) (C11-C50)	34		722503-69-7	CAY	
<i>Calcium long-chain alkyl (C8-C40) phenate</i> , see Calcium long-chain alkyl (C5-C10) phenate or Calcium long-chain alkyl (C11-C40) phenate				CAQ	CAU/CAV (CAN/CAW)
Calcium long-chain alkyl (C5-C10) phenate	34	3		CAU	CAN/CAQ/CAV/CAW
Calcium long-chain alkyl (C5-C20) phenate	34			CAV	CAN/CAQ/CAU/CAW
Calcium long-chain alkyl (C11-C40) phenate	34	3		CAW	CAN/CAQ/

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Calcium long-chain alkyl phenate sulfide (alternately sulphide) (C8-C40)	34			CPI	CAU/CAV
Calcium long-chain alkyl phenolic amine (C8-C40)	9			CPQ	
Calcium long-chain alkyl (C18-C28) salicylate	34	3		CAJ	
Calcium long-chain alkyl salicylate (C13+)	34			CAK	CAJ/CAZ
Calcium nitrate solutions (50% or less)	34	3	10124-37-5	CNU	CNT
Calcium nitrate/Magnesium nitrate/Potassium chloride solution	34			CLM	CNT/CNU/ MGN/ MGO/ PCS/PCU/ PSD
Calcium salts of fatty acids	34		85251-71-4	CFF	
Calcium stearate	34		1592-23-0	CSE	
Calcium sulfonate (alternately sulphonate)/Calcium carbonate/Hydrocarbon solvent mixture	33			CSH	
<i>Camelina oil</i> , see Oil, misc.: Camelina		3	68956-68-3	CEL	
Camphor oil (light)	18		8008-51-3	CPO	
<i>Canola oil</i> , see Oil, edible: Rapeseed (low erucic acid containing less than 4% free fatty acids)			120962-03-0		ORO (ORP)
<i>Caprolactam solution</i> , see epsilon-Caprolactam (molten or aqueous solutions)			105-60-2	CLS	
epsilon-Caprolactam (molten or aqueous solutions)	22	3	105-60-2	CLU	CLS
Caramel solutions	43		8028-89-5	CML	
Carbolic oil	21		108-95-2	CBO	

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Carbon dioxide (high purity)	0	1	124-38-9	CDH	CDO/CDQ
Carbon dioxide (reclaimed quality)	0	1	124-38-9	CDQ	CDH/CDO
Carbon dioxide, liquefied	0	1	124-38-9	CDO	CDH/CDQ
Carbon disulfide (alternately disulphide)	38		75-15-0	CBB	
Carbon tetrachloride	36	2	56-23-5	CBT	CBU
<i>Cashew nut shell oil (untreated)</i> , see Oil, misc.:			8007-24-7		OCN
Cashew nut shell (untreated)					
<i>Castor oil</i> , see Oil, edible: Castor	34		8001-79-4		OCA (VEO).
Catoxid feedstock	36	2		CXF	
Caustic potash solution	5	2	1310-58-3	CPS	
Caustic soda solution	5	2	1310-73-2	CSS	
Cesium formate solution	43	3	3495-36-1	CSM	
<i>Cetyl alcohol (Hexadecanol)</i> , see Alcohols (C13+)			36653-82-4		ALY (ASY/ AYL)
<i>Cetyl alcohol</i> , see Alcohols (C13+)	20		36653-82-4		ALY (ASY/ AYL)
Cetyl/Eicosyl methacrylate mixture	14	1		CEM	
<i>Cetyl/Stearyl alcohol</i> , see Alcohols (C13+)					ALY (ASY/ AYL)
Chlorinated paraffins (C10-C13)	36		* 1002-69-3	CLH	CLG/CLJ/ CLQ
Chlorinated paraffins (C14-C17) (with 50% Chlorine or more, and less than 1% C13 or shorter chains)	36	3		CLJ	CLG/CLH/ CLQ
Chlorinated paraffins (C14-C17) (with 52% Chlorine)	36			CLQ	CLG/CLH/ CLJ

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Chlorinated paraffins (C18+) with any level of chlorine	36		* 3386-33-2	CLG	CLH/CLJ
Chlorine	0	1	7782-50-5	CLX	
Chloroacetic acid (80% or less)	4	3	79-11-8	CHM	CHL/MCA
Chlorobenzene	36	2	108-90-7	CRB	
<i>Chlorodifluoromethane</i> , see Monochlorodifluoromethane			75-45-6	MCF	
2-Chloro-4-ethylamino-6-isopropylamino-5-triazine solution	0	1	287476-17-9	CET	
1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one	18	2	66346-01-8	CDP	
2- or 3-Chloropropionic acid	4		29617-66-1 or 107-94-8	CPM	CLA/CLP
Chloroform	36		67-66-3	CRF	
Chlorohydrins (crude)	17	3	* 107-07-3	CHD	
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution	9			CDM	
<i>o</i> -Chloronitrobenzene	42		88-73-3	CNO	CNP
Chlorosulfonic (alternately Chlorosulphonic) acid	0	1	7790-94-5	CSA	
<i>m</i> -Chlorotoluene	36	3	108-41-8	CTM	CHI/CRN/ CTO
<i>o</i> -Chlorotoluene	36	3	95-49-8	CTO	CHI/CRN/ CTM
<i>p</i> -Chlorotoluene	36	3	106-43-4	CRN	CHI/CTM/ CTO
Chlorotoluenes (mixed isomers)	36	3	25168-05-2	CHI	CRN/ CTM/CTO
Choline chloride solutions	20		67-48-1	CCO	

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Citric acid (70% or less)	4	3	77-92-9	CIS	CIT
Clay slurry	43		1332-58-7	CLY	
Coal slurry	43		125612-26-2	COG	COA
Coal tar	33		8007-45-2	COR	OCT
Coal tar crude bases	33		65996-84-1	CTB	
<i>Coal tar distillate</i> , see Naphtha: Coal tar solvent			65996-91-0	CDL	NCT (CTU)
<i>Coal tar naphtha solvent</i> , see Naphtha: Coal tar solvent			65996-91-0		NCT (CDL/CTU)
Coal tar pitch (molten)	33	3	65996-93-2	CTP	
Coal tar, high temperature	33		65996-89-6	CHH	
Cobalt naphthenate in solvent naphtha	34		61789-51-3	CNS	
<i>Cocoa butter</i> , see Oil, edible: Cocoa butter			8002-31-1		OCB (VEO)
<i>Coconut oil</i> , see Oil, edible: Coconut		2	8001-31-8		OCC (VEO)
<i>Coconut oil, fatty acid</i> , see Oil, misc.: Coconut fatty acid		2	61788-47-4		CFA
<i>Coconut oil, fatty acid methyl ester</i> , see Oil, misc.: Coconut fatty acid methyl ester		3	61788-59-8		OCM
Copper salt of long-chain (C17+) alkanolic acid	34			CUS	CFT
Copper salt of long-chain (C3-C16) fatty acid	34		* 3112-74-1	CFT	CUS
<i>Corn oil</i> , see Oil, edible: Corn			8001-30-7		OCO (VEO)
Corn syrup	43		8029-43-4	CSY	
<i>Cottonseed oil</i> , see Oil, edible: Cottonseed			8001-29-4		OCS (VEO)
<i>Cottonseed oil, fatty acid</i> , see Oil, misc.: Cottonseed oil, fatty acid			68308-51-0	CFY	
Creosote	21	2		CCW	CCT/CWD
Creosote (coal tar)	21	2, 3	8001-58-9	CCT	CCW

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Creosote (wood tar)	21	2, 3	8021-39-4	CWD	CCT/CCW
Cresol/Phenol/Xylenol mixture	21			CXX	
Cresols (all isomers)	21	3	1319-77-3	CRS	CFO/CFP/ CRL/CRO/ CSC/CSO
<i>Cresols with 5% or more Phenol, see Phenol</i>				CFP	PHN (CFO/ CRL/CRO/ CRS/CSO)
<i>Cresols with less than 5% Phenol, see Cresols (all isomers)</i>				CFO	CRS (CFP/ CRL/CRO/ CSO)
<i>Cresylate spent caustic, see Cresylic acid, sodium salt solution</i>		2		CSC	CYD
Cresylic acid	21		1319-77-3	CRY	
Cresylic acid, dephenolized	21		1319-77-3	CAD	CRY/CYN
Cresylic acid tar	21			CRX	
Cresylic acid with 5% or more phenol	21			CYN	CAD/CRY
Cresylic acid, sodium salt solution	5	2	34689-46-8	CYD	CSC
Crotonaldehyde	19	2	123-73-9	CTA	
<i>Crude Isononylaldehyde, see Isononylaldehyde (crude)</i>			5435-64-3		INC
Crude Isopropanol	20		67-63-0		IPB (IPA/ PAL)
<i>Crude Piperazine, see Piperazine (crude)</i>			110-85-0		PZC (PPZ/ PIZ)
<i>Cumene, see Alkyl (C3-C4) benzenes</i>			98-82-8	CUM	AKD (PBY/

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1,5,9-Cyclododecatriene	30		4904-61-4	CYT	PBZ)	
Cycloheptane	31		291-64-5	CYE		
Cyclohexane	31		110-82-7	CHX		
Cyclohexane-1,2-dicarboxylic acid, diisononyl ester	34		166412-78-8	CDE		
Cyclohexane oxidation products, sodium salts solution	43			CYS		
Cyclohexanol	20		108-93-0	CHN		
Cyclohexanone	18	2	108-94-1	CCH		
Cyclohexanone/Cyclohexanol mixtures	18	2		CYX		
Cyclohexyl acetate	34		622-45-7	CYC		
Cyclopentadiene/Styrene/Benzene mixture	30			CSB		
1,3-Cyclopentadiene dimer (molten)	30	3	7313-32-8	CPD		DPT/DPV
Cyclopentane	31		287-92-3	CYP		
Cyclopentene	30		142-29-0	CPE		
<i>p</i> -Cymene	32		99-87-6	CMP		
Decahydronaphthalene	33		91-17-8	DHN		
Decaldehyde	19		112-31-2	DAY	IDA/DAL	
<i>iso-Decaldehyde</i> , see Isodecaldehyde			3085-26-5			
<i>n-Decaldehyde</i>	19		3085-26-5			
<i>Decane (all isomers)</i> , see n-Alkanes (C10+) (all isomers)			124-18-5	DCC	ALV (ALJ)	
Decanoic acid	4		334-48-5	DCO	NEA	
Decene	30		872-05-9	DCE		
Decyl acetate	34		112-17-4	DYA		

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Decyl acrylate	14		2156-96-9	DAT	IAI/DAR
Decyl alcohol (all isomers)	20	2, 3	85566-12-7	DAX	ISA/DAN
Decyl/Dodecyl/Tetradecyl alcohol mixture	20	3	* 112-30-1	DYO	DAN/DAX/ DDN/ISA
<i>Decylbenzene, see Alkyl (C9+) benzenes</i>			104-72-3	DBZ	AKB
Decyloxytetrahydrothiophene dioxide	0	1	18760-44-6	DHT	
Detergent alkylate	32		68442-97-7	DKY	AKB/DBZ/ DDB/TDB/ TRB/UDB
<i>Dextrose solution, see Glucose solution</i>			50-99-7	DTS	GLU
Diacetone alcohol	20	2	123-42-2	DAA	
<i>Dialkyl (C10-C14) benzenes, see Alkyl (C9+) benzenes</i>			*	DAB	AKB
Dialkyl (C8-C9) diphenylamines	9		* 101-67-7	DAQ	
Dialkyl (C7-C13) phthalates	34		* 3648-21-3	DAH	
<i>Including:</i>					
<i>Di-(2-ethylhexyl) phthalate</i>	34		117-81-7		
<i>Diheptyl phthalate</i>	34		3648-21-3		
<i>Dihexyl phthalate</i>	34		84-75-3		
<i>Diisooctyl phthalate</i>	34		131-20-4		
<i>Diisodecyl phthalate</i>	34		89-16-7		
<i>Diisononyl phthalate</i>	34		28553-12-0		
<i>Dinonyl phthalate</i>	34		84-76-4		
<i>Dioctyl phthalate</i>	34		117-84-0		
<i>Ditridecyl phthalate</i>	34		119-06-2		
<i>Diundecyl phthalate</i>	34		3648-20-2		
<i>Dialkyl (C9-C10) phthalates, see Dialkyl (C7-C13)</i>			* 84-76-4	DLK	DLH (DAP/

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phthalates					DHL/DHP/ DID/DIE/ DIF/DIN/ DIO/DIT/ DOP/DPA/ DTP/DUP)
Dialkyl thiophosphates sodium salts solution	34	3	* 26377-29-7	DYH	
2,6-Diaminohexanoic acid phosphonate mixed salts solution	21			DBT	
Dibromomethane	36		74-95-3	DBH	
<i>Dibutyl carbinol</i> , see Nonyl alcohol (all isomers)			623-93-8		NNS (DBC/NNI/ NNN)
Dibutyl hydrogen phosphonate	34		107-66-4	DHD	
Dibutyl phthalate	34		84-74-2	DPA	DIT
Dibutyl terephthalate	34	3	1962-75-0	DYE	
Dibutylamine	7		111-92-2	DBA	
Dibutylphenol (all isomers)	21			DBT	
Dibutylphenols	21		26967-68-0	DBT	
Di-tert-butylphenol	21		128-39-2	DBF	DBT/DBV/ DBW
2,4-Di-tert-butylphenol	21		96-76-4	DBV	DBF/DBT/ DBW
2,6-Di-tert-butylphenol	21	3	128-39-2	DBW	DBF/DBT/ DBV
Dichlorobenzene (all isomers)	36	3	25321-22-6	DBX	DBM/ DBO/DBP

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3,4-Dichloro-1-butene	36		760-23-6	DCD	DCB
Dichlorodifluoromethane	36		75-71-8	DCF	
1,1-Dichloroethane	36		75-34-3	DCH	
Dichloroethyl ether	41	3	111-44-4	DYR	DEE
1,6-Dichlorohexane	36		2163-00-0	DHX	
2,2'-Dichloroisopropyl ether	41		63283-80-7	DCI	
Dichloromethane	36	2	75-09-2	DCM	
2,4-Dichlorophenol	21		120-83-2	DCP	
2,4-Dichlorophenoxyacetic acid/Diethanolamine salt solution	43		5742-19-8	DDE	
2,4-Dichlorophenoxyacetic acid/Dimethylamine salt solution (70% or less)	0	1, 2, 3	2008-39-1	DDA	DAD/DSX
2,4-Dichlorophenoxyacetic acid/Triisopropanolamine salt solution	43	2	34075-45-1	DTI	
1,1-Dichloropropane	36		78-99-9	DPB	DPC/DPL/ DPP/DPX
1,2-Dichloropropane	36	2, 3	78-87-5	DPP	DPB/DPC/ DPL/DPX
1,3-Dichloropropane	36		142-28-9	DPC	DPB/DPL/ DPP/DPX
Dichloropropene (all isomers)	15		26952-23-8	DCW	DPF/DPU
1,3-Dichloropropene	15		542-75-6		DCW/DPF
Dichloropropene/Dichloropropane mixtures	15		8003-19-8	DMX	DCW/ DPB/DPC/ DPL/DPP/ DPU/DPX
2,2-Dichloropropionic acid	4		75-99-0	DCN	

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Dicyclopentadiene, Resin Grade, 81-89%	30	3	77-73-6	DPV	CPD/DPT
<i>Dicyclopentadiene, see 1,3-Cyclopentadiene dimer (molten)</i>			77-73-6	DPT	CPD (DPV)
Diethanolamine	8	2	111-42-2	DEA	
<i>Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution</i>			5742-19-8	DZZ	DDE
Diethylamine	7		109-89-7	DEN	
Diethylaminoethanol	8		100-37-8	DAE	
2,6-Diethylaniline	9		579-66-8	DMN	DIY
Diethylbenzene	32		25340-17-4	DEB	
Diethylene glycol	40	2	111-46-6	DEG	
<i>Diethylene glycol butyl ether, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether</i>			112-34-5	DME	PAG
<i>Diethylene glycol butyl ether acetate, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether acetate</i>			124-17-4	DEM	PAF
Diethylene glycol dibenzoate	34		120-55-8	DGZ	
Diethylene glycol dibutyl ether	40		112-73-2	DIG	
Diethylene glycol diethyl ether	40		112-36-7	DGS	
<i>Diethylene glycol ethyl ether, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether</i>			111-90-0	DGE	PAG
<i>Diethylene glycol ethyl ether acetate, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether acetate</i>			112-15-2	DGA	PAF
<i>Diethylene glycol n-hexyl ether, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether</i>			112-59-4	DHE	PAG

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<i>Diethylene glycol methyl ether, see Poly (2-8) alkylene glycol monoalkyl (C1-C6) ether</i>			111-77-3	DGM	PAG
<i>Diethylene glycol methyl ether acetate, see Poly (2-8) alkylene glycol monoalkyl (C1-C6) ether acetate</i>			629-38-9	DGR	PAF
Diethylene glycol phenyl ether	40		104-68-7	DGP	
Diethylene glycol phthalate	34		2202-98-4	DGL	
<i>Diethylene glycol propyl ether, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether</i>			6881-94-3	DGO	PAG
Diethylenetriamine	7	2	111-40-0	DET	
Diethylenetriaminepentaacetic acid, pentasodium salt solution	43		140-01-2	DYS	
<i>Diethylethanolamine, see Diethylaminoethanol</i>			100-37-8		DAE
Diethyl ether	8		60-29-7	EET	
<i>Diethyl hexanol, see Decyl alcohol (all isomers)</i>			19398-78-8		DAX
Di-(2-ethylhexyl) adipate	34		103-23-1	DEH	
Di-(2-ethylhexyl) phosphoric acid	1		298-07-7	DEP	
<i>Di-(2-ethylhexyl) phthalate, see Dialkyl (C7-C13) phthalate</i>			117-81-7	DIE	DAH
Di-(2-ethylhexyl) terephthalate	34		6422-86-2	DHH	
Diethyl phthalate	34		84-66-2	DPH	
Diethyl sulfate (alternately sulphate)	34		64-67-5	DSU	
Diglycidyl ether of Bisphenol A	16		1675-54-3	BDE	
Diglycidyl ether of Bisphenol F	16		2095-03-6	DGF	
<i>Diheptyl phthalate, see Dialkyl (C7-C13) phthalate</i>			3648-21-3	DHP	DAH
Di-n-hexyl adipate	34		110-33-8	DHA	
<i>Dihexyl phthalate, see Dialkyl (C7-C13) phthalate</i>			84-75-3	DHL	

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<i>Diisobutyl carbinol</i> , see Nonyl alcohol (all isomers)			108-82-7	DBC	NNS
Diisobutyl ketone	18		108-83-8	DIK	
Diisobutyl phthalate	34		84-69-5	DIT	DPA
Diisobutylamine	7		110-96-3	DBU	
Diisobutylene	30		25167-70-8	DBL	
<i>Diisodecyl phthalate</i> , see Dialkyl (C7-C13) phthalates			26761-40-0	DID	DAH
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution	5		73347-80-5	DDH	
Diisononyl adipate	34		33703-08-1	DNY	
<i>Diisononyl phthalate</i> , see Dialkyl (C7-C13) phthalates		2	28553-12-0	DIN	DAH
<i>Diisooctyl phthalate</i> , see Dialkyl (C7-C13) phthalate			27554-26-3	DIO	DAH/(DIE/DOP)
Diisopropanolamine	8		110-97-4	DIP	
Diisopropylamine	7		108-18-9	DIA	DNA
Diisopropylbenzene (all isomers)	32		25321-09-9	DIX	
Diisopropylnaphthalene	32		24157-81-1	DII	
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution	5		73347-80-5	DDH	
N,N-Dimethylacetamide	10		127-19-5	DAC	DLS
N,N-Dimethylacetamide solution (40% or less)	10	3	127-19-5	DLS	DAL
Dimethyl adipate	34		627-93-0	DLA	
Dimethylamine	7		124-40-3	DMA	DMC/ DMG/DMY
<i>Dimethylamine salt of 4-Chloro-2-methylphenoxyacetic acid solution</i> , see			2039-46-5		CDM

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution <i>Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (70% or less)</i> Dimethylamine solution (45% or less)	7	3	124-40-3	DMG	DMA/ DMC/DMY
Dimethylamine solution (greater than 45% but not greater than 55%)	7	3	124-40-3	DMY	DMA/ DMC/DMG
Dimethylamine solution (greater than 55% but not greater than 65%)	7	3	124-40-3	DMC	DMA/ DMG/DMY
2,6-Dimethylaniline	9		87-62-7	DMM	DDL
<i>Dimethylbenzene, see Xylenes</i>		2	1330-20-7		XLX/XLM/ XLO/XLP
Dimethylcyclicsiloxane hydrolyzate	34		* 541-05-9	DXZ	
N,N-Dimethylcyclohexylamine	7		98-94-2	DXN	
Dimethyl disulfide (alternately disulphide)	0	1, 2, 3	624-92-0	DSK	
<i>Dimethyldodecylamine, see N,N-Dimethyldodecylamine</i>	7		112-18-5		DDY
N,N-Dimethyldodecylamine	7		112-18-5	DDY	
Dimethylethanolamine	8		108-01-0	DMB	
Dimethyl ether	41		115-10-6	DIM	
Dimethylformamide	10	2	68-12-2	DMF	
Dimethyl furan	41		625-86-5	DFU	
Dimethyl glutarate	34		1119-40-0	DGT	
Dimethyl hydrogen phosphite	34	2	868-85-9	DPI	
Dimethyl naphthalene sulfonic (alternately	34	2	27178-87-6	DNS	

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sulphonic) acid, sodium salt solution					
Dimethyl octanoic acid	4		29662-90-6	DMO	
Dimethyl phthalate	34		131-11-3	DTL	
<i>Dimethylpolysiloxane</i> , see Polydimethylsiloxane			9016-00-6	DMP	
2,2-Dimethylpropane-1,3-diol (molten or solution)	20	3	126-30-7	DDI	
Dimethyl succinate	34		106-65-0	DSE	
Dinitrotoluene (molten)	42	3	121-14-2	DNM	DNL/DNU/ DTT
<i>Dinonyl phthalate</i> , see Dialkyl (C7-C13) phthalates			84-76-4	DIF	DAH
<i>Dioctyl phthalate</i> , see Dialkyl (C7-C13) phthalates			117-84-0	DOP	DAH (DIE/ DIO)
1,4-Dioxane	41		123-91-1	DOX	
Dipentene	30		138-86-3	DPN	
Diphenyl	32		92-52-4	DIL	
Diphenylamine (molten)	9		122-39-4	DAG	DAM
Diphenylamine, reaction product with 2,2,4-trimethylpentene	9		68921-45-9	DAK	
Diphenylamines, alkylated	9		68921-45-9	DAJ	
Diphenyl/Diphenyl ether mixtures	33		8004-13-5	DDO	
Diphenyl ether	41		101-84-8	DPE	
<i>Diphenyl ether/Biphenyl ether mixture</i> , see Diphenyl/Diphenyl ether mixture			8004-13-5		DDO
Diphenyl ether/Diphenyl phenyl ether mixture	41		8004-13-5	DOB	
Diphenylmethane diisocyanate	12	2	101-68-8	DPM	
<i>Diphenyl oxide</i> , see Diphenyl ether			101-84-8		DPE
Diphenylol propane-Epichlorohydrin resins	0	1	25068-38-6	DPR	
Di-n-propylamine	7		142-84-7	DNA	DIA

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Dipropylene glycol	40		25265-71-8	DPG	
<i>Dipropylene glycol butyl ether</i> , see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			29911-28-2	DBG	PAG
Dipropylene glycol dibenzoate	34		94-51-9	DGY	
<i>Dipropylene glycol methyl ether</i> , see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			34590-94-8	DPY	PAG
Distillates, flashed feed stocks	33		8002-05-9	DFF	
Distillates, straight run	33		68814-87-9	DSR	
Di-tert-butyl phenol	21			DBF	DBT/DBV/ DBW
2,4-Di-tert-butyl phenol	21		96-76-4	DBV	DBF/DBT/ DBW
2,6-Di-tert-butyl phenol	21		128-39-2	DBW	DBF/DBT/ DBV
Dithiocarbamate ester (C7-C35)	34			DHO	
Ditridecyl adipate	34		16958-92-2	DTY	
<i>Ditridecyl phthalate</i> , see Dialkyl (C7-C13) phthalate			119-06-2	DTP	DAH
<i>Diundecyl phthalate</i> , see Dialkyl (C7-C13) phthalates			3648-20-2	DUP	DAH
<i>Dodecane (all isomers)</i> , see n-Alkanes (C10+) (all isomers)			13475-82-6	DOF	ALV (ALJ/ DOC)
tert-Dodecanethiol	20	2	25103-58-6	DDL	LRM
Dodecene (all isomers)	30	3	25378-22-7	DOZ	DDC/DOD
1-Dodecene, see Dodecene (all isomers)	30			DDC	DOZ
<i>Dodecanol (all isomers)</i> , see Dodecyl alcohol (all isomers)		2	112-53-8	DDN	LAL
2-Dodecenylsuccinic acid, dipotassium salt	34		57195-28-5	DSP	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
solution					
Dodecyl alcohol (all isomers)	20	2	112-53-8	DDN	ASK/ASY/ LAL
Dodecylamine/Tetradecylamine mixture	7	2	* 124-22-1	DTA	
<i>Dodecylbenzene</i> , see Alkyl (C9+) benzenes			123-01-3	DDB	AKB
Dodecylbenzenesulfonic (alternately Dedecylbenzenesulphonic) acid	0	1, 2	27176-87-0	DSA	
Dodecyldimethylamine/Tetradecyldimethylamine mixture	7		* 112-18-5	DOT	
Dodecyl diphenyl ether disulfonate (alternately disulphonate) solution	43		25167-32-2	DTA	
Dodecyl hydroxypropyl sulfide (alternately sulphide)	0	1	67124-09-8	DOH	
n-Dodecyl mercaptan	21		112-55-0	DBT	
Dodecyl methacrylate	14		142-90-5	DDM	
Dodecyl/Octadecyl methacrylate mixture	14		* 142-90-5	DOM	DDM
Dodecyl/Pentadecyl methacrylate mixture	14		* 142-90-5	DDP	
Dodecyl phenol	21		27193-86-8	DOL	
Dodecyl xylene	32		66697-27-6	DXY	
Drilling brines (containing Calcium, Potassium or Sodium salts)	43			DRL	DRB/DRS
Drilling brines (containing Zinc salts)	43			DZB	DRB
Drilling brines, including: Calcium bromide solution, Calcium chloride solution and Sodium chloride solution	43	3			DRS/DRL
Drilling mud (low toxicity) (<i>if flammable or combustible</i>)	33			DRO	DRM/ DRN/DRP

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Drilling mud (low toxicity) (<i>if non-flammable or non-combustible</i>)	43			DRP	DRM/ DRN/DRO
Epichlorohydrin	17		106-89-8	EPC	
Epoxy resin	16			EPN	
<i>ETBE</i> , see Ethyl tert-butyl ether			637-92-3		EBE
Ethane	31		74-84-0	ETH	
Ethanolamine	8		141-43-5	MEA	
<i>2-Ethoxyethanol</i> , see Ethylene glycol monoalkyl ethers			110-80-5	EEO	EGC (EGE)
2-Ethoxyethyl acetate	34	2	111-15-9	EEA	EGA
Ethoxylated alkyloxy alkyl amine	8		68155-39-5	ELM	
<i>Ethoxylated alcohols, C11-C15</i> , see alcohol polyethoxylates			9002-92-0		AEA/AEB/ AED/AET/ APV/ APW/APX
Ethoxylated long-chain (C16+) alkyloxyalkylamine	8			ELA	
Ethoxylated tallow alkyl amine	7		61791-26-2	TAY	TAG/TAR
Ethoxylated tallow alkyl amine, glycol mixture	7			TAG	TAR/TAY
Ethoxylated tallow amine (> 95%)	7	3	61791-26-2	TAR	TAG/TAY
<i>Ethoxy triglycol</i> , see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether			112-50-5	ETG	PAG (ETR/ TGE)
Ethoxy triglycol (crude)	40		112-50-5	ETR	
Ethyl acetate	34	2	141-78-6	ETA	
Ethyl acetoacetate	34		141-97-9	EAA	
Ethyl acrylate	14	2	140-88-5	EAC	
Ethyl alcohol	20	2	64-17-5	EAL	
Ethylamine	7	2	75-04-7	EAM	EAN/EAO

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Ethylamine solution (72% or less)	7	3	75-04-7	EAN	EAM/EAO
Ethyl amyl ketone	18		106-68-3	EAK	ELK
Ethylbenzene	32		100-41-4	ETB	
Ethyl butanol	20		97-95-0	EBT	
N-Ethylbutylamine	7		13360-63-9	EBA	
Ethyl tert-butyl ether	41	2	637-92-3	EBE	
Ethyl butyrate	34		105-54-4	EBR	
Ethyl chloride	36		75-00-3	ECL	
Ethyl cyclohexane	31		1678-91-7	ECY	
N-Ethylcyclohexylamine	7		5459-93-8	ECC	
2-Ethyl-2-(2,4-dichlorophenoxy) acetate	34		533-23-3	EDY	
2-Ethyl-2-(2,4-dichlorophenoxy) propionate	34		58048-39-8	EDP	
S-Ethyl dipropylthiocarbamate	34	3	759-94-4	ECB	
Ethylene	30		74-85-1	ETL	
Ethyleneamine EA 1302	7	2	593-67-9	EMX	
Ethylene carbonate	34		96-49-1	ECR	
Ethylene chlorohydrin	20		107-07-3	ECH	
Ethylene cyanohydrin	20	2	109-78-4	ETC	
Ethylenediamine	7	2	107-15-3	EDA	EMX
Ethylenediaminetetraacetic acid/tetrasodium salt solution	43		64-02-8	EDS	
Ethylene dibromide	36		106-93-4	EDB	
Ethylene dichloride	36	2	107-06-2	EDC	
Ethylene glycol	20	2	107-21-1	EGL	EAG
Ethylene glycol acetate	34		542-59-6	EGO	
<i>Ethylene glycol butyl ether, see Ethylene glycol</i>			111-76-2	EGM	EGC

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monoalkyl ethers					
<i>Ethylene glycol tert-butyl ether</i> , see Ethylene glycol monoalkyl ethers			7580-85-0	EGG	EGC
Ethylene glycol butyl ether acetate	34		112-07-2	EMA	
Ethylene glycol diacetate	34		111-55-7	EGY	
Ethylene glycol dibutyl ether	40		112-48-1	EGB	
<i>Ethylene glycol ethyl ether</i> , see Ethyl glycol monoalkyl ethers			110-80-5	EGE	EGC/EEO
<i>Ethylene glycol ethyl ether acetate</i> , see 2-Ethoxyethyl acetate		2	111-15-9	EGA	EEA
<i>Ethylene glycol hexyl ether</i> , see Ethylene glycol monoalkyl ethers			112-25-4	EGH	EGC
<i>Ethylene glycol isobutyl ether</i> , see Ethylene glycol monoalkyl ethers			224-658-5		EGC (EGG/EGM)
<i>Ethylene glycol isopropyl ether</i> , see Ethylene glycol monoalkyl ethers			109-59-1	EGI	EGC
<i>Ethylene glycol methyl butyl ether</i> , see Ethylene glycol monoalkyl ethers			13343-98-1	EMB	EGC
<i>Ethylene glycol methyl ether</i> , see Ethylene glycol monoalkyl ethers			109-86-4	EME	EGC
Ethylene glycol methyl ether acetate	34		110-49-6	EGT	
Ethylene glycol monoalkyl ethers	40	2		EGC	
<i>Including:</i>					
<i>Ethylene glycol butyl ether</i>	40		111-76-2		
<i>Ethylene glycol tert-butyl ether</i>	40		7580-85-0		
<i>Ethylene glycol ethyl ether</i>	40		111-15-9		
<i>Ethylene glycol hexyl ether</i>	40		112-25-4		

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<i>Ethylene glycol isobutyl ether</i>	40		224-658-5		
<i>Ethylene glycol isopropyl ether</i>	40		109-59-1		
<i>Ethylene glycol methyl ether</i>	40		109-86-4		
<i>Ethylene glycol methyl butyl ether</i>	40		13343-98-1		
<i>Ethylene glycol propyl ether</i>	40		2807-30-9		
Ethylene glycol phenyl ether	40		122-99-6	EPE	
Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture	40		122-99-6/ 104 68 7	EDX	
<i>Ethylene glycol propyl ether, see Ethylene glycol monoalkyl ethers</i>			2807-30-9	EGP	EGC/EGI/ EGN
<i>Ethylene glycol n-propyl ether, see Ethylene glycol monoalkyl ethers</i>			2807-30-9	EGN	EGC (EGI/ EGP)
Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture	20			EBX	
Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture	20			ESX	
Ethylene oxide	0	1	75-21-8	EOX	
Ethylene oxide/Propylene oxide mixture	16		75-21-8/ 75-56-9	EPF	EPM
Ethylene oxide/Propylene oxide mixture with an Ethylene oxide content not more than 30% by mass	16	3	75-21-8/ 75-56-9	EPM	EPF
Ethylene-Propylene copolymer (in liquid mixtures)	31		9010-79-1	EPY	
Ethylene-Vinyl acetate copolymer (emulsion)	43		24937-78-8	ECV	
<i>Ethyl ether, see Diethyl ether</i>			60-29-7		EET
Ethyl-3-ethoxypropionate	34		763-69-9	EEP	
<i>2-Ethylhexaldehyde, see Octyl aldehydes</i>			123-05-7	EHA	OAL (OLX)

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<i>2-Ethylhexanoic acid, see Octanoic acid (all isomers)</i>			149-57-5	EHO	OAY (OAA)
<i>2-Ethylhexanol, see Octanol</i>			104-76-7	EHX	OCA (OTA)
2-Ethylhexyl acrylate	14		103-11-7	EAI	
2-Ethylhexylamine	7		104-75-6	EHM	
Ethyl hexyl phthalate	34		117-81-7	EHE	
Ethyl hexyl tallate	34		68334-13-4	EHT	
2-Ethyl-2-(hydroxymethyl) propane-1,3-diol (C8-C10) ester	34		77-99-6	EHD	
Ethyl lactate	34		97-64-3	ELT	
Ethylidene norbornene	30	2	16219-75-3	ENB	
Ethyl methacrylate	14		97-63-2	ETM	
N-Ethylmethylallylamine	7		18328-90-0	EML	
Ethyl propionate	34		105-37-3	EPR	
2-Ethyl-3-propylacrolein	19	2	645-62-5	EPA	
2-Ethyl-6-methyl-N-(1'-methyl-2-methoxyethyl)aniline	9		51219-00-2	EEM	
<i>o</i> -Ethyl phenol	21		90-00-6	EPL	
Ethyl toluene	32		25550-14-5	ETE	
Fatty acid methyl esters	34	3	67762-38-3	FME	
Fatty acids (C8-C10)	34	3	* 124-07-2	FDS	
Fatty acids (C12+)	34	3	* 143-07-7	FDT	FAB/FAD/ FAI/FDI
Fatty acids (saturated, C13+)	34		700041-79-8	FAB	FAD
<i>Fatty acids (saturated, C14+), see Fatty acids (saturated, C13+)</i>			700041-79-8	FAD	FAB
Fatty acids (C16+)	34	3	* 57-10-3	FDI	

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Fatty acids, essentially linear (C6-C18) 2-ethylhexyl ester	34	2, 3		FAE	
Ferric chloride solution	1		7705-08-0	FCS	FCL
Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution	43	2		FHX	STA
Ferric nitrate/Nitric acid solution	3	2	7782-61-8	FNN	
<i>Fish oil</i> , see Oil, edible: Fish		2	8016-13-5		OFS (AFN)
Fish protein concentrate (containing 4% or less formic acid)	4			FPC	
Fish silage protein concentrate (containing 4% or less formic acid)	4			FSC	
Fish solubles (<i>water based fish meal extracts</i>)	43			FSO	
Fluorosilicic acid (20-30%) in water solution	1	3	16961-83-4	FSK	FSJ/FSL/ HFS
Fluorosilicic acid (30% or less)	1		16961-83-4	FSJ	FSK/FSL/ HFS
Formaldehyde (50% or more), Methanol mixtures	19	2	50-00-0	MTM	
Formaldehyde solutions (37%-50%)	19	2	50-00-0	FMS	FMG/FMR
Formaldehyde solutions (45% or less)	19	2, 3	50-00-0	FMR	FMG/FMS
Formamide	10		75-12-7	FAM	
Formic acid	4	2	64-18-6	FMA	FMB
Formic acid (85% or less)	4	2	64-18-6	FMB	FMA
Formic acid (over 85%)	4	2, 3	64-18-6	FMD	
Formic acid mixture (containing up to 18% Propionic acid and up to 25% Sodium formate)	4	2, 3	64-18-6	FMC	FMA/FMB
Fructose solution	43		57-48-7	FTS	FRT
Fumaric adduct of Rosin, water dispersion	43		65997-04-8	FAR	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
<i>Fuming sulfuric (alternately sulphuric) acid, see Oleum</i>		2	8014-95-7		
Furfural	19		98-01-1	FFA	
Furfuryl alcohol	20	2	98-00-0	FAL	
<i>Gas oil, cracked, see Oil, misc.: Gas, cracked</i>			64741-62-4		GOC
Gasoline blending stock, alkylates	33		64741-64-6	GAK	
Gasoline blending stock, reformates	33		8006-61-9	GRF	
Gasolines:					
Automotive (containing not more than 4.23 grams lead per gal.)	33		86290-81-5	GAT	
Aviation (containing not more than 4.86 grams lead per gal.)	33			GAV	AVA
Casinghead (<i>natural</i>)	33		68425-31-0	GCS	
Polymer	33		8006-61-9	GPL	
Straight run	33		68606-11-1	GSR	
<i>Gasolines: Pyrolysis (containing Benzene), see Pyrolysis gasoline (containing Benzene)</i>			68477-58-7	GPY	PYG
Glucitol/Glycerol blend propoxylated (containing less than 10% amines)	40	3		GGA	
Glucitol/Glycerol blend propoxylated (containing 10% or more amines)	40			GGB	
Glucose solution	43		50-99-7	GLS	DTS
Glutaraldehyde solutions (50% or less)	19		111-30-8	GTA	
Glycerine	20	2	56-81-5	GCR	
Glycerine (83%)/Dioxanedimethanol (17%) mixture	20			GDN	GDM
<i>Glycerol, see Glycerine</i>		2	56-81-5		GCR

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Glycerol ethoxylated	40		31694-55-0	GXA	
Glycerol monooleate	20		25496-72-4	GMO	
Glycerol polyalkoxylate	40		700038-65-9	GPA	
Glycerol propoxylated	40	3	25791-96-2	GXP	
Glycerol, propoxylated and ethoxylated	40	3	9082-00-2	GXE	
Glycerol/Sucrose blend propoxylated and ethoxylated	40	3		GSB	
Glyceryl triacetate	34		102-76-1	GCT	
Glycidyl ester of C10 trialkyl acetic acid	34			GLU	GLT
<i>Glycidyl ester of tertiary carboxylic acid, see Glycidyl ester of C10 trialkyl acetic acid</i>				GLT	GLU
<i>Glycidyl ester of tridecyl acetic acid, see Glycidyl ester of C10 trialkyl acetic acid</i>				GLT	GLU
<i>Glycidyl ester of Versatic acid, see Glycidyl ester of C10 trialkyl acetic acid</i>				GLT	GLU
Glycine, sodium salt solution	7		56-40-6	GSS	
<i>Glycol diacetate, see Ethylene glycol diacetate</i>			111-55-7		EGY
Glycol mixture, crude	20		107-21-1	GMC	
<i>Glycol triacetate, see Glyceryl triacetate</i>			102-76-1		GCT
Glycolic acid solution (70% or less)	4	3	79-14-1	GLC	
Glyoxal solution (40% or less)	19	3	107-22-2	GOS	
Glyoxylic acid solution (50% or less)	4	3	298-12-4	GAC	
Glyphosate solution (not containing surfactant)	7		1071-83-6	GIO	RUP
<i>Grape Seed Oil, see Oil, edible: Grape seed</i>			8024-22-4		
<i>Groundnut oil, see Oil, edible: Groundnut</i>			8002-03-7		OGN (VEO)
<i>Hazelnut oil, see Oil, edible: Hazelnut</i>			84012-21-5		OHN

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
<i>Heptadecane (all isomers), see n-Alkanes (C10+)</i> (all isomers)			629-78-7		(VEO) ALV (ALJ)
<i>Heptane (all isomers), see Alkanes (C6-C9)</i>			142-82-5	HMX	ALK(HPI/ HPT)
n-Heptanoic acid	4		111-14-8	HEN	HEP
Heptanol (all isomers)	20	3	111-70-6	HTX	HTN
Heptene (all isomers)	30	2, 3	592-76-7	HPX	THE
Heptyl acetate	34		112-06-1	HPE	
<i>Heptylbenzenes, see Alkyl (C5-C8) benzenes</i>			1078-71-3		AKD
<i>Herbicide (C15-H22-NO2-Cl), see Metolachlor</i>			51218-45-2		MCO
<i>Hexadecanol (Cetyl alcohol), see Alcohols (C13+)</i>			36653-82-4		ALY (ASY/ AYL)
1-Hexadecylnaphthalene/ 1,4-bis(Hexadecyl)naphthalene mixture	32		* 56388-47-7	HNI HNH	HNI HNH
1-n-Hexadecylnaphthalene (90%)/1,4-di-n- (Hexadecyl)naphthalene (10%)	32		* 56388-47-7	HNI HNH	HNI HNH
<i>Hexaethylene glycol, see Polyethylene glycol</i>			2615-15-8	HMG	PEG
1,3,5-Hexahydrotriethanol-1,3,5-triazine solution	9			HES	
Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)	9			HET	
Hexamethylene diisocyanate	12		822-06-0	HMS	HDI
Hexamethylene glycol	20		629-11-8	HMG	HXG
Hexamethylenediamine (molten)	7	3	124-09-4	HME	HMD/ HMC
Hexamethylenediamine adipate (50% in water)	43		15511-81-6	HAM	HAN
Hexamethylenediamine adipate solution	43		15511-81-6	HAN	HAM

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Hexamethylenediamine solution	7		124-09-4	HMC	HMD/HME
Hexamethyleneimine	7		111-49-9	HMI	
Hexamethylenetetramine solutions	7		100-97-0	HTS	HMT
<i>Hexane (all isomers), see Alkanes (C6-C9)</i>		2	110-54-3	HXS	ALK (IHA/HXA)
1,6-Hexanediol, distillation overheads	4	2, 3	629-11-8	HDO	
Hexanoic acid	4		142-62-1	HXO	
Hexanol	20		111-27-3	HXM	HEW/HEZ/HXN
Hexene (all isomers)	30	2, 3	592-41-6	HEX	HXE/HXT/HXU/HXV/MPN/MTN
Hexyl acetate	34		142-92-7	HAE	
<i>Hexylbenzenes, see Alkyl (C5-C8) benzenes</i>			1077-16-3		AKD
<i>Hexylene glycol, see Hexamethylene glycol</i>			107-41-5	HXG	HMG
<i>Hog grease, see Lard</i>			61789-99-9		LRD
Hydrochloric acid	1		7647-01-0	HCL	
<i>Hydrofluorosilicic acid (25% or less), see Fluorosilicic acid (30% or less)</i>			16961-83-4		FSJ(FSK/FSL/HFS)
bis(Hydrogenated tallow alkyl)methyl amines	7		61788-63-4	HTA	
Hydrogen peroxide solutions (over 8% but not more than 60% by mass)	0	1, 3	7722-84-1	HPN	HPO/HPS
Hydrogen peroxide solutions (over 60% but not more than 70% by mass)	0	1, 3	7722-84-1	HPS	HPN/HPO
Hydrogenated starch hydrolysate	0	1, 3	68425-17-2	HSH	
2-Hydroxyethyl acrylate	14	2	818-61-1	HAI	
N-(Hydroxyethyl)ethylenediamine triacetic acid,	43		207386-87-6	HET	

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trisodium salt solution					
N,N-bis(2-Hydroxyethyl) oleamide	10		93-83-4	HOO	
2-Hydroxy-4-(methylthio)butanoic acid	4		583-91-5	HBA	
<i>Hydroxyl terminated polybutadiene, see</i> Polybutadiene, hydroxyl terminated			69102-90-5		PHT
alpha-Hydro-omega-hydroxytetradeca(oxytetramethylene)	40			HTO	PYS/PYT
<i>Illipe oil, see</i> Oil, edible: Illipe			68956-68-3		ILO (VEO)
Isoamyl alcohol	20	3	123-51-3	IAA	AAI/AAL/ AAN/ APM/ASE
Isobutyl alcohol	20	2, 3	78-83-1	IAL	BAN/BAS/ BAT/BAY
Isobutyl formate	34	3	542-55-2	BFI	BFN/BFO
Isobutyl methacrylate	14	3	97-86-9	BMI	BMH/BMN
Isodecaldehyde	19		3085-26-5		
Isononylaldehyde (crude)	19		5435-64-3	INC	
Isophorone	18	2	78-59-1	IPH	
Isophoronediamine	7		2855-13-2	IPI	
Isophorone diisocyanate	12		4089-71-9	IPD	
Isoprene (all isomers)	30		78-79-5	IPR	
Isoprene (part refined)	30		78-79-5	IPS	IPR/ISC
Isoprene concentrate (Shell)	30		78-79-5	ISC	
Isopropanolamine	8	3	78-96-6	MPA	IPF/PAX/ PLA
Isopropanolamine solution	8	3	78-96-6	PAI	MPA/PAY/ PLA/PRG

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Isopropyl acetate	34	3	108-21-4	IAC	PAT
Isopropyl alcohol	20	2, 3	67-63-0	IPA	IPB/PAL
Isopropylamine	7	3	75-31-0	IPP	IPO/IPQ/ PRA
Isopropylamine (70% or less) solution	7	3	75-31-0	IPQ	IPO/IPP/ PRA
<i>Isopropylbenzene, see Alkyl (C3-C4) benzenes</i>			98-82-8		AKC(CUM/ PBY/PBZ)
Isopropylcyclohexane	31	3	696-29-7	IPX	
Isopropyl ether	41	3	108-20-3	IPE	PRL/PRN
<i>Jatropha oil, see Oil, misc.: Jatropha</i>			88-6-7		JTO
Jet fuels:				JPO	JPT/JPF/ JPV
JP-4	33		50815-00-4	JPF	
JP-5	33		8008-20-6	JPV	
JP-8	33		8008-20-6	JPE	
Kaolin clay solution/suspension	43		1332-58-7	KLC	KLS
Kaolin slurry	43		1332-58-7	KLS	KLC
Kerosene	33		8008-20-6	KRS	
Ketone residue	18			KTR	
Kraft black liquor	5		66071-92-9	KBL	KPL
Kraft pulping liquors (free alkali content 3% or more) (Black, Green, or White)	5		68131-33-9	KPL	KBL
Lactic acid	0	1, 2	79-33-4	LTA	
Lactonitrile solution (80% or less)	37	3	78-97-7	LNI	
Lard	34		61789-99-9	LRD	OLD
Latex, ammonia (1% or less)-inhibited	30	3	98-82-8	LTX	

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Latex: Carboxylated Styrene-Butadiene copolymer; Styrene-Butadiene rubber	43	3	98-82-8	LCC	LCB/LSB
Latex, liquid synthetic	43		98-82-8	LLS	LCB/LCC/LSB
Lauric acid	34		143-07-7	LRA	
Lauric acid methyl ester/Myristic acid methyl ester mixture	34		111-82-0	LMM	
<i>Lauryl polyglucose</i> , see Alkyl (C12-C14) polyglucoside solution (55% or less)			59122-55-3		AGM/LAP
<i>Lauryl polyglucose (50% or less)</i> , see Alkyl (C12-C14) polyglucoside solution (55% or less)			59122-55-3	LAP	AMG
Lecithin	34		8002-43-5	LEC	
Lignin liquor	43		9005-53-2	LNL	ALG/CLL/LGA/LGM/LSL/SHC/SHP/SHQ/SLP
Ligninsulfonic (alternately Ligninsulphonic) acid, magnesium salt solution	43	3	9009-75-0	LGM	LGA/LNL/LSL
<i>Ligninsulfonic (alternately Ligninsulphonic) acid, sodium salt solution</i> , see Lignin liquor or Sodium lignosulfonate (alternately lignosulphonate) solution			8061-51-6	LGA	LNL or SLG
<i>d-Limonene</i> , see Dipentene			5989-27-5		DPN
Linear alkyl (C12-C16) propoxyamine ethoxylate	8		68213-26-3	LPE	
<i>Linseed oil</i> , see Oil, misc.: Linseed			8001-26-1		OLS
<i>Liquefied Natural Gas</i> , see Methane			74-82-8	LNG	MTH
Liquid chemical wastes	0	1, 3		LCW	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Liquid Streptomyces solubles	43				
Long-chain alkaryl polyether (C11-C20)	41			LCP	
Long-chain alkaryl sulfonic (alternately sulphonic) acid (C16-C60)	0	1		LCS	
Long-chain alkyl amine	7		61789-79-5	LAA	
Long-chain alkylphenate/Phenol sulfide (alternately sulphide) mixture	21			LPS	
Long-chain alkylphenol (C14-C18)	21			LCA	
Long-chain alkylphenol (C18-C30)	21			LCK	
Long-chain alkyl (C13+) salicylic acid	4		69-72-7	LAS	
Long-chain polyetheramine in alkyl (C2-C4)benzenes	7			LCE	
L-Lysine solution (60% or less)	43	3	25988-63-0	LYS	
Magnesium chloride solution	0	1, 2	7786-30-3	MGL	
Magnesium hydroxide slurry	5		1309-42-8	MHS	
Magnesium long-chain alkaryl sulfonate (alternately sulphonate) (C11-C50)	34		*	MAS	MSE
Magnesium long-chain alkyl phenate sulfide (alternately sulphide) (C8-C20)	34		115254-47-2	MPS	
Magnesium long-chain alkyl salicylate (C11+)	34			MLS	
Magnesium nitrate solution (66.7%)	43		13446	MGP	MGN/ MGO
<i>Magnesium nonyl phenol sulfide (alternately sulphide), see Magnesium long-chain alkyl phenate sulfide (alternately sulphide) (C8-C20)</i>					MPS
<i>Magnesium sulfonate (alternately sulphonate), see Magnesium long-chain alkaryl sulfonate</i>			71786-47-5	MSE	MAS

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(alternately sulphonate) (C11-C50)					
Maleic anhydride	11		108-31-6	MLA	
Maleic anhydride/sodium allylsulphonate copolymer solution	11				PHN (CFO/ CRL/CRO/ CRS/CSO)
Maltitol solution	0	1, 3	585-88-6	MTI	
<i>Mango kernel oil</i> , see Oil, edible: Mango kernel			90063-86-8		MKO (VEO)
Mercaptobenzothiazol, sodium salt solution	5		149-30-4	SMB	MBT
2-Mercaptobenzothiazol (in liquid mixture)	5		149-30-4	BTM	SMD
Mesityl oxide	18	2	141-79-7	MSO	
Metam sodium solution	7		137-42-8	MSS	SMD
Methacrylic acid	4		79-41-4	MAD	
Methacrylic acid—Alkoxy poly(alkylene oxide) methacrylate copolymer, sodium salt aqueous solution (45% or less)	20	3	79-41-4	MAQ	
Methacrylic resin in ethylene dichloride	14			MRD	
Methacrylonitrile	15	2	126-98-7	MET	
Methane	31		74-82-8	MTH	LNG
3-Methoxy-1-butanol	20		2517-43-3	MTX	
3-Methoxybutyl acetate	34		4435-53-4	MOA	
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide, see Metolachlor	34		51218-45		MCO
1-Methoxy-2-propyl acetate	34		108-65-6	MXP	
<i>Methoxy triglycol</i> , see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether			112-35-6	MTG	PAG (TGY)

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Methyl acetate	34		79-20-9	MTT	
Methyl acetoacetate	34		105-45-3	MAE	
Methyl acetylene/Propadiene mixture	30		74-99-7	MAP	
Methyl acrylate	14		96-33-3	MAM	
Methyl alcohol	20	2	67-56-1	MAL	
Methylamine solutions (42% or less)	7	3	74-89-5	MSZ	
Methyl amyl acetate	34		7789-99-3	MAC	
Methyl amyl alcohol	20		108-11-2	MAA	MIC
Methyl amyl ketone	18		110-43-0	MAK	
N-Methylaniline	9	3	100-61-8	MAN	
alpha-Methylbenzyl alcohol with Acetophenone (15% or less)	20	3	98-85-1	MBA	
Methyl bromide	36		74-83-9	MTB	
<i>Methyl butanol</i> , see the Amyl alcohols			71-41-0		AAI/AAL/ AAN/ APM/ASE/ IAA
<i>Methyl butenes</i> , see Pentene (all isomers)			109-67-1		PTX (AMW/ AMZ/PTE)
Methyl butenol	20		137-32-6	MBL	
Methyl tert-butyl ether	41	2	1634-04-4	MBE	
Methyl butyl ketone	18	2	591-78-6	MBB	MBK/MIK
Methyl 3-(3,5 di-tert-butyl-4-hydroxyphenyl) propionate crude melt	20		6386-38-5	MYP	
Methylbutynol	20		137-32-6	MBY	MHB
3-Methyl butyraldehyde	19		590-86-3	MBR	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Methyl butyrate	34		623-42-7	MBU	
Methyl chloride	36		74-87-3	MTC	
Methylcyclohexane	31		591-47-9	MCY	
Methylcyclohexanemethanol (crude)	20		34885-03-5	MYH	
Methylcyclopentadiene dimer	30		26472-00-4	MCK	
Methylcyclopentadienyl manganese tricarbonyl	0	1, 3	12108-13-3	MCT	MCW
Methylcyclopentadienyl manganese tricarbonyl (60-70%) in mineral oil	0	1	12108-13-3	MCW	MCT
Methyl diethanolamine	8		105-59-9	MDE	MAB
Methyl ethyl ketone	18	2	78-93-3	MEK	
2-Methyl-6-ethyl aniline	9		24549-06-2	MEN	
Methyl formate	34		107-31-3	MFM	
N-Methylglucamine solution	43	3	6284-40-8	MGC	
2-Methylglutaronitrile	37		4553-62-2	MLN	MGN
2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less)	37	3		MGE	MLN
Methyl heptyl ketone	18		821-55-6	MHK	
2-Methyl-2-hydroxy-3-butyne	20		115-19-5	MHB	MBY
<i>Methyl isoamyl ketone, see Methyl amyl ketone</i>			110-12-0	MAJ	MAK
<i>Methyl isobutyl carbinol, see Methyl amyl alcohol</i>			108-11-2	MIC	MAA
Methyl isobutyl ketone	18		108-10-1	MIK	MBB/MBK
Methyl methacrylate	14		80-62-6	MMM	
Methylene bridged isobutylenated phenols	21		68610-06-0	MBP	
<i>Methylene chloride, see Dichloromethane</i>			75-09-2		DCM
3-Methyl-3-methoxybutanol	20		56539-66-3	MXB	
2-Methyl-5-ethyl pyridine	9		104-90-5	MEP	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
3-Methyl-3-methoxybutyl acetate	34		103429-90-9	MMB	
Methyl naphthalene (molten)	32	3	90-12-0	MNA	
Methylolurea	19		1000-82-4	MUS	
<i>2-Methyl pentane, see Hexane (all isomers)</i>			107-83-5		HXS (ALK/ HXA/IHA/ NHX)
2-Methyl-1,5-pentanediamine	7		15520-10-2	MPM	
<i>2-Methyl-1-pentene, see Hexene (all isomers)</i>			763-29-1	MPN	HEX (HXE/ HXT/HXU/ HXV/ MTN)
<i>4-Methyl-1-pentene, see Hexene (all isomers)</i>			691-37-2	MTN	HEX (HXE/ HXT/HXU/ HXV/ MPN)
<i>Methyl tert-pentyl ether, see tert-Amyl methyl ether</i>			994-05-8		AYE
2-Methyl-1,3-propanediol	20		78-26-2	MDL	
Methyl propyl ketone	18		107-87-9	MKE	
2-Methyl-5-ethylpyridine	9		104-90-5	MEP	
<i>Methylpyridine, see the Methylpyridines</i>				MPQ	MPE/ MPF/MPR
2-Methylpyridine	9	3	109-06-8	MPR	MPE/ MPF/MPQ
3-Methylpyridine	9	3	109-99-6	MPE	MPF/ MPQ/MPR
4-Methylpyridine	9	3	108-89-4	MPF	MPE/ MPQ/MPR

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
N-Methyl-2-pyrrolidone	9	2	872-50-4	MPY	
Methyl salicylate	34		119-36-8	MES	
alpha-Methylstyrene	30		98-83-9	MSR	
3-(Methylthio)propionaldehyde	19		3268-49-3	MTP	
Metolachlor	34		51218-45-2	MCO	
Microsilica slurry	43		69012-64-2	MOS	
Milk	43		8049-98-7	MLK	
Mineral spirits	33		64475-85-0	MNS	
Mixed C4 Cargoes	30			MIX	
Molasses	20		68476-78-8	MOL	MON
Molasses residue (from fermentation)	0	1	94114-07-5	MON	MOL
Molybdenum polysulfide (alternately polysulphide) long-chain alkyl dithiocarbamide complex	0	1, 3	1317-33-5	MOP	
Monochlorodifluoromethane	36		75-45-6	MCF	
<i>Monoethanolamine, see Ethanolamine</i>			141-43-5	MEA	
<i>Monoethylamine, see Ethylamine</i>			75-04-7		EAM (EAN/ EAO)
<i>Monoisopropanolamine, see Isopropanolamine</i>			78-96-6		MPA (PLA/PLX)
Morpholine	7	2	110-91-8	MPL	
Motor fuel anti-knock compound (containing lead alkyls)	0	1		MFA	
<i>MTBE, see Methyl tert-butyl ether</i>			1634-04-4		MBE
Myrcene	30		123-35-3	MRE	
Naphtha:					

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Aromatic	33		64742-94-5	NAR	
Coal tar solvent	33		8030-30-6	NCT	
Heavy	33		64742-94-5	NAG	
Paraffinic	33		8012-95-1	NPF	
Petroleum	33		64742-94-5	PTN	
Solvent	33		64742-94-5	NSV	
Stoddard solvent	33		8052-41-3	NSS	
Varnish Makers' and Painters'	33		8032-32-4	NVM	
Naphthalene (molten)	32	3	91-20-3	NTM	
Naphthalene crude (molten)	32		91-20-3	NCM	NAC/NCD
Naphthalene still residue	32	2	91-20-3	NSR	
Naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution	34		85-47-2	NSB	NSA
Naphthalene sulfonic (alternately sulphonic) acid-Formaldehyde copolymer, sodium salt solution	0	1	85-47-2	NFS	
Naphthenic acid	4		1338-24-5	NTI	
Naphthenic acid, sodium salt solution	43		61790-13-4	NTS	
Neodecanoic acid	4		26896-20-8	NEA	DCO/NAT
Nitrating acid (mixture of Sulfuric (alternately Sulphuric) and Nitric acids)	0	1	7697-37-2	NIA	
Nitric acid (70% and over)	3	2, 3	7697-37-2	NCE	NAC/NCD
Nitric acid (less than 70%)	3	2	7697-37-2	NCD	NAC/NCE
<i>Nitric Acid, fuming</i> , see Nitric acid (70% and over)		1, 2, 3	7697-37-2		NCE
<i>Nitric Acid, red fuming</i> , see Nitric acid (70% and over)		1, 2, 3	52583-42-3		NCE
Nitrilotriacetic acid, trisodium salt solution	34	3	139-13-9	NCA	
Nitrobenzene	42		98-95-3	NTB	

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<i>o</i> -Nitrochlorobenzene, see <i>o</i> -Chloronitrobenzene			88-73-3		CNO (CNP)
Nitroethane	42		79-24-3	NTE	
Nitroethane (80%)/Nitropropane (20%)	42	2, 3		NNL	NNM/ NNO/ NPM/ NPN/ NPP/NTE
Nitroethane/1-Nitropropane (each 15% or more) mixture	42	2		NNO	NNL/ NNM/ NPM/ NPN/ NPP/NTE
Nitrogen	0	1	7727-37-9	NXX	
Nitrophenol (mixed isomers)	42		88-75-5	NPX	NIP/NPH
<i>o</i> -Nitrophenol (molten)	0	1, 2	88-75-5	NTP	NIP/NPH/ NPX
Nitropropane (60%)/Nitroethane (40%) mixture	42			NNM	NNL/ NNO/ NPM/ NPN/ NPP/NTE
1-or 2-Nitropropane	42		108-03-2	NPM	NPN/NPP
<i>o</i> - or <i>p</i> -Nitrotoluenes	42	3	99-99-0	NIT	NIE/NTR/ NTT
<i>Nonane</i> (all isomers), see Alkanes (C6-C9)			111-84-2	NAX	ALK (NAN)
Nonanoic acid (all isomers)	4		112-05-0	NNA	NAI/NIN

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Nonanoic/Tridecanoic acid mixture	4			NAT	NAI/NIN/ NNA
<i>Non-edible industrial grade palm oil, see Oil, misc.:</i> Palm, non-edible industrial grade			8002-75-3		OPB
Nonene (all isomers)	30	2	124-11-8	NOO	NNE/ NON/ OAM/ OFX/OFY
Nonyl acetate	34		143-13-5	NAE	
Nonyl alcohol (all isomers)	20	2	143-08-8	NNS	ALR/DBC/ NNI/NNN
<i>Nonylbenzene, see Alkyl (C9+) benzenes</i>			1081-77-2		AKB
Non-noxious Liquid Substance, (12) n.o.s. Cat OS	0	1		NOL	
Nonyl methacrylate monomer	14		2696-43-7	NMA	
Nonyl phenol	21		25154-52-3	NNP	
<i>Nonyl phenol poly(4+)ethoxylate, see Alkyl (C7-C11) phenol poly(4-12) ethoxylate</i>			9016-45-9	NPE	APN
<i>Nonyl phenol sulfide (alternately sulphide) (90% or less) solution, see Alkyl (C8-C40) phenol sulfide (alternately sulphide)</i>			34992-00-2		AKS (NPS)
Nonylphenol (48-62%)/Phenol (42-48%)/Dinonylphenol (1-10%) mixture	21			NYL	
Noxious Liquid Substance, NF, (1) n.o.s. ("trade name" contains "principal components") Cat X	0	1			
Noxious Liquid Substance, F, (2) n.o.s. ("trade name" contains "principal components") Cat X	0	1			
Noxious Liquid Substance, NF, (3) n.o.s. ("trade name" contains "principal components") Cat X	0	1			

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Noxious Liquid Substance, F, (4) n.o.s. ("trade name" contains "principal components") Cat X	0	1			
Noxious Liquid Substance, NF, (5) n.o.s. ("trade name" contains "principal components") Cat Y	0	1			
Noxious Liquid Substance, F, (6) n.o.s. ("trade name" contains "principal components") Cat Y	0	1			
Noxious Liquid Substance, NF, (7) n.o.s. ("trade name" contains "principal components") Cat Y	0	1			
Noxious Liquid Substance, F, (8) n.o.s. ("trade name" contains "principal components") Cat Y	0	1			
Noxious Liquid Substance, NF, (9) n.o.s. ("trade name" contains "principal components") Cat Z	0	1			
Noxious Liquid Substance, F, (10) n.o.s. ("trade name" contains "principal components") Cat Z	0	1			
Noxious Liquid Substance, (11) n.o.s. ("trade name" contains "principal components") Cat Z	0	1			
Non-noxious Liquid Substance, (12) n.o.s. ("trade name" contains "principal components") Cat OS	0	1		NOL	
<i>Nutmeg butter oil</i> , see Oil, edible: Nutmeg butter					ONB (VEO)
<i>1-Octadecene</i> , see the olefin or alpha-olefin entries			112-88-9		OAM/OFZ
<i>1-Octadecanol</i> , see Stearyl alcohol			112-92-5		SYL (ALY/ASY)
Octadecenoamide solution	10		3322-62-1	ODD	
<i>Octadecenol (oleyl alcohol)</i> , see Alcohols (C13+)			143-28-2		ALY (AYL/ASY/OYL)
Octamethylcyclotetrasiloxane	34	3	556-67-2	OSA	

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<i>Octane (all isomers), see Alkanes (C6-C9)</i>			111-65-9	OAX	ALK (100/OAN)
Octanoic acid (all isomers)	4		124-07-2	OAY	OAA/EHO
Octanol (all isomers)	20	2	111-87-5	OCX	EHX/OPA/OTA
Octene (all isomers)	30	2	111-66-0	OTX	OAM/OFC/OFY/OFW/OTE
n-Octyl acetate	34		112-14-1	OAF	OAE
<i>Octyl alcohol, see Octanol (all isomers)</i>		2	111-87-5		OCX (EHX/IOA/OTA)
Octyl aldehydes	19		124-13-0	OAL	EHA/IOC//OLX
<i>Octylbenzenes, see Alkyl (C5-C8) benzenes</i>			2189-60-8		AKD
Octyl decyl adipate	34		110-29-2	ODA	
n-Octyl mercaptan	0		111-88-6	OME	
<i>Octyl nitrates (all isomers), see Alkyl (C7-C9) nitrates</i>		2	629-39-0	ONE	AKN
Octyl phenol	21		27193-28-8	OPH	
<i>Octyl phthalate, see Dioctyl phthalate</i>			117-84-0		DAH (DIE/DIO/DLK/DOP)
Offshore contaminated bulk liquid P	0			OBP	
Offshore contaminated bulk liquid S	0			OBS	
Oil, edible:					
Beechnut	34		481-39-0	OBN	VEO

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Castor	34		8001-79-4	OCA	VEO
Cocoa butter	34		8002-31-1	OCB	VEO
Coconut	34	2	8001-31-8	OCC	VEO
Cod liver	34		8001-69-2	OCL	AFN
Corn	34		8001-30-7	OCO	VEO
Cottonseed	34		8001-29-4	OCS	VEO
Fish	34	2	8016-13-5	OFS	AFN
Grape seed	34		8024-22-4		
Groundnut	34		8002-03-7	OGN	VEO
Hazelnut	34		185630-72-2	OHN	VEO
Illipe	34		91770-65-9	ILO	VEO
Lard	34		61789-99-9	OLD	AFN
Maize, see Oil, edible: Corn			8001-30-7		OCO (VEO)
Mango kernel	34	3	90063-86-8	MKO	
Nutmeg butter	34		8008-45-5	ONB	VEO
Olive	34		8001-25-0	OOL	VEO
Palm	34	2, 3	8002-75-3	OPM	VEO
Palm kernel	34		8023-79-8	OPO	VEO
Palm kernel olein	34		93334-39-5	PKO	VEO
Palm kernel stearin	34		91079-14-0	PKS	VEO
Palm mid fraction	34		91079-14-0	PFM	VEO
Palm olein	34		93334-39-5	PON	VEO
Palm stearin	34		91079-14-0	PMS	VEO
Peanut	34		8002-03-7	OPN	VEO
Poppy	34		8002-11-7	OPY	VEO

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Poppy seed	34		8002-11-7	OPS	VEO
Raisin seed	34		8024-22-4	ORA	VEO
Rapeseed	34		8002-13-9	ORP	VEO
Rapeseed (low erucic acid containing less than 4% free fatty acids)	34	3	8002-13-9	ORO	ORP/VEO
Rice bran	34		68553-81-1	ORB	VEO
Safflower	34		8001-23-8	OSF	VEO
Salad	34		9083-41-4	OSL	VEO
Sesame	34		8008-74-0	OSS	VEO
Shea butter	34		194043-92-0	OSH	VEO
Soyabean	34	2	8001-22-7	OSB	VEO
<i>Sunflower</i> , see Oil, edible: Sunflower seed			8001-21-6		OSN (VEO)
Sunflower seed	34		8001-21-6	OSN	VEO
Tucum	34		356065-49-1	OTC	VEO
Vegetable	34		9083-41-4	OVG	VEO
Walnut	34		8024-09-7	OWN	VEO
Oil, fuel:					
No. 1	33		8008-20-6	OON	
No. 1-D	33			OOD	
No. 2	33		68476-30-2	OTW	
No. 2-D	33			OTD	
No. 4	33		68553-00-4	OFR	
No. 5	33		70892-11-4	OFV	
No. 6	33		68553-00-4	OSX	
Oil, misc.:					
Acid mixture from soyabean, corn (maize) and	34			AOM	

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sunflower oil refining						
Aliphatic	33		8052-41-3	OML	AFN	
Animal	34		68991-19-5	OMA		
Aromatic	33		6472-95-6	OMR		
Camelina	34		68956-68-3	OCI		
Cashew nut shell (untreated)	34		8007-24-7	OCN		
Clarified	33		64741-62-4	OCF		
Coal	33		8008-2-06	OMC		
Coconut fatty acid	34	2	61788-47-4	CFA		
Coconut, fatty acid methyl ester	34		61788-59-8	OCM		
Cotton seed oil, fatty acid	34		8001-29-4	CFY		
Crude	33		8002-05-9	OFA		
Diesel	33		68334-30-5	ODS		
Disulfide (alternately Disulphide)	0	1	624-92-0	ODI		
Gas, cracked	33		8006-61-9	GOC		
Gas, high pour	33		8006-61-9	OGP		
Gas, low pour	33		8006-61-9	OGL		
Gas, low sulfur (alternately sulphur)	33		8006-61-9	OGS		
Heartcut distillate	33		68131-77-1	OHD		
Jatropha	34	3	88-6-7	JTO		AFN
Lanolin	34		8006-54-0	OLL		
Linseed	33		8001-26-1	OLS		
Lubricating	33	2	93572-43-1	OLB		
Mineral	33		8042-47-5	OMN		
Mineral seal	33		64742-46-7	OMS		
Motor	33			OMT		

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Neatsfoot	33		8002-64-0	ONF	AFN
Oiticica	34		8016-35-1	OOI	
Palm acid	34		8002-75-3	PLM	
Palm fatty acid distillate	34		68440-15-3	PFD	
Palm oil, fatty acid methyl ester	34		91051-34-2	OPE	
Palm kernel acid	34		101403-98	OPK	
Palm kernel fatty acid distillate	34		68440-15-3	PNG	
Palm, non-edible industrial grade	34		8002-75-3	OPB	
Penetrating	33		64742-95-6	OPT	
Perilla	34		68132-21-8	OPR	
Pilchard	34		8016-13-5	OPL	AFN
Pine	33		8002-09-3	OPI	PNL
Rapeseed fatty acid methyl esters	34	3	73891-99-3	ORP	
Residual	33		68476-33-5	ORL	
Resin, distilled	30	3	8016-37-3	ORR	
Road	33		8052-42-4	ORD	
Rosin	33		8002-16-2	ORN	
Seal	34		64742-46-7	OSE	
Soapstock	34		68952-95-4	OIS	
Soyabean (epoxidized)	34		8013-07-8		OSC/EVO
Soyabean fatty acid methyl ester	34		68919-53-9		OST
Spindle	33		64742-54-7	OSD	
Tall	34		8002-26-4	OTL	OTI/OTJ
Tall, crude	34	2	8002-26-4	OTI	OTJ/OTL
Tall, distilled	34	2	8002-26-4	OTJ	OTI/OTL
Tall, fatty acid	34	2	61790-12-3	OTT	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Tall fatty acid (resin acids less than 20%)	34	2	61790-12-3	OTK	OTT
Tall pitch	34		08016-81-7	OTP	
Transformer	33		64742-53-6	OTF	
Tung	34		8001-20-5	OTG	
Turbine	33			OTB	
Used cooking oil	34			OUC	VEO
Used cooking oil (triglycerides, C16-C18, and C18 unsaturated)	34			OUT	VEO
Vacuum gas oil	33		64741-57-7	OVC	
<i>Oleamide solution, see Octadecenoamide solution</i>			301-02-0		ODD
Olefin-Alkyl ester copolymer (molecular weight 2000+)	30			OCP	
Olefin mixture (C7-C9) C8 rich, stabilized	30	3	25339-56-4	OFC	OFW/OFY/ OFX
Olefin mixtures (C5-C7)	30	3	25264-93-1	OFY	OAM/ OFC/ OFW/OFX/ OFZ
Olefin mixtures (C5-C15)	30	3	25264-93-1	OFY	OAM/ OFC/ OFW/OFX/ OFZ
Olefins (C13+, all isomers)	30		85535-87-1	OFZ	OAM/OFW
alpha-Olefins (C6-C18) mixtures	30		592-41-6	OAM	OFC/ OFW/OFX/ OFY/OFZ
Oleic acid	4		112-80-1	OLA	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Oleum	0	1, 2	8014-95-7	OLM	SAC/SFX
<i>Oleyl alcohol</i> , see Alcohols (C13+)			143-28-2	OYL	ALY (ASY)
Oleylamine	7		112-90-3	OLY	
<i>Olive oil</i> , see Oil, edible: Olive			8001-25-0		OOL (VEO)
Orange juice (concentrated)	0	1, 3	68514-75-0	OJC	OJN
Orange juice (not concentrated)	0	1, 3	68514-75-0	OJN	OJC
Organomolybdenum amide	10		445409-27-8	OGA	
<i>ORIMULSION</i> , see Asphalt emulsion					ASQ
Oxyalkylated alkyl phenol formaldehyde	33		9003-35-4	OPF	
Oxygenated aliphatic hydrocarbon mixture	0	1, 3		OAH	
<i>Palm acid oil</i> , see Oil, misc.: Palm acid		3	68440-15-3		PLM
<i>Palm fatty acid distillate</i> , see Oil, misc.: Palm fatty acid distillate		3			PFD
<i>Palm kernel acid oil</i> , see Oil, misc.: Palm kernel acid			101403-98		PNO
<i>Palm kernel acid oil, methyl ester</i> , see Oil, misc.: Palm kernel acid, methyl ester					PNF
<i>Palm kernel oil</i> , see Oil, edible: Palm kernel			8023-79-8		OPO (VEO)
<i>Palm kernel oil fatty acid distillate</i> , see Oil, misc.: Palm kernel fatty acid distillate					PNG
<i>Palm kernel olein</i> , see Oil, edible: Palm kernel olein		3	93334-39-5		PKO (VEO)
<i>Palm kernel stearin</i> , see Oil, edible: Palm kernel stearin		3			PKS (VEO)
<i>Palm mid fraction</i> , see Oil, edible: Palm mid fraction		3	91079-14-0		PFM (VEO)
<i>Palm oil</i> , see Oil, edible: Palm		2, 3	8002-75-3	OPM	VEO/OPE

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<i>Palm oil fatty acid methyl ester</i> , see Oil, misc.:		3			OPE
<i>Palm fatty acid methyl ester</i>					
<i>Palm olein</i> , see Oil, edible: Palm olein		3	93334-39-5		PON (VEO)
<i>Palm stearin</i> , see Oil, edible: Palm stearin			91079-14-0		PMS (VEO)
Parachlorobenzotrifluoride	32		98-56-6	PBF	
<i>Paraffin wax</i> , see Waxes: Paraffin		3	8002-74-2		WPF
<i>n-Paraffins (C10-C20)</i> , see n-Alkanes (C10+) all isomers				PFN	ALJ
Paraldehyde	19		123-63-7	PDH	
Paraldehyde-Ammonia reaction product	9			PRB	
<i>Peanut</i> , see Oil, edible: Peanut			8002-03-7		OPN (VEO)
Pentachloroethane	36		76-01-7	PCE	
Pentacosa (oxypropane-2,3-diyl)s	20		923-61-5	POY	
<i>Pentadecanol</i> , see Alcohols (C13+)			629-76-5	PDC	ALY
1,3-Pentadiene	30		1574-41-0	PDE	PDN
1,3-Pentadiene (greater than 50%), Cyclopentene and isomers, mixtures	30	3	1574-41-0	PMM	
<i>Pentaethylene glycol</i> , see Polyethylene glycols			4792-15-8		PEG
<i>Pentaethylene glycol methyl ether</i> , see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether			23778-52-1		PAG
Pentaethylenhexamine	7		4067-16-7	PEN	
Pentaethylenhexamine/Tetraethylenepentamine mixture	7			PEP	
Pentane (all isomers)	31		109-66-0	PTY	IPT/PTA

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Pentanoic acid	4		109-52-4	POC	
n-Pentanoic acid (64%)/2-Methyl butyric acid (36%) mixture	4			POJ	POC
<i>Pentasodium salt of Diethylenetriaminepentaacetic acid solution, see Diethylenetriaminepentaacetic acid, pentasodium salt solution</i>			140-01-2		DYS
Pentene (all isomers)	30		109-67-1	PTX	PTE
Pentyl aldehyde	19		110-62-3	PYL	
n-Pentyl propionate	34		624-54-4	PPE	
Perchloroethylene	36	2	127-18-4	PER	TTE
Petrolatum	33		8009-03-8	PTL	
Phenol	21	2	108-95-2	PHN	PNS
Phenol solutions (2% or less)	43		108-95-2	PNS	PHN
1-Phenyl-1-xylyl ethane	32		6196-96-8	PXE	
Phosphate esters	34		68130-47-2	PZE	
Phosphate esters, alkyl (C12-C14) amine	7			PEA	
[[[(Phosphonomethyl) imino] bis[ethylenenitrilobis (methylene)]] tetrakisphosphonic acid, ammonium salt solution (60% or less)	3			PES	
Phosphoric acid	1	2	7664-38-2	PAC	
Phosphorus, yellow or white	0	1	7723-14-0	PPW	PPB/PPR
Phosphosulfurized (alternately Phosphosulphurized) bicycle terpene	0	1		PBT	
Phthalate based polyester polyol	0	1, 2	32472-85-8	PBE	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Phthalic anhydride (molten)	11		85-44-9	PAN	
<i>PIB</i> , see Poly (4+)isobutylene (molecular weight >224).			9003-27-4		
alpha-Pinene	30		7785-26-4	PIO	PIB/PIN
beta-Pinene	30		127-91	PIP	PIN/PIO
<i>Pine oil</i> , see Oil, misc.: Pine			8002-09-3	PNL	OPI
Piperazine (70% or less)	7	3	110-85-0	PIZ	PPB/PPZ
Piperazine (crude)	7		110-85-0	PZC	PPZ/PIZ
Piperazine, 68% solution	7		110-85-0		
Polyacrylic acid solution (40% or less)	43		9003-01-4	PYA	
Polyalkenyl succinic anhydride amine	7		108-30-5	PSN	
Polyalkyl acrylate	14		9003-21-8	PAY	
Polyalkyl (C18-C22) acrylate in Xylene	14			PIX	
Polyalkylalkenaminesuccinimide, molybdenum oxysulfide (alternately oxysulphide)	0	3		PSO	
Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures	40		9038-95-3	PPX	
<i>Polyalkylene glycol butyl ether</i> , see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether				PGB	PAG
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether	40	2		PAG	
<i>Including:</i>					
<i>Diethylene glycol butyl ether</i>	40		112-34-5		
<i>Diethylene glycol ethyl ether</i>	40		111-90-0		
<i>Diethylene glycol n-hexyl ether</i>	40		112-59-4		
<i>Diethylene glycol methyl ether</i>	40		111-77-3		
<i>Diethylene glycol propyl ether</i>	40		6881-94-3		
<i>Dipropylene glycol butyl ether</i>	40		112-34-5		

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<i>Dipropylene glycol methyl ether</i>	40		34590-94-8		
<i>Polyalkylene glycol butyl ether</i>	40		111-76-2		
<i>Polyethylene glycol monoalkyl ether</i>	40		111-80-5		
<i>Polypropylene glycol methyl ether</i>	40		34590-94-8		
<i>Tetraethylene glycol methyl ether</i>	40		23783-42-8		
<i>Triethylene glycol butyl ether</i>	40		143-22-6		
<i>Triethylene glycol ethyl ether</i>	40		112-50-5		
<i>Triethylene glycol methyl ether</i>	40		112-35-6		
<i>Tripropylene glycol methyl ether</i>	40		25498-49-1		
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate	34			PAF	
<i>Including:</i>					
<i>Diethylene glycol butyl ether acetate</i>	34		124-17-4		
<i>Diethylene glycol ethyl ether acetate</i>	34		112-15-2		
<i>Diethylene glycol methyl ether acetate</i>	34		110-49-6		
Polyalkylene oxide polyol	20			PAO	
Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures	40			PPX	
Polyalkylene oxide polyol	20			PAO	
Polyalkyl (C10-C20) methacrylate	14		221-657-1	PMT	PYY
Polyalkyl methacrylate in mineral oil	14			PYY	PMT
Polyalkyl (C10-C18) methacrylate/Ethylene-propylene copolymer mixture	14			PEM	
Polyalpha olefins	31		115-07-1	PYO	
Polyaluminum (alternately Polyaluminium) chloride solution	1		1327-41-9	PLS	
Polybutadiene, hydroxyl terminated	20		69102-90-5	PHT	

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Polybutene	33		9003-29-6	PLB	
Polybutenyl succinimide	10		84605-20-9	PBS	
<i>Polycarboxylic ester (C9+), see Ditridecyl adipate</i>			16958-92-2		DTY
Poly (2+)cyclic aromatics	32		91-20-3	PCA	
<i>Polydimethylsiloxane, see Dimethylpolysiloxane</i>			9016-00-6		DMP
Polyether, borated	41			PED	
Polyether (molecular weight 1350+)	41			PYR	
Polyether polyols	41		25214-63-5	PEO	
Polyethylene glycol	40		25322-68-3	PEG	
Polyethylene glycol dimethyl ether	40		24991-55-7	PEF	
Poly(ethylene glycol) methylbutenyl ether (molecular weight >1000)	40			PBN	
<i>Polyethylene glycol monoalkyl ether, see</i>			111-77-3	PEE	PAG
<i>Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether</i>					
Polyethylene polyamines	7	2	109-89-7	PEB	PEY
Polyethylene polyamines (more than 50% C5-C20 Paraffin oil)	7	2, 3		PEY	PEB
Polyferric sulfate (alternately sulphate) solution	34		51434-22-1	PSS	
Polyglycerine/Sodium salts solution (containing less than 3% Sodium hydroxide)	20	2		PGT	PGS
Polyglycerol	20		25618-55-7	PGL	
Poly(iminoethylene)-graft-N-poly(ethyleneoxy) solution (90% or less)	7	3		PIG	PIM
Polyisobutenamine in aliphatic (C10-C14) solvent	7	2		PIB	PIA
(Polyisobutene) amino products in aliphatic hydrocarbons	7	3			
Polyisobutenyl anhydride adduct	11			PBA	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Polyisobutenyl succinimide	10		84605-20-9	PIS	
Poly(4+)isobutylene (molecular weight >224)	30	3	9003-27-4	PIL	
Polyisobutylene (molecular weight ≤224)	30	3	9003-27-4	PIL	
Polyisobutylene succinic anhydride	11		67762-77-0	PYS	
Polymerized esters	34			PYM	
Polymethylene polyphenyl isocyanate	12	2	9016-87-9	PPI	
Polymethylsiloxane	34		9006-65-9	PMX	
Polyolefin (molecular weight 300+)	33			PMW	PLF
Polyolefin amide alkeneamine (C17+)	33			POH	POD
<i>Polyolefin amide alkeneamine (C28+), see</i>				POD	POH
Polyolefin amide alkenamine (C17+)					
Polyolefin amide alkeneamine borate (C28-C250)	33		134758-95-5	PAB	
Polyolefin amide alkeneamine in mineral oil	33			PLK	
Polyolefin amide alkeneamine/Molybdenum oxysulfide (alternately oxysulphide) mixture	7			PMO	
Polyolefin amide alkeneamine polyol	20			PAP	
Polyolefinamine (C17+)	7		98761-78-5	POG	
Polyolefinamine (C28-C250)	33			POM	
Polyolefinamine in alkyl (C2-C4) benzenes	32			POF	POR
Polyolefinamine in aromatic solvent	32	3		POR	POF
Polyolefin aminoester salts (molecular weight 2000+)	34			PAE	
Polyolefin anhydride	11		9006-26-2	PAR	
Polyolefin ester (C28-C250)	34			POS	
Polyolefin in mineral oil	30			PLF	PMW
Polyolefin phenolic amine (C28-C250)	9			PPH	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Polyolefin phosphorosulfide (alternately phosphorosulphide), barium derivative (C28-C250)	34			PPS	
Poly (oxyalkylene) alkenyl ether (molecular weight >1000)	41	3	9005-00-9	PXY	
Polyoxybutylene alcohol	41		9002-92-0	PXA	
Poly(20)oxyethylene sorbitan monooleate	34		9005-65-6	PSM	
Polyoxypropylenediamine (molecular weight 2000)	7			PYD	
Poly(5+) propylene	30		9003-07-0	PLQ	PLP
Polypropylene glycol	40	2	25322-69-4	PGC	
<i>Polypropylene glycol methyl ether</i> , see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether			107-98-2	PGM	PAG
Polysiloxane	34		63148-53-8	PSX	
Polysiloxane/White spirit, low (15-20%) aromatic	34			PWS	
<i>Poly(tetramethylene ether) glycols (molecular weight 950-1050)</i> , see alpha-hydro-omega-Hydroxytetradeca(oxytetramethylene)			25190-06-1	PYU	HTO
Polytetramethylene ether glycol	40		25190-06-1	PYT	HTO/PYU/ PYS
<i>Poppy seed</i> , see Oil, edible: Poppy seed			8002-11-7		OPS (VEO)
<i>Poppy</i> , see Oil, edible: Poppy					OPY (VEO)
Potassium chloride solution	43		7447-40-7	PCU	PCD/PSD
Potassium chloride solution (10% or more)	43		7447-40-7	PCS	PCD/PCU
Potassium chloride solution (less than 26%)	43		7447-40-7	PSD	CLM/DRL/ PCS/PCU
Potassium formate solutions	34		590-29-4	PFR	

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<i>Potassium hydroxide solution</i> , see Caustic potash solution		2	1310-58-3		CPS/PTH
Potassium oleate	34		143-18-0	POE	
Potassium polysulfide (alternately polysulphide)/Potassium thiosulfide (alternately thiosulphide) solution (41% or less)	0	1		PYP	PSF/PTF
Potassium salt of polyolefin acid	34			PSP	
Potassium thiosulfate (alternately thiosulphate) (50% or less)	43		10294-66-3	PTF	
Propane	31		74-98-6	PRP	LPG
<i>iso-Propanolamine</i> , see Isopropanolamine			78-96-6		MPA (PAX/PLA)
n-Propanolamine	8		107-10-8	PLA	MPA/PAX
2-Propene-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer solution	0	1, 3		PLN	
Propionaldehyde	19		123-38-6	PAD	
beta-Propiolactone	18	3	57-57-8	PLT	
Propionic acid	4		79-09-4	PNA	
Propionic anhydride	11		123-62-6	PAH	
Propionitrile	37		107-12-0	PCN	
<i>n-Propoxypropanol</i> , see Propylene glycol monoalkyl ether			1569-01-3	PXP	PGE
n-Propyl acetate	34		109-60-4	PAT	IAC
n-Propyl alcohol	20	2	71-23-8	PAL	IPA
n-Propyl chloride	36		540-54-5	PRC	
Propyl ether	41		557-17-5		IPE/PRE
n-Propylamine	7		107-10-8	PRA	IPO/IPP/

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
<i>iso</i> -Propylamine solution, see Isopropylamine (70% or less) solution			75-31-0		IPQ IPQ (IPO/ IPP/PRA)
<i>Propylbenzenes (all isomers), see Alkyl (C3-C4) benzenes</i>			103-65-1	PBY	AKC (CUM/ PBZ)
<i>iso</i> -Propyl cyclohexane, see Isopropylcyclohexane			696-29-7		IPX
Propylene	30		115-07-1	PPL	
Propylene-Butylene copolymer	30		29160-13-2	PBP	
Propylene carbonate	34		108-32-7	PLC	
Propylene dimer	30		26824-72-2	PDR	
Propylene glycol	20	2	57-55-6	PPG	
<i>Propylene glycol n-butyl ether, see Propylene glycol monoalkyl ether</i>			5131-66-8	PGD	PGE
<i>Propylene glycol ethyl ether, see Propylene glycol monoalkyl ether</i>			1569-02-4	PGY	PGE
<i>Propylene glycol methyl ether, see Propylene glycol monoalkyl ether</i>		2	107-98-2	PME	PGE
Propylene glycol methyl ether acetate	34	2	108-65-6	PGN	
Propylene glycol monoalkyl ether	40			PGE	
<i>Including:</i>					
<i>n</i> -Propoxypropanol	40		30136-13-1		
<i>Propylene glycol n-butyl ether</i>	40		5131-66-8		
<i>Propylene glycol ethyl ether</i>	40		1569-02-4		
<i>Propylene glycol methyl ether</i>	40		107-98-2		
<i>Propylene glycol propyl ether</i>	40		1569-01-3		
Propylene glycol phenyl ether	40		770-35-4	PGP	

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<i>Propylene glycol propyl ether</i> , see Propylene glycol monoalkyl ether			1569-01-3		PGE
Propylene oxide	16		75-56-9	POX	
Propylene tetramer	30		6842-15-5	PTT	
Propylene trimer	30		13987-01-4	PTR	
Propylene/Propane/MAPP gas mixture	30	2		PPM	
<i>Pseudocumene</i> , see Trimethylbenzene (all isomers)			95-63-6		TMB/ TMD/ TME/TRE
Pyridine	9		110-86-1	PRD	
<i>Pyridine bases</i> , see Paraldehyde-Ammonia reaction product					PRB
Pyrolysis gasoline (containing Benzene)	32	3	68477-58-7	PYG	GPY
<i>Rapeseed oil (low erucic acid containing less than 4% free fatty acids)</i> , see Oil, edible: Rapeseed (low erucic acid containing less than 4% free fatty acids)		3	8002-13-9		ORO (VEO)
<i>Rapeseed oil fatty acid methyl esters</i> , see Oil, misc.: Rapeseed fatty acid methyl esters		3	73891-99-3		RSO
<i>Rapeseed oil</i> , see Oil, edible: Rapeseed			8002-13-9		ORO (VEO)
Refrigerant gases	0	1		RFG	
<i>Resin oil, distilled</i> , see Oil, misc.: Resin, distilled		3			ORR (ORS)
<i>Rice bran oil</i> , see Oil, edible: Rice bran			68553-81-1		ORB
Rosin soap (disproportionated) solution	43		61790-50-9	RSP	
<i>Rosin</i> , see Oil, misc.: Rosin			8050-09-7		ORN
<i>Rum</i> , see Alcoholic beverages, n.o.s.			64-17-5		ABV
<i>Safflower oil</i> , see Oil, edible: Safflower			8001-23-8		OSF (VEO)

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Sewage sludge	43			SWS	
<i>Shea butter</i> , see Oil, edible: Shea butter		3	194043-92-0		OSH (VEO)
Silica slurry	43		69012-64-2	SLC	
Siloxanes	34		9011-19-2	SLX	
Sludge, treated	43			SWA	
Sodium acetate solutions	34		127-09-3	SAN	
Sodium acetate, Glycol, Water mixture (containing 1% or less Sodium hydroxide) (if non-flammable or non-combustible)	5	2		SAY	SAO/SAP/ SAQ/SAY
Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide)	5			SAQ	SAO/SAP/ SAW/SAY
Sodium acetate, Glycol, Water mixture (not containing Sodium hydroxide)	34	2		SAW	SAO/SAP/ SAQ/SAY
Sodium alkyl (C14-C17) sulfonates (alternately sulphonates) (60-65% solution)	34			SSU	AKA/AKE
Sodium aluminate solution	5		11138-49-1	SAV	SAU
Sodium aluminate solution (45% or less)	5		11138-49-1	SAU	SAV
Sodium aluminosilicate slurry	34		1344-00-9	SLR	
Sodium benzoate	34		532-32-1	SBN	SBM
Sodium bicarbonate solution (less than 10%)	34	3	144-55-8	SBC	
Sodium borohydride (15% or less)/Sodium hydroxide solution	5			SBX	CSS/SBH/ SBI/SHD
Sodium bromide solution (less than 50%)	43	3	7647-15-6	SBL	SBR
Sodium carbonate solution	5		497-19-8	SCE	
Sodium chlorate solution (50% or less)	0	1, 2	7775-09	SDD	SDC
Sodium cyanide solution	5		143-33-9	SCO	SCN/SCS
Sodium dichromate solution (70% or less)	0	1, 2	7789-12-0	SDL	SCR

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<i>Sodium dimethyl naphthalene sulfonate solution, see Dimethyl naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution</i>			532-02-5		DNS
Sodium hydrogen sulfide (alternately sulphide) (6% or less)/Sodium carbonate (3% or less) solution	0	1, 2, 3		SSS	SCE/SHW
Sodium hydrogen sulfite (alternately sulphite) solution (45% or less)	43		7631-90-5	SHY	SHX
Sodium hydrosulfide (alternately hydrosulphide)/Ammonium sulfide (alternately sulphide) solution	5	2		SSA	ASF/ASS
Sodium hydrosulfide (alternately hydrosulphide) solution (45% or less)	5	2	16721-80-5	SHR	
<i>Sodium hydroxide solution, see Caustic soda solution</i>		2	1310-73-2		CSS (SHD)
Sodium hypochlorite solution (15% or less)	5		7681-52-9	SHP	SHC/SHQ
Sodium hypochlorite solution (20% or less)	5		7681-52-9	SHQ	SHC/SHP
Sodium lignosulfonate (alternately lignosulphonate) solution	43		8061-51-6	SLG	LNL
Sodium long-chain alkyl salicylate (C13+)	34		84539-60-6	SLS	
<i>Sodium-2-mercaptobenzothiazol solution, see Mercaptobenzothiazol, sodium salt solution</i>			2492-26-4		SMB
Sodium methoxide (25% in methanol)	0	1	124-41-4	SMO	
Sodium methylate 21-30% in methanol	0	1, 2, 3	124-41-4	SMT	SMS
<i>Sodium naphthalene sulfonate (alternately sulphonate) solution, see Naphthalene sulfonic (alternately sulphonic) acid (40% or less), sodium salt solution (40% or less)</i>			532-02-5	SNS	NSA (NSB)

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<i>Sodium naphthenate solution, see Naphthenic acid, sodium salt solution</i>			61790-13-4		NTS
Sodium nitrite solution	5		7632-00-0	SNI	SNT
<i>Sodium N-methyl dithio carbamate solution, see Metam sodium solution</i>			137-42-8	MSS	SMD
Sodium petroleum sulfonate (alternately sulphonate)	34		68608-26-4	SPS	
Sodium poly (4+)acrylate solution	43	2	9003-04-7	SOP	SOO
Sodium polyacrylate solution	43	2	9003-04-7	SOO	SOP
<i>Sodium salt of Ferric hydroxyethylethylenediaminetriacetic acid solution, see Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution</i>			139-89-9	STA	FHX
Sodium silicate solution	43	2	1344-09-8	SSN	SSC
Sodium sulfate (alternately sulphate) solution	34	3	7757-82-5	SST	SSO
Sodium sulfide (alternately sulphide) solution (15% or less)	43		1313-82-2	SDR	SDS
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H ₂ S 15 ppm or less)	0	1, 2		SSH	SDS/SHR/SSI/SSJ
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H ₂ S greater than 15 ppm but less than 200 ppm)	0	1, 2		SSI	SDS/SHR/SSH/SSJ
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H ₂ S greater than 200 ppm)	0	1, 2		SSJ	SDS/SHR/SSH/SSI

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Sodium sulfite (alternately sulphite) solution (25% or less)	43		7757-83-7	SUP	SSF/SUS
Sodium tartrates/Sodium succinates solution	43			STM	
Sodium thiocyanate solution (56% or less)	0	1, 2	540-72-7	STS	SCY
Sorbitol solution	20		50-70-4	SBU	SBT
<i>Soyabean fatty acid methyl ester, see Oil, misc.:</i>			67784-80-9		OST
Soyabean fatty acid methyl ester					
Soyabean oil (epoxidized)	34		8013-07-8		OSC/EVO
<i>Soyabean oil, see Oil, edible: Soyabean</i>		2	8001-22-7		OSB (VEO)
<i>Stearic acid, see Fatty acids (saturated, C13+)</i>			57-11-4	SRA	FAD (FAB/ FAE/FDI/ FDT)
Stearyl alcohol	20		112-92-5	SYL	ALY/ASY
<i>Stoddard solvent, see Naphtha: Stoddard solvent</i>			8032-32-4		NSS
Styrene monomer	30		100-42-5	STY	
Sulfohydrocarbon (alternately Sulphohydrocarbon) (C3-C88)	33			SFO	
Sulfohydrocarbon (alternately Sulphohydrocarbon), long-chain (C18+) alkylamine mixture	7			SFX	
Sulfolane (alternately Sulpholane)	39		126-33-0	SFL	
Sulfonated (alternately Sulphonated) polyacrylate solutions	43	2		SPA	
Sulfur (alternately Sulphur) (molten)	0	1, 2	7704-34-9	SXX	
Sulfur (alternately Sulphur) dioxide	0	1	7446-09-5	SFD	
Sulfuric (alternately Sulphuric) acid	2	2	7664-93-9	SFA	SAC
Sulfuric (alternately Sulphuric) acid, spent	2	2	7664-93-9	SAC	SFA

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Sulfurized (alternately Sulphurized) fat (C14-C20)	33			SFT	
Sulfurized (alternately Sulphurized) polyolefinamide	10			SPY	
Sulfurized (alternately Sulphurized) polyolefinamide alkene (C28-C250) amine	33			SPO	
<i>Sunflower seed oil</i> , see Oil, edible: Sunflowerseed	34		8001-21-6		OSN (VEO)
<i>Sym-trichlorobenzene</i> , see 1,2,4-Trichlorobenzene.			108-70-3		
<i>Tall oil</i> , see Oil, misc.: Tall			8002-26-4		OTL (OTI/OTJ)
<i>Tall oil, crude</i> , see Oil, misc.: Tall, crude		2, 3	8002-26-4		OTI (OTJ/OTL)
<i>Tall oil, distilled</i> , see Oil, misc.: Tall, distilled		3	8002-26-4		OTJ (OTI/OTL)
<i>Tall oil, fatty acid</i> , see Oil, misc.: Tall fatty acid		2	61790-12-3		OTT
<i>Tall oil fatty acid (resin acids less than 20%)</i> , see Oil, misc.: Tall oil fatty acid (resin less than 20%)		2			OTK (OTT)
Tall oil fatty acid, barium salt	0	1, 2		TOB	
<i>Tall oil pitch</i> , see Oil, misc.: Tall pitch		3	08016-81-7		OTP (OTI/OTJ/OTL)
Tall oil soap (crude)	34			TOR	TOS
Tall oil soap (disproportionated) solution	43			TOS	
Tallow	34	2	61789-97-7	TLO	
<i>Tallow alcohol</i> , see Alcohols (C13+)		2	67762-27-0	TFA	ALY (ASY)
Tallow alkyl nitrile	37			TAN	
Tallow fatty acid	34	2	61790-37-2	TFD	
<i>Tallow fatty alcohol</i> , see Alcohols (C13+)		2	67762-27-0	TFA	ALY
<i>TAME</i> , see tert-Amyl methyl ether			994-05-8		AYE

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Tertiary butylphenols	21		128-39-2	BLT	BTP
Tetrachloroethane	36		79-34-5	TEC	
<i>1,1,2,2-Tetrachloroethane</i> , see Tetrachloroethane	36		79-34-5	TEC	TEE
<i>Tetradecanol</i> , see Alcohols (C13+)			112-72-1	TTN	ALY
<i>Tetradecene</i> , see olefins or alpha-olefin entries			1120-36-1		OAM/ OFY/OFW/ OFZ/TDD
<i>Tetradecylbenzene</i> , see Alkyl (C9+) benzenes			1459-10-5	TDB	AKB
Tetraethyl silicate monomer/oligomer (20% in ethanol)	0	1, 3		TSM	
Tetraethylene glycol	40		112-60-7	TTG	
<i>Tetraethylene glycol methyl ether</i> , see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether			23783-42-8		PAG
Tetraethylenepentamine	7	2	112-57-2	TTP	
Tetrahydrofuran	41		109-99-9	THF	
Tetrahydronaphthalene	32		119-64-2	THN	
Tetramethylbenzene (all isomers)	32		527-53-7	TTC	TTB
<i>1,2,3,5-Tetramethylbenzene</i> , see Tetramethylbenzene (all isomers)			527-53-7	TTB	TTC
<i>Tetrapropylbenzene</i> , see Alkyl (C9+) benzenes					AKB
<i>Tetrasodium salt of ethylenediaminetetraacetic acid solution</i> , see Ethylenediaminetetraacetic acid, tetrasodium salt solution			13235-36-4		EDS
Titanium dioxide slurry	43		13463-67-7	TDS	
Titanium tetrachloride	2		7550-45-0	TTT	
Toluene	32	2	108-88-3	TOL	
Toluene diisocyanate	12	2	584-84-9		TDI

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Toluenediamine	9		95-80-7	TDA	
o-Toluidine	9	2	95-53-4	TLI	TOD/TOI
<i>Triarylphosphate</i> , see Triisopropylated phenyl phosphates			115-86-6	TRA	TPL
Tributyl phosphate	34		126-73-8	TBP	
1,2,3-Trichlorobenzene (molten)	36	3	120-82-1	TBZ	TCB
1,2,4-Trichlorobenzene	36		120-82-1	TCB	TBZ
<i>1,2,3-Trichlorobenzol</i> , see 1,2,3-Trichlorobenzene (molten)			87-61-6	TBZ	TCB
1,1,1-Trichloroethane	36	2	71-55-6	TCE	TCM
1,1,2-Trichloroethane	36		79-00-5	TCM	TCE
Trichloroethylene	36	2	79-01-6	TCL	
1,1,2-Trichloro-1,2,2-trifluoroethane	36		76-13-1	TTF	
Tricresyl phosphate (containing 1% or more ortho-isomer)	34	3	78-30-8 (o isomer)	TCO	TCP/TCQ
Tricresyl phosphate (containing less than 1% ortho-isomer)	34	3	1330-78-5	TCP	TCO/TCQ
1,2,3-Trichloropropane	36	2	96-18-4	TCN	
<i>Tridecane (all isomers)</i> , see n-Alkanes (C10+) (all isomers)			629-50-5	TRD	ALV (ALJ)
Tridecanoic acid	34		638-53-9	TDO	
<i>Tridecanol</i> , see Alcohols (C13+)			112-70-9	TDN	ALY (ASK/ASY/AYK/LAL)
<i>Tridecene</i> , see Olefins (C13+ all isomers)			2437-56-1	TRD	OAM/OFY/OFW/OFZ/TDC

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Tridecyl acetate	34		1072-33-9	TAE	
<i>Tridecylbenzene, see Alkyl (C9+) benzenes</i>			123-02-4	TRB	AKB
Triethanolamine	8	2	102-71-6	TEA	
Triethylamine	7		121-44-8	TEN	
Triethylbenzene	32		102-25-0	TEB	
			(1,3,5)		
Triethylene glycol	40		112-27-6	TEG	
<i>Triethylene glycol butyl ether, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether</i>			143-22-6	TBE	PAG
Triethylene glycol butyl ether mixture	40		143-22-6	TBD	
Triethylene glycol di-(2-ethylbutyrate)	34		95-08-9	TGD	
Triethylene glycol dibenzoate	34		120-56-9	TGB	
Triethylene glycol ether mixture	40		112-35-6	TYM	
<i>Triethylene glycol ethyl ether, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether</i>			112-50-5	TGE	PAG
<i>Triethylene glycol methyl ether, see Poly (2-8)alkylene glycol monoalkyl (C1-C6) ether</i>			112-35-6	TGY	PAG
Triethylenetetramine	7	2	112-24-3	TET	
Triethyl phosphate	34		78-40-0	TPS	
Triethyl phosphite	34	2	122-52-1	TPI	
Triisobutylene	30		7756-94-7	TIB	
Triisooctyl trimellitate	34		27251-75-8	TIS	
Triisopropanolamine	8		122-20-3	TIP	
<i>Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution</i>					DTI

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Triisopropylated phenyl phosphates	34		26967-76-0	TPL	
Trimethylacetic acid	4		75-98-9	TAA	
Trimethylamine solution (30% or less)	7		75-50-3	TMT	TMA
Trimethylbenzene (all isomers)	32		95-63-6 (1,2,4)	TRE	TMB/ TMD/TME
<i>Trimethyl nonanol, see Dodecyl alcohol</i>			112-53-8		DDN (ASK/ ASY/LAL)
Trimethylol propane polyethoxylated	20		50586-59-9	TPR	
Trimethyl phosphite	34	2	121-45-9	TPP	
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-)	12		28679-16-5	THI	
Trimethylhexamethylenediamine (2,2,4- and 2,4,4-)	7		25513-64-8	THA	
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	34		6846-50-0	TMQ	
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate	34		18491-15-1	TMP	
2,2,4-Trimethyl-3-pentanol-1-isobutyrate	34			TMR	
1,3,5-Trioxane	41	2	110-88-3	TRO	
Triphenylborane (10% or less)/Caustic soda solution	5		960-71-4	TPB	
<i>Tripropylene, see Propylene trimer</i>			13987-01-4		PTR
Tripropylene glycol	40		24800-44-0	TGC	
<i>Tripropylene glycol methyl ether, see Poly (2-8) alkylene glycol monoalkyl (C1-C6) ether</i>			25498-49-1	TGM	PAG
<i>Trisodium nitrilotriacetate solution, see Nitritotriacetic acid, trisodium salt solution</i>			5064-31-3	TSO	NCA (TSN)
Trisodium phosphate solution	5		10101-89-0	TSP	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
<i>Trisodium salt of N-(Hydroxyethyl)ethylenediaminetriacetic acid solution, see N-(Hydroxyethyl)ethylenediaminetriacetic acid, trisodium salt solution</i>			207386-87-6		HET
Trixylyl phosphate	34		25155-23-1		TRP
<i>Trixylenyl phosphate, see Trixylyl phosphate</i>			25155-23-1		TRP
<i>Tung oil, see Oil, misc.: Tung</i>			8001-20-5		OTG
Turpentine	30		9005-90-7	TPT	
<i>Turpentine substitute, see White spirit (low (15-20%) aromatic)</i>			8052-41-13		WSL (WSP)
<i>Undecane (all isomers), see Alkanes (C10+) (all isomers)</i>			1120-21-4	UDN	ALV (ALJ)
Undecanoic acid	4		112-37-8	UDA	
<i>Undecanol, see Undecyl alcohol</i>			112-42-5		UND (ALR)
Undecene	30		1120-21-4	UDD	UDC
1-Undecene	30		821-95-4	UDC	UDD
Undecyl alcohol	20		112-42-5	UND	ALR
<i>Undecylbenzene, see Alkyl (C9+) benzenes</i>			67774-74-7	UDB	AKB
Urea solution	43		57-13-6	USL	URE
Urea, Ammonium mono- and di-hydrogen phosphate/Potassium chloride solution	0	1		UPX	
Urea/Ammonium nitrate solution (containing less than 1% free Ammonia)	43	2		UAU	ANU/UAS/ UAT/UAV
Urea/Ammonium nitrate solution (containing 1% or more free Ammonia)	6			UAT	ANU/UAS
Urea/Ammonium phosphate solution	43			UAP	

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Vacuum gas oil, see oil misc.: Vacuum gas oil	33		64741-57-7	OVC	IVA/VAL
Valeraldehyde (all isomers)	19		110-62-3	VAK	
Vanillin black liquor (free alkali content 3% or more)	5		68514-06-7	VBL	
Vegetable acid oils, n.o.s.	34			VAD	
<i>Including:</i>					
<i>Corn acid oil</i>	34		68308-50-9		
<i>Cottonseed acid oil</i>	34		68308-51-0		
<i>Dark mixed acid oil</i>	34				
<i>Groundnut acid oil</i>	34				
<i>Mixed acid oil</i>	34				
<i>Mixed general acid oil</i>	34				
<i>Mixed hard acid oil</i>	34				
<i>Mixed soft acid oil</i>	34				
<i>Rapeseed acid oil</i>	34		112-86-7		
<i>Safflower acid oil</i>	34				
<i>Soya acid oil</i>	34		68308-53-2		
<i>Sunflower seed acid oil</i>	34		84625-38-7		
<i>Vegetable oil mixtures, containing less than 15% free fatty acid (m)</i>	34			VEO	
<i>Vegetable fatty acid distillates, n.o.s.</i>	34	3		VFD	
<i>Including:</i>					
<i>Palm kernel fatty acid distillate</i>	34		67701-05-7		
<i>Palm oil fatty acid distillate</i>	34		68440-15-3		
<i>Tall fatty acid distillate</i>	34		61790-12-3		
<i>Tall oil fatty acid distillate</i>	34		61790-12-3		

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Vegetable oils, n.o.s.	34			VEO	
<i>Including:</i>					
<i>Beechnut oil</i>	34				
<i>Camelina oil</i>	34		68956-68-3		
<i>Cashew nut shell</i>	34		8007-24-7		
<i>Castor oil</i>	34		8001-79-4		
<i>Cocoa butter</i>	34		8002-31-1		
<i>Coconut oil</i>	34	2	8001-31-8		
<i>Corn oil</i>	34		8001-30-7		
<i>Cottonseed oil</i>	34		801-29-4		
<i>Croton oil</i>	34		8001-28-3		
<i>Grape seed oil</i>	34		8024-22-4		
<i>Groundnut acid oil</i>	34				
<i>Hazelnut oil</i>	34		84012-21-5		
<i>Illipe oil</i>	34		91770-65-9		
<i>Jatropha oil</i>	34		88-6-7	JTO	
<i>Linseed oil</i>	34		8001-26-1		
<i>Mango kernel oil</i>	34		90063-86-8		
<i>Nutmeg butter</i>	34		8008-45-5		
<i>Oiticica oil</i>	34		8016-35-1		
<i>Olive oil</i>	34		8001-25-0		
<i>Palm kernel oil</i>	34		8023-79-8		
<i>Palm kernel olein</i>	34		93334-39-5		
<i>Palm kernel stearin</i>	34				
<i>Palm mid fraction</i>	34		91079-14-0		
<i>Palm, non-edible industrial grade</i>	34		8002-75-3		

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<i>Palm oil</i>	34	2, 3	8002-75-3		
<i>Palm olein</i>	34		93334-39-5		
<i>Palm stearin</i>	34		91079-14-0		
<i>Peanut oil</i>	34		8002-03-7		
<i>Peel oil (oranges and lemons)</i>	34		8008-56-8		
<i>Perilla oil</i>	34		68132-21-8		
<i>Pine oil</i>	34		8002-09-3		
<i>Poppy seed oil</i>	34		8002-11-7		
<i>Poppy oil</i>	34				
<i>Raisin seed oil</i>	34		8024-22-4		
<i>Rapeseed oil</i>	34		8002-13-9		
<i>Rapeseed (low erucic acid containing less than 4% free fatty acids)</i>	34	3			
<i>Resin oil, distilled</i>	30	3			
<i>Rice bran oil</i>	34		68553-81-1		
<i>Rosin oil</i>	34		8002-16-2		
<i>Safflower oil</i>	34		8001-23-8		
<i>Salad oil</i>	34		68956-68-3		
<i>Sesame oil</i>	34		8008-74-0		
<i>Shea butter</i>	34		194043-92-0		
<i>Soyabean oil</i>	34	2	8001-22-7		
<i>Sunflower seed oil</i>	34		8001-21-6		
<i>Tall</i>	34		8002-26-4		
<i>Tall, crude</i>	34		8002-26-4		
<i>Tall, distilled</i>	34		8002-26-4		
<i>Tall, pitch</i>	34		8016-81-7		

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<i>Tucum oil</i>	34		98143-57-8		
<i>Tung oil</i>	34		8001-20-5		
<i>Walnut oil</i>	34		8024-09-7		
Vegetable protein solution (hydrolyzed)	43		100209-45-8	VPS	
Vinyl acetate	13	2	108-05-4	VAM	
Vinyl chloride	35		75-01-4	VCM	
Vinyl ethyl ether	13		109-92-2	VEE	
Vinylidene chloride	35		75-35-4	VCI	
Vinyl neodecanoate	13	2	51000-52-3	VND	
Vinyltoluene	13		25013-15-4	VNT	
Water	43		7732-18-5	WTR	
Waxes				WAX	
<i>Including:</i>					
<i>Candelilla</i>	34		8006-44-8	WCD	
<i>Carnauba</i>	34		8015-86-9	WCA	
<i>Hydrocarbon</i>	31			WHC	WPF
<i>Paraffin</i>	31		8002-74-2	WPF	
<i>Petroleum</i>	33			WPT	
<i>White spirit, see White spirit (low (15-20%) aromatic)</i>			8052-41-13	WSP	WSL
White spirit (low (15-20%) aromatic)	33		8052-41-3	WSL	WSP
<i>Wine, see Alcoholic beverages</i>			64-17-5	ABV	
Wood lignin with Sodium acetate/oxalate	0	1, 3		WOL	
Xylenes	32	2	106-42-3	XLX	XLM/XLO/ XLP
Xylenes/Ethylbenzene (10% or more) mixture	32			XEB	

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Chemical name	Group No.	Footnote	CAS No.	CHRIS code	Related CHRIS codes
Xylenols	21		105-67-9	XYL	
Zinc alkaryl dithiophosphate (C7-C16)	34			ZAD	
Zinc alkenyl carboxamide	10			ZAA	WSL
Zinc alkyl dithiophosphate (C3-C14)	34		688649-42-3	ZAP	
<i>Zinc bromide/Calcium bromide solution, see Drilling brine (containing Zinc salts)</i>			7699-45-8		DZB

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

Table 2 to Part 150—Grouping of Cargoes

TABLE 2 TO PART 150—GROUPING OF CARGOES

Group	Cargo
0. Unassigned Cargoes	Acetone cyanohydrin
	Alkenoic acid, polyhydroxy ester borated
	Alkylbenzene distillation bottoms
	Alkyl (C8-C10)/(C12-C14):(60% or more/40% or less)
	Alkyl (C11-C17) benzene sulfonic (alternately sulphonic) acid
	Alkylbenzene sulfonic (alternately sulphonic) acid (less than 4%) ¹

NOTES:

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

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

NOTES:

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

Group	Cargo
	Naphthalene sulfonic (alternately sulphonic) acid-formaldehyde copolymer, sodium salt solution
	Nitrating acid (mixture of Sulfuric (alternately Sulphuric) and Nitric acids)
	Nitric acid (70% and over) ¹
	Nitric acid fuming
	Nitric acid red fuming
	Nitrogen
	o-Nitrophenol (molten) ¹
	Noxious Liquid Substance, NF, (1) n.o.s. ("trade name" contains "principal components") Cat X
	Noxious Liquid Substance, F, (2) n.o.s. ("trade name" contains "principal components") Cat X
	Noxious Liquid Substance, NF, (3) n.o.s. ("trade name" contains "principal components") Cat X
	Noxious Liquid Substance, F, (4) n.o.s. ("trade name" contains "principal components") Cat X
	Noxious Liquid Substance, NF, (5) n.o.s. ("trade name" contains "principal components") Cat Y
	Noxious Liquid Substance, F, (6) n.o.s. ("trade name" contains "principal components") Cat Y
	Noxious Liquid Substance, NF, (7) n.o.s. ("trade name" contains "principal components") Cat Y
	Noxious Liquid Substance, F, (8) n.o.s. ("trade name" contains "principal components") Cat Y
	Noxious Liquid Substance, NF, (9) n.o.s. ("trade name" contains "principal components") Cat Z
	Noxious Liquid Substance, F, (10) n.o.s. ("trade name" contains "principal components") Cat Z
	Noxious Liquid Substance, (11) n.o.s. ("trade name" contains "principal components") Cat Z
	Non-noxious Liquid Substance, (12) n.o.s. ("trade name" contains "principal components") Cat OS
	n-Octyl Mercaptan
	Offshore contaminated bulk liquid P (Pollution-only products)
	Offshore contaminated bulk liquid S (Safety hazard products)
	Oleum ¹
	Orange juice (concentrated)
	Orange juice (not concentrated)
	Oxygenated aliphatic hydrocarbon mixture

NOTES:

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

Group	Cargo
	Phosphorus, yellow or white Phosphosulfurized (alternately Phosphosulphurized) bicycle terpene Phthalate-based polyester polyol ¹ Polyalkylalkenaminesuccinimide, molybdenum oxysulfide Potassium polysulfide (alternately polysulphide), Potassium thiosulfide (alternately thiosulphide) solution (41% or less) 2-Propene-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer solution Refrigerant gases Sodium chlorate solution (50% or less) ¹ Sodium dichromate solution (70% or less) ¹ Sodium hydrogen sulfide (alternately sulphide) (6% or less)/Sodium carbonate (3% or less) solution ¹ Sodium methoxide (25% in methanol) Sodium methylate (21-30% in methanol) Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H ₂ S 15 ppm or less) Sodium sulfide (alternately sulphide), Hydrosulfide (alternately Hydrosulphide) solution (H ₂ S greater than 15 ppm but less than 200 ppm) ¹ Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H ₂ S greater than 200 ppm) Sodium thiocyanate solution (56% or less) ¹ Sulfur (alternately Sulphur) (molten) Sulfur (alternately Sulphur) dioxide Tall oil fatty acid, barium salt ¹ Tetraethyl silicate monomer/oligomer (20% in ethanol) Urea, Ammonium mono- and di-hydrogen phosphate/Potassium chloride solution Wood lignin with Sodium acetate/oxalate
1. Non-Oxidizing Mineral Acids	Di-(2-ethylhexyl) phosphoric acid Ferric chloride solution Fluorosilicic acid (20-30%) in water solution Fluorosilicic acid (30% or less) Hydrochloric acid Hydrofluorosilicic acid (25% or less) Phosphoric acid Polyaluminum (alternately Polyaluminium) chloride solution
2. Sulfuric	Sulfuric (alternately Sulphuric) acid ¹

NOTES:

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

Group	Cargo
(Alternately Sulphuric) Acids	Sulfuric (alternately sulphuric) acid, spent
	Titanium tetrachloride
3. Nitric Acids	Ferric nitrate/Nitric acid solution Nitric acid (70% or less)
4. Organic Acids	Acetic acid ¹ Acetic acid ¹ Butyric acid Chloroacetic acid (80% or less) 2- or 3-Chloropropionic acid Citric acid (70% or less) Decanoic acid 2,2-Dichloropropionic acid Dimethyl octanoic acid Fish protein concentrate (containing 4% or less formic acid) Fish silage protein concentrate (containing 4% or less formic acid) Formic acid ¹ Formic acid (85% or less) Formic acid (over 85%) Formic acid mixture (containing up to 18% Propionic acid and up to 25% Sodium formate) Glycolic acid (70% or less) Glyoxylic acid solution (50% or less) n-Heptanoic acid 1,6-Hexanediol, distillation overheads Hexanoic acid 2-Hydroxy-4-(methylthio)butanoic acid Jatropha oil Long-chain alkyl (C13+) salicylic acid Methacrylic acid Naphthenic acid Neodecanoic acid Nonanoic acid (all isomers) Nonanoic/Tridecanoic acid mixture Octanoic acid (all isomers) Oleic acid Pentanoic acid n-Pentanoic acid (64%)/2-Methyl butyric acid (36%) mixture

NOTES:

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

Group	Cargo
5. Caustics	Propionic acid Trimethylacetic acid Undecanoic acid Aluminum (alternately Aluminium) hydroxide/sodium hydroxide/sodium carbonate solution (40% or less) Ammonium sulfide (alternately sulphide) solution (45% or less) Calcium hydroxide slurry Calcium hypochlorite solution (15% or less) Calcium hypochlorite solution (more than 15%) Caustic potash solution ¹ Caustic soda solution ¹ Cresylic acid, sodium salt solution 1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution Kraft black liquor Kraft pulping liquors (free alkali content 3% or more) (Black, Green, or White) Magnesium hydroxide slurry Mercaptobenzothiazol, sodium salt solution 2-Mercaptobenzothiazol (in liquid mixture) Potassium hydroxide solution ¹ Sodium acetate, Glycol, Water mixture (containing 1% or less Sodium hydroxide) (if non-flammable or non-combustible) Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide) Sodium aluminate solution Sodium aluminate solution (45% or less) Sodium borohydride (15% or less)/Sodium hydroxide solution Sodium carbonate solutions Sodium cyanide solution Sodium hydrosulfide (alternately hydrosulphide) solution (45% or less) ¹ Sodium hydrosulfide (alternately hydrosulphide)/Ammonium sulfide (alternately sulphide) solution ¹ Sodium hypochlorite solution (15% or less) Sodium hypochlorite solution (20% or less) Sodium 2-mercaptobenzothiazol solution Sodium nitrite solution Triphenylborane (10% or less)/Caustic soda solution Trisodium phosphate solution Vanillin black liquor (free alkali content 3% or more)
6. Ammonia	Ammonia, anhydrous

NOTES:

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

Group	Cargo
7. Aliphatic Amines	Ammonium hydroxide (28% or less Ammonia)
	Urea/Ammonium nitrate solution (containing 1% or more Ammonia)
	Alkyl amine (C17+)
	Alkyl (C12+) dimethylamine
	N-Aminoethylpiperazine
	Butylamine (all isomers)
	Crude piperazine
	Cyclohexylamine
	Dibutylamine
	Diethylamine ¹
	Diethylenetriamine ¹
	Diisobutylamine
	Diisopropylamine
	Dimethylamine
	Dimethylamine solution (45% or less)
	Dimethylamine solution (greater than 45% but not greater than 55%)
	Dimethylamine solution (greater than 55% but not greater than 65%)
	N,N-Dimethylcyclohexylamine
	N,N-Dimethyldodecylamine
	Di-n-propylamine
	Dodecylamine/Tetradecylamine mixture
	Dodecyldimethylamine/Tetradecyldimethylamine mixture
	Ethoxylated tallow alkyl amine
	Ethoxylated tallow alkyl amine, glycol mixture
	Ethoxylated tallow amine (>95%)
	Ethylamine ¹
	Ethylamine solution (72% or less)
	N-Ethylbutylamine
	N-Ethylcyclohexylamine
	Ethyleneamine EA 1302 ¹
	Ethylenediamine ¹
2-Ethylhexylamine	
N-Ethylmethylallylamine	
Glycine, sodium salt solution	
Glyphosate solution (not containing surfactant)	
Hexamethylenediamine (molten)	

NOTES:

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

Group	Cargo
	Hexamethylenediamine solution
	Hexamethylenimine
	Hexamethylenetetramine solutions
	bis-(Hydrogenated tallow alkyl) methyl amines
	Isophoronediamine
	Isopropylamine
	Isopropylamine (70% or less) solution
	Long-chain alkyl amine
	Long-chain polyetheramine in alkyl (C2-C4) benzenes
	Metam sodium solution
	Methylamine solutions (42% or less)
	2-Methyl-1,5-pentanediamine
	Monoethylamine
	Morpholine ¹
	Oleylamine
	Pentaethylenehexamine
	Pentaethylenehexamine/Tetraethylenepentamine mixture
	Phosphate esters, alkyl (C12-C14) amine
	Piperazine (70% or less)
	Piperazine (crude)
	Piperazine, 68% solution
	Polyalkenyl succinic anhydride amine
	Polyethylene polyamines ¹
	Polyethylene polyamines (more than 50% C5-C20 Paraffin oil)
	Poly(iminoethylene)-graft-N-poly (ethyleneoxy) solution (90% or less)
	(Polyisobutene) amino products in aliphatic hydrocarbons
	Polyisobutenamine in aliphatic (C10-C14) solvent
	Polyolefin amide alkeneamine/Molybdenum oxysulfide (alternately oxysulphide) mixture
	Polyolefinamine (C17+)
	Polyoxypropylenediamine
	n-Propylamine
	iso-Propylamine solution
	Sodium N-methyl dithio carbamate solution
	Sulfohydrocarbon (alternately Sulphohydrocarbon), long-chain (C18+) alkylamine mixture
	Tetraethylenepentamine ¹
	Triethylamine

NOTES:

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

Group	Cargo
8. Alkanolamines	Triethylenetetramine ¹ Trimethylamine solution (30% or less) Trimethylhexamethylenediamine (2,2,4- and 2,4,4-) Alkyl (C12-C16) propoxyamine ethoxylates 2-(2-Aminoethoxy)ethanol Aminoethyldiethanolamine/Aminoethylethanolamine solution Aminoethylethanolamine 2-Amino-2-methyl-1-propanol Diethanolamine Diethylaminoethanol Diisopropanolamine Dimethylethanolamine ¹ Ethanolamine Ethoxylated alkyloxy alkyl amine Ethoxylated long-chain (C16+) alkyloxyalkanamine Isopropanolamine Isopropanolamine solution Linear alkyl (C12-C16) propoxyamine ethoxylates Methyl diethanolamine Monoethanolamine Monoisopropanolamine n-Propanolamine Triethanolamine Triisopropanolamine
9. Aromatic Amines	Alkyl (C8-C9) phenylamine in aromatic solvents Amine C-6, morpholine process residue Aniline Calcium long chain alkyl phenolic amine (C8-C40) 4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution Dialkyl (C8-C9) diphenylamines 2,6-Diethylaniline 2,6-Dimethylaniline Diphenylamine (molten) Diphenylamine, reaction product with 2,2,4-trimethylpentene Diphenylamines, alkylated 2-Ethyl-6-methyl-N-(1'-methyl-2-methoxyethyl)aniline

NOTES:

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

Group	Cargo
	1,3,5-Hexahydrotriethanol-1,3,5-triazine solution Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less) N-Methylaniline 2-Methyl-6-ethyl aniline 2-Methyl-5-ethylpyridine Methylpyridine 2-Methylpyridine 3-Methylpyridine 4-Methylpyridine N-Methyl-2-pyrrolidone ¹ Paraldehyde-Ammonia reaction product Polyolefin phenolic amine (C28-C250) Pyridine Pyridine bases Toluenediamine o-Toluidine
10. Amides	Acetochlor Acrylamide solution (50% or less) Alkenyl (C11+) amide N,N-Dimethylacetamide N,N-Dimethylacetamide solution N,N-Dimethylacetamide solution (40% or less) Dimethylformamide Formamide N,N-bis(2-Hydroxyethyl) oleamide Octadecenoamide solution Oleamide solution Organomolybdenum amide Polybutenyl succinimide Polyisobutenyl succinimide Sulfurized (alternately Sulphurized) polyolefinamide Zinc alkenyl carboxamide
11. Organic Anhydrides	Acetic anhydride Alkenyl (C16-C20) succinic anhydride Alkyl succinic anhydride Maleic anhydride

NOTES:

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

Group	Cargo
	Maleic anhydride/sodium allylsulphonate copolymer solution Phthalic anhydride (molten) Polyisobutenyl anhydride adduct Polyisobutylene succinic anhydride Polyolefin anhydride Propionic anhydride
12. Isocyanates	Diphenylmethane diisocyanate Hexamethylene diisocyanate Isophorone diisocyanate Polymethylene polyphenyl isocyanate Toluene diisocyanate Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-)
13. Vinyl Acetates	Vinyl acetate Vinyl ethyl ether Vinyl neodecanate Vinyl toluene
14. Acrylates	Butyl acrylate (all isomers) Butyl methacrylate Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture Cetyl/Eicosyl methacrylate mixture Decyl acrylate Dodecyl methacrylate Dodecyl/Octadecyl methacrylate mixture Dodecyl/Pentadecyl methacrylate mixture Ethyl acrylate 2-Ethylhexyl acrylate Ethyl methacrylate 2-Hydroxyethyl acrylate ¹ Isobutyl methacrylate Methacrylic resin in ethylene dichloride Methyl acrylate Methyl methacrylate Nonyl methacrylate monomer Polyalkyl acrylate Polyalkyl (C18-C22) acrylate in Xylene Polyalkyl (C10-C20) methacrylate

NOTES:

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

Group	Cargo
15. Substituted Allyls	Polyalkyl methacrylate in mineral oil Polyalkyl (C10-C18) methacrylate/Ethylene-propylene copolymer mixture Acrylonitrile ¹ Allyl alcohol ¹ Allyl chloride Dichloropropene (all isomers) 1,3-Dichloropropene Dichloropropene/Dichloropropane mixtures Methacrylonitrile
16. Alkylene Oxides	Brominated Epoxy Resin in Acetone 1,2-Butylene oxide Diglycidyl ether of Bisphenol A Diglycidyl ether of Bisphenol F Epoxy resin Ethylene oxide/Propylene oxide mixture Ethylene oxide/Propylene oxide mixture with an Ethylene oxide content not more than 30% by mass Propylene oxide
17. Epichlorohydrins	Chlorohydrins Chlorohydrins (crude) Epichlorohydrin
18. Ketones	Acetone ¹ Acetophenone Butyl heptyl ketone Camphor oil (light) 1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one ¹ Cyclohexanone Cyclohexanone/Cyclohexanol mixtures Diisobutyl ketone Ethyl amyl ketone Isophorone Ketone residue Mesityl oxide ¹ Methyl amyl ketone Methyl butyl ketone

NOTES:

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

Group	Cargo
19. Aldehydes	Methyl ethyl ketone ¹ Methyl heptyl ketone Methyl isoamyl ketone Methyl isobutyl ketone ¹ Methyl propyl ketone beta-Propiolactone Acetaldehyde Acrolein ¹ Butyraldehyde (all isomers) Crotonaldehyde ¹ Crude isononylaldehyde Decaldehyde n-Decaldehyde 2-Ethyl-3-propylacrolein ¹ Formaldehyde (50% or more)/Methanol mixtures ¹ Formaldehyde solutions (37%-50%) ¹ Formaldehyde solutions (45% or less) ¹ Furfural Glutaraldehyde solutions (50% or less) Glyoxal solution (40% or less) Isodecaldehyde Isononylaldehyde (crude) 3-Methyl butyraldehyde Methylolureas 3-(Methylthio)propionaldehyde Octyl aldehyde Paraldehyde Pentyl aldehyde Propionaldehyde Valeraldehyde (all isomers)
20. Alcohols, Glycols	Acrylonitrile-Styrene copolymer dispersion in Polyether polyol Alcoholic beverages Alcohol (C9-C11) poly (2.5-9) ethoxylates Alcohol (C6-C17) (secondary) poly (3-6) ethoxylates Alcohol (C10-C18) poly (7) ethoxylates Alcohol (C6-C17) (secondary) poly (7-12) ethoxylates

NOTES:

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

Group	Cargo
	Alcohol (C12-C16) poly (1-6) ethoxylates
	Alcohol (C12-C16) poly (7-19) ethoxylates
	Alcohol (C12-C16) poly (20+) ethoxylates
	Alcohol polyethoxylates
	Alcohol polyethoxylates, secondary
	Alcoholic beverages, n.o.s.
	Alcohols (C12+), primary, linear
	Alcohols (C8-C11), primary, linear and essentially linear
	Alcohols (C12-C13), primary, linear and essentially linear
	Alcohols (C14-C18), primary, linear and essentially linear
	Alcohols (C13+)
	Alkyl/cyclo (C4-C5) alcohols:
	Amyl alcohol, primary
	n-Amyl alcohol
	sec-Amyl alcohol
	tert-Amyl alcohol
	Cetyl Alcohol (Hexadecanol)
	Oleyl Alcohol (Octadecanol)
	Pentadecanol
	Tallow alcohol
	Tetradecanol
	Tridecanol
	Behenyl alcohol
	Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume)
	Brake fluid base mix: Poly(2-8)alkylene (C2-C3) glycols/Polyalkylene (C2-C10) glycols monoalkyl (C1-C4) ethers and their borate esters
	2-Butoxyethanol (58%)/Hyperbranched polyesteramide (42%) (mixture)
	Butyl alcohol (all isomers) ¹
	n-Butyl alcohol
	Butylene glycol
	Choline chloride solutions
	Crude Isopropanol
	Cyclohexanol
	Decyl alcohol (all isomers) ¹
	Decyl/Dodecyl/Tetradecyl alcohol mixture
	Diacetone alcohol ¹
	2,2-Dimethylpropane-1,3-diol (molten or solution)

NOTES:

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

Group	Cargo
	tert-Dodecanethiol ¹
	Dodecyl alcohol (all isomers)
	n-Dodecyl mercaptan
	Ethoxylated alcohols, C11-C15
	Ethyl alcohol ¹
	Ethyl butanol
	Ethylene chlorohydrin
	Ethylene cyanohydrin
	Ethylene glycol ¹
	Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture
	Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture
	Furfuryl alcohol ¹
	Glycerine ¹
	Glycerine (83%)/Dioxanedimethanol (17%) mixture
	Glycerol
	Glycerol monooleate
	Glycol mixture, crude
	Heptanol (all isomers)
	Hexadecanol (Cetyl alcohol)
	Hexamethylene glycol
	Hexanol
	Hexylene glycol
	Isoamyl alcohol
	Isobutyl alcohol
	Isopropyl alcohol
	Methacrylic acid—Alkyloxypoly (alkylene oxide) methacrylate copolymer, sodium salt aqueous solution (45% or less)
	3-Methoxy-1-butanol
	Methyl alcohol ¹
	Methyl amyl alcohol
	alpha-Methylbenzyl alcohol with Acetophenone (15% or less)
	Methyl butanol
	Methyl butenol
	Methyl 3- (3,5 di-tert-butyl-4-hydroxyphenyl) propionate crude melt
	Methyl butynol
	Methylcyclohexanemethanol (crude)
	2-Methyl-2-hydroxy-3-butyne

NOTES:

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

Group	Cargo
	Methyl isobutyl carbinol 3-Methyl-3-methoxybutanol 2-Methyl-1,3-propanediol Molasses Nonyl alcohol (all isomers) ¹ 1-Octadecanol Octadecenol (oleyl alcohol) Octanol (all isomers) ¹ Octyl alcohol ¹ Pentacos(oxypropane-2,3-diyl)s Polyalkylene oxide polyol Polybutadiene, hydroxyl terminated Polyglycerine/Sodium salts solution (containing less than 3% Sodium hydroxide) ¹ Polyglycerol Polyolefin amide alkeneamine polyol n-Propyl alcohol ¹ Propylene glycol ¹ Sorbitol solution Stearyl alcohol Tallow alcohol Tallow fatty alcohol (C13+) Trimethyl nonanol Trimethylol propane polyethoxylated Undecanol Undecyl alcohol Wine
21. Phenols, Cresols	Alkyl (C4-C9) phenols Alkylated (C4-C9) hindered phenols Alkylphenols (C10-C18, C12 rich) Benzyl alcohol Carbolic oil Creosote ¹ Creosote (coal tar) Creosote (wood tar) Cresols (all isomers) Cresol/Phenol/Xylenol mixture

NOTES:

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

Group	Cargo
	Cresols with 5% or more phenol
	Cresols with less than 5% phenol
	Cresylic acid
	Cresylic acid dephenolized
	Cresylic acid tar
	Cresylic acid with 5% or more phenol
	Dibutylphenols
	2,4-Dichlorophenols
	Di-tert-butylphenol
	2,4-Di-tert-butylphenol
	2,6-Di-tert-butylphenol
	2,4-Dichlorophenol
	Dodecyl phenol
	o-Ethyl phenol
	Long-chain alkylphenate/Phenol sulfide (alternately sulphide) mixture
	Long-chain alkylphenol (C14-C18)
	Long-chain alkylphenol (C18-C30)
	Methylene bridged isobutylenated phenols
	Nonylphenol
	Nonylphenol (48-62%)/Phenol (42-48%)/Dinonylphenol (1-10%) mixture
	Octyl phenol
	Phenol
	Tertiary butylphenols
	Xylenols
22. Caprolactam Solutions	epsilon-Caprolactam (molten or aqueous solutions)
23-29. Unassigned	
30. Olefins	Acrylic acid/ethenesulfonic (alternately ethenesulphonic) acid copolymer with phosphonate groups, sodium salt solution Aryl polyolefin (C11-C50) Butadiene (all isomers) Butadiene/Butylene mixtures (containing Acetylenes) Butene oligomer Butylenes (all isomers) 1,5,9-Cyclododecatriene Cyclopentadiene/Styrene/Benzene mixture 1,3-Cyclopentadiene dimer (molten)

NOTES:

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

Group	Cargo
	Cyclopentene
	Decene
	Dicyclopentadiene, Resin Grade, 81-89%
	Diisobutylene
	Dipentene
	Dodecene (all isomers)
	1-Dodecene
	Ethylene
	Ethylidene norbornene ¹
	Heptene (all isomers)
	Hexene (all isomers)
	Isoprene (all isomers)
	Isoprene (part refined)
	Isoprene concentrate (Shell)
	Latex ammonia (1% or less)-inhibited
	d-Limonene
	Methyl acetylene/Propadiene mixture
	Methyl butenes
	Methylcyclopentadiene dimer
	2-Methyl-1-pentene
	4-Methyl-1-pentene
	alpha-Methylstyrene
	Mixed C4 Cargoes
	Myrcene
	Nonene (all isomers)
	1-Octadecene
	Octene (all isomers)
	Olefin-Alkyl ester copolymer (molecular weight 2000+)
	Olefin mixture (C7-C9) C8 rich, stabilized
	Olefin mixtures (C5-C7)
	Olefin mixtures (C5-C15)
	Olefins (C13+, all isomers)
	alpha-Olefins (C6-C18) mixtures
	1,3-Pentadiene
	1,3-Pentadiene (greater than 50%), Cyclopentene and isomers, mixtures
	Pentene (all isomers)
	Pentene

NOTES:

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

Group	Cargo
	alpha-Pinene beta-Pinene Piperylene concentrate Poly(4+)isobutylene (molecular weight >224) Polyisobutylene (molecular weight ≤224) Polyolefin in mineral oil Poly(5+)propylene Propylene Propylene-butylene copolymer Propylene dimer Propylene tetramer Propylene trimer Propylene/Propane/MAPP gas mixture Styrene monomer Tetradecene Tridecene Triisobutylene Tripropylene Turpentine Undecene 1-Undecene
31. Paraffins	Alkanes (C10-C26) linear and branched (flash point >60 °C) Alkanes (C10-C26) linear and branched (flash point ≤60 °C) Alkanes (C6-C9) n-Alkanes (C9-C11) n-Alkanes (C10+) (all isomers) iso- & cyclo-Alkanes (C10-C11) iso- & cyclo-Alkanes (C12+) Butane (all isomers) Butane/Propane mixture Cycloheptane Cyclohexane Cyclopentane Ethane Ethyl cyclohexane Ethylene-Propylene copolymer (in liquid mixtures) Heptadecane (all isomers)

NOTES:

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

Group	Cargo
	Hydrocarbon wax Isopropylcyclohexane Methane Methylcyclohexane 2-Methyl pentane Nonane (all isomers) Octane (all isomers) Paraffin wax Pentane (all isomers) Polyalpha olefins Propane
32. Aromatic Hydrocarbons Mixtures	Alkyl acrylate-Vinyl pyridine copolymer in Toluene Alkyl (C3-C4) benzenes: Butylbenzenes Cumene Propylbenzenes Alkyl (C5-C8) benzenes: Amylbenzenes Heptylbenzenes Hexylbenzenes Octylbenzenes Alkyl (C9+) benzenes Decylbenzenes Dodecylbenzenes Nonylbenzenes Tetradecylbenzenes Tetrapropylbenzenes Tridecylbenzenes Undecylbenzenes Alkylbenzenes mixtures (containing naphthalene) Alkylbenzene mixtures (containing at least 50% of Toluene) Alkylbenzene, Alkylindane, Alkylindene mixture (each C12-C17) Alkyl toluene Alkyl (C18+) toluenes Benzene Benzene and mixtures having 10% Benzene or more Benzene hydrocarbon mixtures (containing Acetylenes) (having 10% Benzene or

NOTES:

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

Group	Cargo
	more)
	Benzene/Toluene/Xylene mixtures (having 10% Benzene or more)
	Butyl phenol, Formaldehyde resin in Xylene
	Butyl toluene
	C9 Resinfeed (DSM) ¹
	<i>p</i> -Cymene
	Detergent alkylate
	Diethylbenzene
	Diisopropylbenzene (all isomers)
	Diisopropylnaphthalene
	Diphenyl
	Dodecyl xylene
	Ethylbenzene
	Ethyl toluene
	1-Hexadecylnaphthalene/1,4-bis (Hexadecyl) naphthalene mixture
	1,n-Hexadecylnaphthalene (90%)/1,4-Di-n-(Hexadecyl) naphthalene (10%)
	Hexylbenzenes
	Methyl naphthalene (molten)
	Naphthalene crude (molten)
	Naphthalene (molten)
	Naphthalene still residue
	Parachlorobenzotrifluoride
	1-Phenyl-1-xylyl ethane
	Poly(2+) cyclic aromatics
	Polyolefinamine in alkyl (C2-C4) benzenes
	Polyolefinamine in aromatic solvent
	Pyrolysis gasoline (containing Benzene)
	Tetrahydronaphthalene
	Tetramethylbenzene (all isomers)
	C9 Resinfeed (DSM) ²
	1,2,3,5-Tetramethylbenzene
	Toluene
	Tridecylbenzene
	Triethylbenzene
	Trimethylbenzene (all isomers)
	Xylenes
	Xylenes/Ethylbenzene (10% or more) mixture

NOTES:

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

Group	Cargo
33. Miscellaneous Hydrocarbon Mixtures	Alachlor technical (90% or more) Alkylbenzene sulfonic (alternately sulphonic) acid, sodium salt solution Alkyl dithiothiadiazole (C6-C24) Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, high overbase Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, low overbase Asphalt Asphalt blending stocks, roofers flux Asphalt blending stocks, straight run residue Asphalt emulsion Asphalt, kerosene, and other components Aviation alkylates (C8 paraffins and isoparaffins BPT 95 to 120 °C) Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flash point >60 °C (>25% but <99% by volume) Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flash point ≤60 °C (>25% but <99% by volume) Calcium sulfonate (alternately sulphonate)/Calcium carbonate/Hydrocarbon solvent mixture Coal tar Coal tar crude bases Coal tar distillate Coal tar pitch (molten) Coal tar, high temperature Decahydronaphthalene Diphenyl/Diphenyl ether mixture Distillates, flashed feed stocks Distillates, straight run Drilling mud (low toxicity) (if flammable or combustible) Gas oil, cracked Gasoline blending stock, alkylates Gasoline blending stock, reformates Gasolines: Automotive (containing not over 4.23 grams lead per gal.) Aviation (containing not over 4.86 grams lead per gal.) Casinghead (natural)

NOTES:

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

Group	Cargo
	Polymer
	Straight run
	Jet Fuels:
	JP-4
	JP-5
	JP-8
	Kerosene
	Mineral spirits
	Naphtha:
	Aromatic
	Coal tar solvent
	Heavy
	Paraffinic
	Petroleum
	Solvent
	Stoddard solvent
	Varnish Makers' and Painters'
	Oil, fuel:
	No. 1
	No. 1-D
	No. 2
	No. 2-D
	No. 4
	No. 5
	No. 6
	Oil, misc.:
	Aliphatic
	Aromatic
	Clarified
	Coal
	Crude
	Diesel
	Gas, cracked
	Gas, high pour
	Gas, low pour
	Gas, low sulfur (alternately sulphur)
	Heartcut distillate

NOTES:

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

Group	Cargo
	Lubricating
	Mineral
	Mineral seal
	Motor
	Neatsfoot
	Penetrating
	Pine
	Residual
	Road
	Rosin
	Spindle
	Transformer
	Turbine
	Vacuum gas oil
	Oxyalkylated alkyl phenol formaldehyde
	Petrolatum
	Petroleum wax
	Polybutene
	Polyolefin (molecular weight 300+)
	Polyolefin amide alkeneamine (C17+)
	Polyolefin amide alkeneamine (C28+)
	Polyolefin amide alkeneamine borate (C28-C250)
	Polyolefin amide alkeneamine in mineral oil
	Polyolefinamine (C28-C250)
	Sulfohydrocarbon (alternately Sulphohydrocarbon) (C3-C88)
	Sulfurized (alternately Sulphurized) fat (C14-C20)
	Sulfurized (alternately Sulphurized) polyolefinamide alkene (C28-C250) amine
	Waxes: Petroleum
	White spirit
	White spirit (low (15-20%) aromatic)
34. Esters	Alkenyl (C8+) amine, Alkenyl (C12+) acid ester mixture
	Alkyl dithiocarbamate (C19-C35)
	Alkyl ester copolymer (C4-C20)
	Alkyl ester copolymer in mineral oil
	Alkyl (C7-C9) nitrates ¹
	Alkyl (C8-C40) phenol sulfide (alternately sulphide)
	Alkyl (C10-C20), (saturated and unsaturated) phosphite

NOTES:

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

Group	Cargo
	Alkyl sulfonic (alternately sulphonic) acid ester of phenol
	Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, borated
	Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomer)
	Amyl acetate (all isomers)
	Amyl acid phosphate
	Animal and Fish oils, n.o.s.:
	Cod liver oil
	Lanolin
	Neatsfoot oil
	Pilchard oil
	Sperm oil
	Animal and Fish acid oils and distillates, n.o.s.:
	Animal acid oil
	Fish acid oil
	Lard acid oil
	Mixed acid oil
	Mixed general acid oil
	Mixed hard acid oil
	Mixed soft acid oil
	Barium long-chain (C11-C50) alkaryl sulfonate (alternately sulphonate)
	Barium long-chain alkyl (C8-C14) phenate sulfide (alternately sulphide)
	Benzenetricarboxylic acid trioctyl ester
	Benzyl acetate
	Bio-fuel blends of Diesel/gas oil and FAME (>25% but <99% by volume)
	Bio-fuel blends of Diesel/gas oil and vegetable oil (>25% but <99% by volume)
	Boronated calcium sulfonate
	Bis (2-ethylhexyl) terephthalate
	Boronated calcium sulfonate (alternately sulphonate)
	Butyl acetate (all isomers)
	Butyl benzyl phthalate
	Butyl butyrate (all isomers)
	n-Butyl formate
	n-Butyl propionate
	Butyl stearate
	Calcium alkyl (C10-C28) salicylate
	Calcium alkyl (C9) phenol sulfide (alternately sulphide), polyolefin

NOTES:

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

Group	Cargo
	phosphorosulfide (alternately phosphorosulphide) mixture
	Calcium carbonate slurry
	Calcium long-chain alkaryl sulfonate (alternately sulphonate) (C11-C50)
	Calcium long-chain alkyl (C5-C10) phenate
	Calcium long-chain alkyl (C5-C20) phenate
	Calcium long-chain alkyl (C11-C40) phenate
	Calcium long-chain alkyl (C18-C28) salicylate
	Calcium long-chain alkyl phenate sulfide (alternately sulphide) (C8-C40)
	Calcium long-chain alkyl salicylate (C13+)
	Calcium nitrate solutions (50% or less)
	Calcium nitrate/Magnesium nitrate/Potassium chloride solution
	Calcium salts of fatty acids
	Calcium stearate
	Cobalt naphthenate in solvent naphtha
	Copper salt of long-chain (C17+) alkanolic acid
	Copper salt of long-chain (C3-C16) fatty acid
	Cyclohexane-1,2-dicarboxylic acid,diisononyl ester
	Cyclohexyl acetate
	Decyl acetate
	Dialkyl (C7-C13) phthalates:
	2,6-Diaminohexanoic acid phosphonate mixed salts solution
	Di-(2-ethylhexyl) phthalate
	Diheptyl phthalate
	Dihexyl phthalate
	Diisooctyl phthalate
	Dioctyl phthalate
	Diisodecyl phthalate
	Diisononyl phthalate
	Dinonyl phthalate
	Ditridecyl phthalate
	Diundecyl phthalate
	Dialkyl thiophosphates sodium salts solution
	Dibutyl hydrogen phosphonate
	Dibutyl phthalate
	Dibutyl terephthalate
	Di-(2-ethylhexyl) adipate
	Di-(2-ethylhexyl) terephthalate

NOTES:

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

Group	Cargo
	Diethylene glycol dibenzoate
	Diethylene glycol phthalate
	Diethyl phthalate
	Diethyl sulfate (alternately sulphate)
	Di-n-hexyl adipate
	Diisobutyl phthalate
	Dimethyl adipate
	Dimethylcyclicsiloxane hydrolyzate
	Dimethyl glutarate
	Dimethyl hydrogen phosphite ¹
	Dimethyl naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution ¹
	Dimethyl phthalate
	Dimethylpolysiloxane
	Dimethyl succinate
	Dipropylene glycol dibenzoate
	Dithiocarbamate ester (C7-C35)
	Ditridecyl adipate
	2-Dodecenylsuccinic acid, dipotassium salt solution
	2-Ethoxyethyl acetate
	Ethyl acetate
	Ethyl acetoacetate
	Ethyl butyrate
	2-Ethyl-2-(2,4-dichlorophenoxy) acetate
	2-Ethyl-2-(2,4-dichlorophenoxy) propionate
	S-Ethyl dipropylthiocarbamate
	Ethylene carbonate
	Ethylene glycol acetate
	Ethylene glycol butyl ether acetate
	Ethylene glycol diacetate
	Ethylene glycol methyl ether acetate
	Ethyl-3-ethoxypropionate
	Ethyl hexyl phthalate
	Ethyl hexyl tallate
	2-Ethyl-2-(hydroxymethyl) propane-1,3-diol (C8-C10) ester
	Ethyl lactate
	Ethyl propionate

NOTES:

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

Group	Cargo
	Fatty acid methyl esters
	Fatty acids (C8-C10)
	Fatty acids (C12+)
	Fatty acids (saturated, C13+)
	Fatty acids (C16+)
	Fatty acids, essentially linear (C6-C18) 2-ethylhexyl ester
	Glyceryl triacetate
	Glycidyl ester of C10 trialkyl acetic acid
	Glycidyl ester of tertiary carboxylic acid
	Glycidyl ester of tridecyl acetic acid
	Glycidyl ester of Versatic acid
	Glycol diacetate
	Glycol triacetate
	Heptyl acetate
	Herbicide (C15-H22-NO2-Cl)
	Hexyl acetate
	Hog grease
	Isobutyl formate
	Isopropyl acetate
	Lauric acid
	Lauric acid methyl ester/Myristic acid methyl ester mixture
	Lecithin
	Magnesium long-chain alkaryl sulfonate (alternately sulphonate) (C11-C50)
	Magnesium long-chain alkyl phenate sulfide (alternately sulphide) (C8-C20)
	Magnesium long-chain alkyl salicylate (C11+)
	Magnesium nonyl phenol sulfide (alternately sulphide)
	Magnesium sulfonate (alternately sulphonate)
	3-Methoxybutyl acetate
	1-Methoxy-2-propyl acetate
	Methyl acetate
	Methyl acetoacetate
	Methyl amyl acetate
	Methyl butyrate
	Methyl formate
	3-Methyl-3-methoxybutyl acetate
	Methyl salicylate
	N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide

NOTES:

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

Group	Cargo
	Metolachlor
	Naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution
	Nitrilotriacetic acid, trisodium salt solution
	Nonyl acetate
	Nonyl phenol sulfide (90% or less) solution
	Octamethylcyclotetrasiloxane
	n-Octyl acetate
	Octyl decyl adipate
	Octyl nitrate
	Octyl phthalate
	Oil, edible:
	Beechnut
	Castor
	Cocoa butter
	Coconut
	Cod liver
	Corn
	Cotton seed
	Fish
	Grape seed
	Groundnut
	Hazelnut
	Illipe
	Lard
	Maize
	Mango kernel
	Nutmeg butter
	Olive
	Palm
	Palm kernel
	Palm kernel olein
	Palm kernel stearin
	Palm mid fraction
	Palm olein
	Palm stearin
	Peanut
	Poppy

NOTES:

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

Group	Cargo
	Poppy seed
	Raisin seed
	Rapeseed
	Rapeseed, (low erucic acid containing less than 4% free fatty acids)
	Rice bran
	Safflower
	Salad
	Sesame
	Shea butter
	Soyabean
	Sunflower
	Sunflower seed
	Tucum
	Vegetable
	Walnut
	Oil, misc.:
	Acid mixture from soyabean, corn (maize) and sunflower oil refining
	Animal
	Camelina
	Cashew nut shell oil (untreated)
	Coconut fatty acid
	Coconut, fatty acid methyl ester
	Cottonseed oil, fatty acid
	Lanolin
	Linseed
	Oiticica
	Palm acid
	Palm fatty acid distillate
	Palm oil, fatty acid methyl ester
	Palm kernel acid
	Palm kernel fatty acid distillate
	Palm, non-edible industrial grade
	Perilla
	Pilchard
	Rapeseed fatty acid methyl esters
	Seal
	Soapstock

NOTES:

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

Group	Cargo
	Soyabean (epoxidized)
	Soyabean fatty acid methyl ester
	Tall
	Tall, crude
	Tall, distilled
	Tall, fatty acid
	Tall, fatty acid (resin acids less than 20%)
	Tall pitch
	Tung
	Used cooking oil
	Used cooking oil (triglycerides, C16-C18 and C18 unsaturated)
	n-Pentyl propionate
	Phosphate esters
	[[[(Phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]]]tetrakisphosphonic acid, ammonium salt solution (60% or less)
	Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate:
	Diethylene glycol butyl ether acetate
	Diethylene glycol ethyl ether acetate
	Diethylene glycol methyl ether acetate
	Polycarboxylic ester (C9+)
	Polyferric sulfate (alternately sulphate) solution
	Polymerized esters
	Polymethylsiloxane
	Polyolefin aminoester salts (molecular weight 2000+)
	Polyolefin ester (C28-C250)
	Polyolefin phosphorosulfide (alternately phosphorosulphide), barium derivative (C28-C250)
	Poly(20)oxyethylene sorbitan monooleate
	Polysiloxane
	Polysiloxane/White spirit, low (15-20%) aromatic
	Potassium formate solutions
	Potassium formate solution (75% or more)
	Potassium oleate
	Potassium salt of polyolefin acid
	n-Propyl acetate
	Propylene carbonate
	Propylene glycol methyl ether acetate
	Shea butter

NOTES:

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

Group	Cargo
	Siloxanes
	Sodium acetate solution
	Sodium acetate/Glycol/Water mixture (not containing Sodium hydroxide)
	Sodium alkyl (C14-C17) sulfonates (alternately sulphonates) 60-65% solution
	Sodium aluminosilicate slurry
	Sodium benzoate
	Sodium bicarbonate solution (less than 10%)
	Sodium dimethyl naphthalene sulfonate (alternately sulphonate) solution ²
	Sodium long-chain alkyl salicylate (C13+)
	Sodium naphthalene sulfonate (alternately sulphonate) solution
	Sodium petroleum sulfonate (alternately sulphonate)
	Sodium sulfate (alternately sulphate) solution
	Tall oil soap, crude
	Tallow
	Tallow fatty acid
	Tributyl phosphate
	Tricresyl phosphate (containing 1% or more ortho-isomer)
	Tricresyl phosphate (containing less than 1% ortho-isomer)
	Tridecanoic acid
	Tridecyl acetate
	Triethylene glycol di-(2-ethylbutyrate)
	Triethylene glycol dibenzoate
	Triethyl phosphate
	Triethyl phosphite ¹
	Triisooctyl trimellitate ¹
	Triisopropylated phenyl phosphates
	Trimethyl phosphite ¹
	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate
	2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate
	2,2,4-Trimethyl-3-pentanol-1-isobutyrate
	Trisodium nitrilotriacetate solution
	Trixylyl phosphate
	Trixylenyl phosphate
	Vegetable acid oils, n.o.s.:
	Corn acid oil
	Cottonseed acid oil
	Dark mixed acid oil

NOTES:

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

Group	Cargo
	Groundnut acid oil
	Mixed acid oil
	Mixed general acid oil
	Mixed hard acid oil
	Mixed soft acid oil
	Rapeseed acid oil
	Safflower acid oil
	Soya acid oil
	Sunflower seed acid oil
	Vegetable oil mixtures, containing less than 15% free fatty acid (m)
	Vegetable fatty acid distillates, n.o.s.:
	Palm kernel fatty acid distillate
	Palm oil fatty acid distillate
	Tall fatty acid distillate
	Tall oil fatty acid distillate
	Vegetable oils, n.o.s.:
	Beechnut oil
	Camelina oil
	Cashew nut shell
	Castor oil
	Cocoa butter
	Coconut oil
	Corn oil
	Cotton seed oil
	Croton oil
	Grape seed oil
	Groundnut oil
	Hazelnut oil
	Illipe oil
	Linseed oil
	Mango kernel oil
	Nutmeg butter
	Oiticica oil
	Olive oil
	Palm kernel oil
	Palm kernel olein
	Palm kernel stearin

NOTES:

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

Group	Cargo
	Palm mid fraction
	Palm, non-edible industrial grade
	Palm oil
	Palm olein
	Palm stearin
	Peanut oil
	Peel oil (oranges and lemons)
	Perilla oil
	Pine oil
	Poppy seed oil
	Poppy oil
	Raisin seed oil
	Rapeseed oil
	Rapeseed (low erucic acid containing less than 4% free fatty acids)
	Rice bran oil
	Rosin oil
	Safflower oil
	Salad oil.
	Sesame oil
	Shea butter
	Soyabean oil
	Sunflower seed oil
	Tall
	Tall, crude
	Tall, distilled
	Tall, pitch
	Tucum oil
	Tung oil
	Walnut oil
	Waxes:
	Candelilla
	Carnauba
	Zinc alkaryl dithiophosphate (C7-C16)
	Zinc alkyl dithiophosphate (C3-C14)
35. Vinyl Halides	Vinyl chloride
	Vinylidene chloride
36. Halogenated	Benzyl chloride

NOTES:

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

Group	Cargo
Hydrocarbons	Bromochloromethane
	Carbon tetrachloride ¹
	Catoxid feedstock ¹
	Chlorinated paraffins (C10-C13)
	Chlorinated paraffins (C14-C17) (with 50% Chlorine or more, and less than 1% C13 or shorter chains)
	Chlorinated paraffins (C14-C17) (with 52% Chlorine)
	Chlorinated paraffins (C18+) with any level of Chlorine
	Chlorobenzene
	Chloroform
	<i>m</i> -Chlorotoluene
	<i>o</i> -Chlorotoluene
	<i>p</i> -Chlorotoluene
	Chlorotoluenes (mixed isomers)
	Dibromomethane
	Dichlorobenzene (all isomers)
	3,4-Dichloro-1-butene
	Dichlorodifluoromethane
	1,1-Dichloroethane
	1,6-Dichlorohexane
	Dichloromethane
	Dichloropropane
	1,1-Dichloropropane
	1,2-Dichloropropane
	1,3-Dichloropropane
	Ethyl chloride
	Ethylene dibromide
	Ethylene dichloride ¹
	Methyl bromide
	Methyl chloride
	Methylene chloride
	Monochlorodifluoromethane
	Pentachloroethane
	Perchloroethylene
	n-Propyl chloride
Sym-trichlorobenzene	
Tetrachloroethane	

NOTES:

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

Group	Cargo
37. Nitriles	1,1,2,2-Tetrachloroethane 1,2,3-Trichlorobenzene (molten) 1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzol 1,1,1-Trichloroethane ¹ 1,1,2-Trichloroethane Trichloroethylene ¹ 1,1,2-Trichloro-1,2,2-trifluoroethane 1,2,3-Trichloropropane Acetonitrile Acetonitrile (low purity grade) Adiponitrile Lactonitrile solution (80% or less) 2-Methylglutaronitrile 2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less) Propionitrile Tallow alkyl nitrile
38. Carbon Disulfide (Alternately Disulfide)	Carbon disulfide (alternately disulphide)
39. Sulfolane (Alternately Sulfolane)	Sulfolane (alternately Sulpholane)
40. Glycol Ethers	Alkyl (C7-C11) phenol poly(4-12) ethoxylates Alkyl (C9-C15) phenyl propoxylate Alkyl (C10-C15, C12 rich) phenol poly(4-12)ethoxylate Diethylene glycol ¹ Diethylene glycol butyl ether Diethylene glycol dibutyl ether Diethylene glycol diethyl ether Diethylene glycol ethyl ether Diethylene glycol methyl ether Diethylene glycol n-hexyl ether Diethylene glycol phenyl ether Diethylene glycol propyl ether Dipropylene glycol Dipropylene glycol butyl ether

NOTES:

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

Group	Cargo
	Dipropylene glycol methyl ether
	2-Ethoxyethanol
	Ethoxy triglycol (crude)
	Ethylene glycol dibutyl ether
	Ethylene glycol monoalkyl ethers:
	Ethylene glycol butyl ether
	Ethylene glycol tert-butyl ether
	Ethylene glycol ethyl ether
	Ethylene glycol hexyl ether
	Ethylene glycol isopropyl ether
	Ethylene glycol methyl butyl ether
	Ethylene glycol methyl ether
	Ethylene glycol propyl ether
	Ethylene glycol n-propyl ether
	Ethylene glycol phenyl ether
	Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture
	Glucitol/Glycerol blend propoxylated (containing less than 10% amines)
	Glucitol/Glycerol blend propoxylated (containing 10% or more amines)
	Glycerol, ethoxylated
	Glycerol polyalkoxylate
	Glycerol, propoxylated
	Glycerol, propoxylated and ethoxylated
	Glycerol/Sucrose blend propoxylated and ethoxylated
	alpha-Hydro-omega-hydroxytetradeca (oxytetramethylene)
	Methoxy triglycol
	Nonyl phenol poly(4+)ethoxylates
	Pentaethylene glycol methyl ether
	Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures
	Poly(2-8)alkylene glycol monoalkyl (C1-C6) ethers:
	Diethylene glycol butyl ether
	Diethylene glycol ethyl ether
	Diethylene glycol n-hexyl ether
	Diethylene glycol methyl ether
	Diethylene glycol propyl ether
	Dipropylene glycol butyl ether
	Dipropylene glycol methyl ether
	Polyalkylene glycol butyl ether

NOTES:

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

Group	Cargo
	Polyethylene glycol monoalkyl ether Polypropylene glycol methyl ether Tetraethylene glycol methyl ether Triethylene glycol butyl ether Triethylene glycol ethyl ether Triethylene glycol methyl ether Tripropylene glycol methyl ether Polyethylene glycol Polyalkylene glycol butyl ether Polyethylene glycol dimethyl ether Poly (ethylene glycol) methylbutenyl ether (molecular weight >1000) Polypropylene glycol Poly (tetramethylene ether) glycols (molecular weight 950-1050) Polytetramethylene ether glycol Propylene glycol monoalkyl ethers: n-Propoxypropanol Propylene glycol n-butyl ether Propylene glycol ethyl ether Propylene glycol methyl ether Propylene glycol propyl ether Propylene glycol phenyl ether Tetraethylene glycol Triethylene glycol Triethylene glycol butyl ether mixture Triethylene glycol ether mixture Tripropylene glycol
41. Ethers	Alcohol (C12-C13, branched and linear) poly(4-8)propoxy sulfates (alternately sulphates), sodium salt 25-30% solution Alkaryl polyethers (C9-C20) tert-Amyl ethyl ether tert-Amyl methyl ether n-Butyl ether Dichloroethyl ether 2,2'-Dichloroisopropyl ether Diethyl ether Dimethyl ether Dimethyl furan

NOTES:

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

Group	Cargo
	1,4-Dioxane Diphenyl ether Diphenyl ether/Diphenyl phenyl ether mixture Ethyl tert-butyl ether ¹ Isopropyl ether Long chain alkaryl polyether (C11-C20) Methyl-tert-butyl ether ¹ Methyl tert-pentyl ether Polyether, borated Polyether (molecular weight 1350+) Polyether polyols Poly(oxyalkylene) alkenyl ether (molecular weight >1000) Polyoxybutylene alcohol Propyl ether Tetrahydrofuran 1,3,5-Trioxane
42. Nitrocompounds	o-Chloronitrobenzene Dinitrotoluene (molten) Nitrobenzene o-Nitrochlorobenzene Nitroethane Nitroethane (80%)/Nitropropane (20%) Nitroethane/1-Nitropropane (each 15% or more) mixture Nitrophenol (mixed isomers) Nitropropane (60%)/Nitroethane (40%) mixtures 1- or 2-Nitropropane o- or p-Nitrotoluenes
43. Miscellaneous Water Solutions	Alkyl (C8-C10) polyglucoside solution (65% or less) Alkyl (C8-C10)/(C12-C14):(40% or less/60% or more) polyglucoside solution (55% or less) Alkyl (C8-C10)/(C12-C14):(50%/50%) polyglucoside solution (55% or less) Alkyl (C8-C10)/(C12-C14):(60% or more/40% or less) polyglucoside solution (55% or less) Alkyl (C12-C14) polyglucoside solution (55% or less) Aluminum sulfate (alternately Aluminium sulphate) solution ¹ 2-Amino-2-hydroxymethyl-1,3-propanediol solution Ammonium bisulfite (alternately bisulphite) solution (70% or less) ¹

NOTES:

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

Group	Cargo
	Ammonium chloride solution (less than 25%)
	Ammonium polyphosphate solution
	Ammonium sulfate (alternately sulphate) solution
	Ammonium sulfate (alternately sulphate) solution (20% or less)
	Ammonium thiosulfate (alternately thiosulphate) solution (60% or less)
	Apple juice
	Caramel solutions
	Cesium formate solution
	Clay slurry
	Coal slurry
	Corn syrup
	Cyclohexane oxidation products, sodium salts solution
	Dextrose solution
	2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution
	2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution ¹
	Diethylenetriaminepentaacetic acid, pentasodium salt solution
	Dodecyl diphenyl ether disulfonate (alternately disulphonate) solution
	Drilling brines (containing Calcium, Potassium, or Sodium salts)
	Drilling brines (containing Zinc salts)
	Drilling brines, including: Calcium bromide solution, Calcium chloride solution, and Sodium chloride solution
	Drilling mud (low toxicity) (if non-flammable or non-combustible)
	Ethylenediaminetetracetic acid/tetrasodium salt solution
	Ethylene-Vinyl acetate copolymer (emulsion)
	Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution ¹
	Fish solubles (water-based fish meal extracts)
	Fructose solution
	Fumaric adduct of Rosin, water dispersion
	Glucose solution
	Hexamethylenediamine adipate (50% in water)
	Hexamethylenediamine adipate solution
	N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution
	Kaolin clay solution/suspension
	Kaolin slurry
	Latex, liquid synthetic
	Latex: Carboxylated Styrene-Butadiene copolymer; Styrene-butadiene rubber
	Lauryl polyglucose

NOTES:

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

Group	Cargo
	Lauryl polyglucose (50% or less)
	Lignin liquor
	Ligninsulfonic (alternately Ligninsulphonic) acid, magnesium salt solution
	Ligninsulfonic (alternately Ligninsulphonic) acid, sodium salt solution
	Liquid Streptomyces solubles
	L-Lysine solution (60% or less)
	Magnesium nitrate solution (66.7%)
	Microsilica slurry
	Milk
	N-Methylglucamine solution
	Naphthenic acid, sodium salt solution
	Pentasodium salt of Diethylenetriaminepentaacetic acid solution
	Phenol solutions (2% or less)
	Polyacrylic acid solution (40% or less)
	Potassium chloride solution
	Potassium chloride solution (10% or more)
	Potassium chloride solution (less than 26%)
	Potassium thiosulfate (alternately thiosulphate) (50% or less)
	Rosin soap (disproportionated) solution
	Sewage sludge
	Silica slurry
	Sludge, treated
	Sodium bromide solution (less than 50%)
	Sodium hydrogen sulfite (alternately sulphite) solution (45% or less)
	Sodium lignosulfonate (alternately lignosulphonate) solution
	<i>Sodium naphthalene sulfonate solution (40% or less), see Naphthalene sulphonic acid, sodium salt solution (40% or less)</i>
	<i>Sodium naphthenate solution, see Naphthenic acid, sodium salt solution</i>
	Sodium poly(4+)acrylate solution
	Sodium polyacrylate solution ¹
	Sodium salt of Ferric hydroxyethylethylenediaminetriacetic acid solution
	Sodium silicate solution ¹
	Sodium sulfide (alternately sulphide) solution (15% or less)
	Sodium sulfite (alternately sulphite) solution (25% or less)
	Sodium tartrates/Sodium succinates solution
	Sulfonated (alternately Sulphonated) polyacrylate solution ¹
	Tall oil soap (disproportionated) solution

NOTES:

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

Group	Cargo
	Tetrasodium salt of ethylenediaminetetraacetic acid solution Titanium dioxide slurry Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution Trisodium salt of N-(Hydroxyethyl)ethylenediaminetriacetic acid solution Urea solution Urea/Ammonium nitrate solution (containing less than 1% free Ammonia) Urea/Ammonium phosphate solution Vegetable protein solution (hydrolyzed) Water

NOTES:

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

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

Appendix I to Part 150—Exceptions to the Chart

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

Member of reactive group	Compatible with
Acetone (18) Acetone cyanohydrin (0)	Diethylenetriamine (7). Acetic acid (4). Acrylates (14). Alcohols, Glycols (20). Aldehydes (19). Aromatic Hydrocarbon Mixtures (32). Carbon Disulfide (alternately Disulphide) (38). Esters (34). Ethers (41). Glycol Ethers (40). Halogenated Hydrocarbons (36). Ketones (18). Miscellaneous Hydrocarbon Mixtures (33). Nitriles (37). Nitrocompounds (42). Olefins (30).

Member of reactive group	Compatible with
Acrylonitrile (15) 1,3-Butylene glycol (20) 1,4-Butylene glycol (20) gamma-Butyrolactone (0) Caustic potash, 50% or less (5)	Paraffins (31). Phenols, Cresols (21). Substituted Allyls (15). Sulfolane (alternately Sulpholane) (39). Vinyl Acetate (13). Vinyl Halides (35). Triethanolamine (8). Morpholine (7). Ethylamine (7). Triethanolamine (8). N-Methyl-2-pyrrolidone (9). Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume) (20). n-Butyl alcohol (20). Cetyl alcohol (Hexadecanol) (20). Ethyl alcohol (20). Ethylene glycol (20). Isobutyl alcohol (20). Isooctyl alcohol (20). Isopropyl alcohol (20). Methyl alcohol (20). Propylene glycol (20).
Caustic soda, 50% or less (5)	Acrylonitrile/Styrene copolymer dispersion in Polyether polyol (20). Alcohol (C12-C16) poly(1-6)ethoxylates (20). Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume) (20). Butyl alcohol (20). tert-Butyl alcohol, Methanol mixtures (20). Cetyl alcohol (Hexadecanol) (20). Decyl alcohol (20). Diacetone alcohol (20). Diethylene glycol (40). Dodecyl alcohol (20). Ethyl alcohol (20). Ethyl alcohol (40% whiskey) (20). Ethylene glycol (20). Ethylene glycol, Diethylene glycol mixture (20). Ethyl hexanol (Octyl alcohol) (20). Isobutyl alcohol (20).

Member of reactive group	Compatible with
	Isodecyl alcohol (20). Isononyl alcohol (20). Isopropyl alcohol (20). Isotridecanol (20). Methyl alcohol (20). Nonyl alcohol (20). Propyl alcohol (20). Propylene glycol (20). Sodium chlorate solution (0). Acetone (18) Ethyl Acrylate (14) Methyl Alcohol (20)
2,4, D Dimethyl amine salt (DMA 806) (0)	Toluene (32)
Dimethyl disulfide (alternately disulfide) (0)	Acrylates (14). Alcohols, Glycols (20). Aromatic Hydrocarbon Mixtures (32). Esters (34). Halogenated Hydrocarbons (36). Ketones (18). Methyl tert-butyl ether (41). Olefins (30). Organic Acids (4). Organic Anhydrides (11). Paraffins (31). Phenols, Cresols (21).
Diphenylmethane diisocyanate (12)	2,2-Dimethylpropane-1,3-diol (20). Polypropylene glycol (40).
tert-Dodecanethiol (20)	Caustic soda solution (50%) (5). Isopropylamine solution (70%) (7). Polymethylene polyphenyl isocyanate (12).
tert-Dodecanethiol (Sulfole 120) (0)	Toluene diisocyanate (12). Acetone (18) Ethyl Acrylate (14) Methyl Alcohol (20) Polymeric methylene diphenyl diisocyanate (Papi 27) (12)
tert-Dodecanethiol (0)	Toluene (32) All Chemicals in Group 33 Acetone (18)

Member of reactive group	Compatible with
n-Dodecyl-mercaptan (0)	All chemicals in Group 33
Dodecyl and Tetradecylamine mixture (7)	Tall oil, fatty acid (34).
Ethylenediamine (7)	Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume) (20).
	Butyl alcohol (20).
	tert-Butyl alcohol (20).
	Butylene glycol (20).
	Creosote (21).
	Diethylene glycol (40).
	Diisobutyl ketone (18).
	Ethyl alcohol (20).
	Ethylene glycol (20).
	Ethyl hexanol (20).
	Fatty alcohols (C12-C14)(20).
	Glycerine (20).
	Isononyl alcohol (20).
	Isophorone (18).
	Methyl butyl ketone (18).
	Methyl ethyl ketone (18).
	Methyl isobutyl ketone (18).
	Propyl alcohol (20).
	Propylene glycol (20).
Hexamethylenediamine (7)	Ethyl Alcohol (Ethanol) (20)
Hexamethylenediamine (molten) (HMD 98%, molten) (7)	n-Butyl Alcohol (20)
	Isobutyl Alcohol (20)
	Isopropyl Alcohol (20)
Hexamethylenediamine solution (7)	CepSinoI™ 1216 (Alcohols (C12+), primary, linear) (20).
Hexamethylenediamine solution (HMD 90%) (7)	n-Butyl Alcohol (20)
	Isobutyl Alcohol (20)
	Isopropyl Alcohol (20)
Lactic acid (0)	Acetic acid (4).
	Benzene (32).
	Ethanol (20).
	Polypropylene glycol (40).
	Vinyl acetate (13).
Oleum (0)	Hexane (31).
	Dichloromethane (36).
	Perchloroethylene (36).

Member of reactive group	Compatible with
Phenol (90% hydrated) (21) 1,2-Propylene glycol (20)	Toluene diisocyanate (12) Diethylenetriamine (7). Polyethylene polyamines (7). Triethylenetetramine (7).
Sodium cresylate as Cresylate spent caustic (5) Sodium dichromate solution (70% or less) (0)	Methyl alcohol (20). Acetone (18). n-Butyl alcohol (20). Ethyl acetate (34). 1-Hexene (30). Methyl alcohol (20). Octene (all isomers) (30). Phosphoric acid (1). Ethyl Alcohol (Ethanol) (20)
Sodium hydrosulfide (alternatively hydrosulphide) solution (5) Sodium hydrosulfide (alternately hydrosulphide) solution (45% or less) (5)	Isopropyl alcohol (20). Methyl alcohol (20). 1,2-Dichloropropane (36). Chlorobenzene (36). Cyclohexanone (18). Cyclohexanone, Cyclohexanol mixtures (18). Diethanolamine (8). Diisononyl phthalate (34). Dimethylformamide (10). Ethyl alcohol (20). Ethylene glycol (20). Furfuryl alcohol (20). Heptene (all isomers) (30). Isobutyl alcohol (20). Isopropyl alcohol (20). Lubricating oil (33). Methyl ethyl ketone (18). Nonene (all isomers) (30). Nonyl alcohol (all isomers) (20). Octene (all isomers) (30). Perchloroethylene (36). Polyisobutenamine in aliphatic (C10-C14) solvent (7). o-Toluidine (9). Xylene (32).
Sodium Methylate 21-30% in methanol (0)	

Member of reactive group	Compatible with
Sodium Methylyate, 30% solution in Methanol (0)	n-Butyl Alcohol (20) Decene (30) Decyl Alcohol (20) Dialkyl (C9-C10) phthalates (34) Dichloromethane (36) Ethanolamine (8) (including Monoethanolamine) Hexene (all isomers) (30) Methyl Isobutyl Ketone (18) Olefin mixtures (C5-C15) (30) Olefins (C13+ all isomers) (30) Phenol (21) n-Propyl Alcohol (20) Propylheptanol (20) C9-Resinfeed (32) Sodium Borohydride (15% or less)/Sodium hydroxide solution (5) Solvent Naphtha (33) Styrene Monomer (30) Toluene (32) Xylenes (Incl. <i>m</i> -Xylene) (32)
Sulfuric (alternately Sulphuric) acid (2)	Coconut oil (34). Coconut oil, fatty acid (34). Palm oil (34). Soyabean oil (34). Tallow (34).
Sulfuric (alternately Sulphuric) acid, 98% or less (2)	Choice white grease tallow (34).
Sulfuric (alternatively Sulphuric) acid (95-98%) (Group 2)	Methyl ester fatty acid (34) Soybean oil (34)
Urea/Ammonium Nitrate solution (containing less than 1% free Ammonia) (43)	Magnesium chloride solutions (0).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Propylene, Propane, MAPP gas mixture (containing 12% or less MAPP gas) (30) is not compatible with Group 1, Non-Oxidizing Mineral Acids, Group 36, Halogenated Hydrocarbons, or with nitrogen dioxide, oxidizing agents, or molten sulfur (alternately sulphur) (0).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix II to Part 150—Explanation of Figure 1

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

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

The cargo groups in the compatibility chart are separated into two categories: 1 through 22 are "Reactive Groups" and 30 through 43 are "Cargo Groups". Left unassigned and available for future expansion are groups 23 through 29 and those past 43. Reactive Groups contain products which are chemically the most reactive; dangerous combinations may result between members of different Reactive Groups and

between members of Reactive Groups and Cargo Groups. Products assigned to Cargo Groups, however, are much less reactive; dangerous combinations involving these can be formed only with members of certain Reactive Groups. Cargo Groups do not react hazardously with one another.

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

- (1) Determine the group numbers of the two cargoes by referring to the alphabetical listing of cargoes and the corresponding groups (Table I). Many cargoes are listed under their parent names; unless otherwise indicated, isomers or mixtures of isomers of a particular cargo are assigned to the same group. For example, to find the group number for Isobutyl Alcohol, look under the parent name Butyl Alcohol. Similarly, the group number for para-Xylene is found under the entry Xylene. If a cargo cannot be found in this listing, contact the Coast Guard for a group determination (see § 150.140).
- (2) If both group numbers are between 30 and 43 inclusive, the products are compatible and the chart need not be used.
- (3) If both group numbers do not fall between 30 and 43 inclusive, locate one of the numbers on the left of the chart (Cargo Groups) and the other across the top (Reactive Groups). (Note that if a group number is between 30 and 43, it can only be found on the left side of the chart.) The box formed by the intersection of the column and row containing the two numbers will contain one of the following:
 - (a) Blank—The two cargoes are compatible.
 - (b) "X" —The two cargoes are not compatible.

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

EXAMPLES

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

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

Appendix III to Part 150—Testing Procedures for Determining Exceptions to the Chart

experimental procedure for evaluating binary chemical reactivity

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

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

Step 1

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

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

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

Step 2

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

Procedure—These separate mixes of the proposed binary combination will be tested. These are 2 ml : 18 ml, 10 ml : 10 ml, and 18 ml : 2 ml, respectively, to result in a final mixture of about 20 ml in each case.

A reference-junctioned thermocouple is prepared by inserting two lengths of 20 gauge or finer iron-constantan or chromelalumel duplex thermocouple wire into glass 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 (CG-ENG-5), Attn: Hazardous Materials Division, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593-7509.

[CGD 75-59, 45 FR 70263, Oct. 23, 1980, as amended by CGD 82-063b, 48 FR 4782, Feb. 3, 1983; CGD 83-047, 50 FR 33046, Aug. 16, 1985; CGD 88-070, 53 FR 34535, Sept. 7, 1988; CGD 96-041, 61 FR 50731, Sept. 27, 1996; USCG-2012-0832, 77 FR 59783, Oct. 1, 2012; USCG-2013-0671, 78 FR 60155, Sept. 30, 2013; USCG-2014-0688, 79 FR 58284, Sept. 29, 2014]

Appendix IV to Part 150—Data Sheet

Appendix IV - 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

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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: _____