



DEPARTMENT OF HOMELAND SECURITY

Coast Guard

46 CFR Parts 30, 150, and 153

Docket No. USCG-2013-0423

RIN 1625-AB94

2012 Liquid Chemical Categorization Updates

AGENCY: Coast Guard, DHS.

ACTION: Interim rule.

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SUMMARY: The Coast Guard is updating and revising regulatory tables that list liquid hazardous materials, liquefied gases, and compressed gases that have been approved for maritime transportation in bulk, and that indicate how each substance's pollution potential has been categorized. The interim rule provides new information about approved substances and their categorizations, but would not make any changes in which substances are approved or how each substance is categorized. Updated information is of value to shippers and to the owners and operators of U.S.-flag tank and bulk cargo vessels in any waters and most foreign-flag tank and oceangoing bulk cargo vessels in U.S. waters. This interim rule promotes the Coast Guard's maritime safety and stewardship missions.

DATES: This interim rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN FEDERAL REGISTER]. Comments and related material must either

be submitted to our online docket via <http://www.regulations.gov> on or before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] or reach the Docket Management Facility by that date.

ADDRESSES: You may submit comments identified by docket number USCG-2013-0423 using any one of the following methods:

- (1) Federal eRulemaking Portal: <http://www.regulations.gov>.
- (2) Fax: 202-493-2251.
- (3) Mail: Docket Management Facility (M-30), U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.
- (4) Hand delivery: Same as mail address above, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202-366-9329.

To avoid duplication, please use only one of these four methods. See the “Public Participation and Request for Comments” portion of the SUPPLEMENTARY INFORMATION section below for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: If you have questions on this rule, e-mail or call LCDR Marie Castillo-Bletso, Coast Guard; e-mail: [Marie.M.Castillo-Bletso@uscg.mil](mailto:Marie.M.Castillo-Bletso@uscg.mil), telephone: 202-372-1023. If you have questions on viewing or submitting material to the docket, call Barbara Hairston, Program Manager, Docket Operations, telephone 202-366-9826.

SUPPLEMENTARY INFORMATION:

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I. Public Participation and Request for Comments

We encourage you to participate in this rulemaking by submitting comments and related materials. All comments received will be posted, without change, to <http://www.regulations.gov> and will include any personal information you have provided.

A. Submitting comments

If you submit a comment, please include the docket number for this rulemaking (USCG-2013-0423), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online, or by fax, mail or hand delivery, but please use only one of these means. We recommend that you include your name and a

mailing address, an e-mail address, or a phone number in the body of your document so that we can contact you if we have questions regarding your submission.

To submit your comment online, go to <http://www.regulations.gov> and insert “USCG-2013-0423” in the “Search” box. Click on "Submit a Comment" in the “Actions” column. If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit comments by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period and may change this interim rule based on your comments.

B. Viewing comments and documents

To view comments, as well as documents mentioned in this preamble as being available in the docket, go to <http://www.regulations.gov> and insert “USCG-2013-0423” in the “Search” box. Click "Search." Click the “Open Docket Folder” in the “Actions” column. If you do not have access to the internet, you may view the docket online by visiting the Docket Management Facility in Room W12-140 on the ground floor of the Department of Transportation West Building, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. We have an agreement with the Department of Transportation to use the Docket Management Facility.

C. Privacy Act

Anyone can search the electronic form of comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment,

if submitted on behalf of an association, business, labor union, etc.). You may review a Privacy Act notice regarding our public dockets in the January 17, 2008, issue of the Federal Register (73 FR 3316).

#### D. Public meeting

We do not now plan to hold a public meeting, but you may submit a request for one to the docket using one of the methods specified under ADDRESSES. In your request, explain explain why you believe a public meeting would be beneficial. If we determine that one would aid this rulemaking, we will hold one at a time and place announced by a later notice in the Federal Register.

#### II. Abbreviations

APA	Administrative Procedure Act
DHS	Department of Homeland Security
E.O.	Executive Order
FR	<u>Federal Register</u>
IBC Code	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
IMO	International Maritime Organization
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973
MEPC	Marine Environment Protection Committee
NLS	Noxious liquid substance
OMB	Office of Management and Budget
SOLAS	International Convention for the Safety of Life at Sea
U.S.C.	United States Code

#### III. Basis and Purpose

The basis of this interim rule is 46 U.S.C. 3703, which requires the Secretary of the department in which the Coast Guard is operating to prescribe regulations relating to the operation of vessels that carry liquid bulk dangerous cargoes, and to the types and grades of cargo those vessels carry. Additional regulatory authority is provided by 33 U.S.C. 1903 (regulations to implement the International Convention for the Prevention of

Pollution from Ships, 1973 (MARPOL)), 46 U.S.C. 2103 (merchant marine regulatory authority), and 46 U.S.C. 3306 (regulations for the safety of individuals and property on inspected vessels). The Secretary's authority under these statutes is delegated to the Coast Guard in Department of Homeland Security Delegation No. 0170.1 (77) and (92).

The purpose of the interim rule is to update and revise regulatory tables that list liquid hazardous materials, liquefied gases, and compressed gases that have been approved for maritime transportation in bulk, and that indicate how each substance's pollution potential has been categorized.

The Administrative Procedure Act, 5 U.S.C. 551 *et seq.*, generally requires agencies to give prior public notice before issuing new rules and to give interested persons an opportunity to participate in the rulemaking by submitting comments or additional information. We are issuing this interim rule without prior notice and comment under the exceptions to the general requirement contained in 5 U.S.C. 553(b)(B) and (d). Section 553(b)(B) provides an exception from prior notice and comment when an agency finds, for good cause, that notice and comment are "impracticable, unnecessary, or contrary to the public interest." We find that it is unnecessary and contrary to the public interest to give prior notice and comment for this interim rule, because this interim rule simply updates and revises tables that list the names and pollution-potential categorizations of liquid chemical substances that have already been categorized and approved for maritime transportation in bulk. It makes no new decisions about whether any specific chemical substance should be approved for bulk maritime transportation, about how any specific substance should be categorized, or about carriage requirements that should apply to any specific substance. It simply updates and revises regulatory

tables to list liquid hazardous materials, liquefied gases, and compressed gases that currently are approved for maritime transportation in bulk, and indicates how each substance's pollution potential currently is categorized under international agreements to which the United States is a party. Neither existing approvals nor existing categorizations can be changed as a result of taking public comment on this rulemaking.

Additionally, delaying the regulatory update to allow for notice and comment is contrary to the public interest because it delays the public's ready access to categorization information without which it is impossible to know which regulations apply to any specific substance.

#### IV. Background

Coast Guard regulations in 46 CFR subchapter O (parts 150 through 155) list hundreds of hazardous liquids, liquefied gases, and compressed gases that the Coast Guard has approved for bulk transportation by vessels. Subchapter O specifies requirements for safely transporting these substances.

If a substance is not already listed in subchapter O, a vessel owner or operator must request the Coast Guard's written permission to transport the substance. 46 CFR 150.140, 151.01-15, 153.900. If the owner or operator plans to ship the substance internationally, an additional procedure is necessary to satisfy the requirements of international treaties to which the United States is a party. Specifically, a "tripartite agreement" must be concluded between the owner or operator, the Coast Guard, and the flag administration of the country to which the substance will be shipped. The tripartite agreement categorizes the substance's potential for pollution and sets its minimum safe carriage requirements in accordance with the International Code for the Construction and

Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code), which contains international standards for the safe maritime bulk transportation of dangerous and noxious liquid chemicals in accordance with MARPOL and the International Convention for the Safety of Life at Sea (SOLAS). A copy of the tripartite agreement is forwarded to the International Maritime Organization's (IMO's) Marine Environment Protection Committee (MEPC).

While this substance-specific approval procedure facilitates the commercial development and use of new substances and ensures the safety of a new substance's maritime transportation, public awareness of the new substance and its applicable safety requirements is maximized only by listing it in subchapter O, and in similar regulatory lists maintained by other countries. The IMO facilitates this public awareness. After each tripartite agreement is forwarded to the MEPC, the MEPC reviews the information the agreement contains, and either modifies or validates the information. Each December, the MEPC releases a circular listing the new substances for which it has completed this review. The circular lists the countries that have approved international maritime transportation of the substance, and provides information about the substance's pollution categorization and minimum transportation safety requirements. Thus, if the United States has approved a substance for bulk maritime transportation, eventually it will be listed in the MEPC circular.

Periodically, the IBC Code is revised, and substances listed in MEPC annual circulars since the last IBC Code revision are incorporated into the IBC Code. The IBC Code was last comprehensively revised in 2007, at which time the pollution categories for approved substances were changed from an A-B-C-D categorization scheme (with A

representing the most severe pollution hazards and B, C, and D representing decreasing levels of risk) to an X-Y-Z-OS scheme (with X, Y, and Z representing decreasing hazard levels and OS representing “other substances” that present no significant pollution hazards). In March 2012, an Annex to the 2007 IBC Code appeared, listing additional substances with their pollution categorizations. The 2007 IBC Code and March 2012 Annex were most recently updated by the December 2012 MEPC Circular.

#### V. Discussion of the Interim Rule

This interim rule is up to date as of the December 2012 MEPC Circular. It updates and revises subchapter O tables listing liquid chemical substances that the Coast Guard has approved for bulk maritime transportation, which have not been updated in several years. As a result, vessel owners and operators have lacked current and comprehensive lists of approved substances. Moreover, the current subchapter O tables use the outmoded A-B-C-D pollution categories and do not convey information about the X, Y, Z, and OS categories in international use since the IBC Code’s 2007 revision. By updating the lists and revising their pollution categorizations to match the 2007 IBC Code, this interim rule provides the regulated community with more current information, thereby achieving a modest reduction in regulatory burden. Our plan is to keep the table updated through annual rulemakings in the future.

The subchapter O tables amended by this interim rule are Table 30.25-1 (List of Flammable and Combustible Bulk Liquid Cargoes), Table I to Part 150 (Alphabetical List of Cargoes), Table II to Part 150 (Grouping of Cargoes), Appendix I to Part 150 (Exceptions to the Chart), and Table 2 to Part 153 (Cargoes Not Regulated Under Subchapters D or O of this Chapter When Carried in Bulk on Non-oceangoing Barges).

We are amending each of these tables to update the lists through December 2012 and to revise pollution categorizations. Also, we are revising the 46 CFR 30.25-1 regulatory text that serves as the introduction to Table 30.25-1 to explain the pollution categorizations included in that table.

## VI. Regulatory Analyses

### A. Regulatory Planning and Review

Executive Orders (E.O.s) 12866 ("Regulatory Planning and Review") and 13563 ("Improving Regulation and Regulatory Review") direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity).

Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This interim rule has not been designated a "significant regulatory action" under section 3(f) of E.O. 12866. Accordingly, the interim rule has not been reviewed by the Office of Management and Budget. A draft regulatory assessment is included herein.

### Affected Population

This interim rule updates tables that list the names and pollution-potential categorizations of liquid chemical substances that have already been categorized and approved for maritime transportation in bulk, either permanently or on a provisional basis. This interim rule makes no new decisions about whether any specific chemical substance should be approved for bulk maritime transportation, about how any specific substance should be categorized, or about carriage requirements that should apply to any

specific substance. It simply provides updated information about the substances that are currently approved and how they are currently categorized. As such, this interim rule does not directly affect any particular vessel population. However, this interim rule indirectly applies to the following vessel populations carrying these cargoes from 46 CFR parts 30, 150, 151, 153, and 154 as described:

- Part 30: U.S-flag tank vessels, as further specified in 46 CFR 30.01-5.
- Part 150: U.S.-flag and foreign-flag tank (when in U.S. waters; except foreign-flag tank vessels in innocent passage through U.S. waters) vessels, with exceptions described in 46 U.S.C. 3702.
- Part 151: Non-self-propelled bulk-cargo carrying oceangoing/non-oceangoing U.S.-flag and oceangoing foreign-flag (when in U.S. waters) vessels, as further specified in 46 CFR 151.01-1.
- Part 153: Self-propelled bulk cargo carrying oceangoing/non-oceangoing U.S.-flag and oceangoing foreign-flag (when in U.S. waters) vessels, as further specified in 46 CFR 153.1.
- Part 154: U.S.-flag and foreign-flag (when in U.S. waters) vessels with bulk liquefied gas cargo/cargo residue or vapor, as further specified in 46 CFR 154.5.

#### Costs

This interim rule updates tables that list the names and pollution-potential categorizations of liquid chemical substances that have already been categorized and approved by the United States and the IMO for maritime transportation in bulk, either permanently or on a provisional basis. Since this interim rule simply updates tables and

a table preface to reflect decisions already made under international law about which liquid chemical substances are approved for bulk maritime transportation, and about how those substances should be categorized with respect to their pollution potential, it does not change established shipping requirements and there are no private sector costs expected from this interim rule. This interim rule incorporates chemical substances and categorizations listed by the IMO through its December 2012 MEPC Circular.

### Benefits

The primary benefit of this interim rule is to conform regulatory language to practices currently allowed by the Coast Guard through either individual letters of approval or the IBC Code as discussed above, which we expect will result in the benefit of improved service to the public through improved clarity and transparency.

#### B. Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601-612) (RFA), we have considered whether this interim rule would have a significant economic impact on a substantial number of small entities. The term "small entities" comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000. We recognize that an Initial Regulatory Flexibility Analysis is not required when an interim rule is promulgated without prior notice and comment. Although no impacts on small entities are anticipated, Coast Guard included a threshold analysis of the Interim Rule requirements in order to follow the spirit of the Regulatory Flexibility Act. As this rule does not impose any additional direct costs on small entities as defined by the

RFA, this rule is not expected to have a significant economic impact on a substantial number of small entities.

#### C. Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Public Law 104-121), we want to assist small entities in understanding this rule so that they can better evaluate its effects on them and participate in the rulemaking. If this interim rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please consult LCDR Marie Castillo-Bletso, at Marie.M.Castillo-Bletso@uscg.mil. The Coast Guard will not retaliate against small entities that question or complain about this interim rule or any policy or action of the Coast Guard.

#### D. Collection of Information

This interim rule would call for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). This interim rule simply updates and revises tables that list substances that have been approved and categorized for bulk maritime transportation, which does not involve information collection.

#### E. Federalism

A rule has implications for federalism under E.O. 13132 (“Federalism”) if it has a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. We have analyzed this interim rule under that E.O. and have determined that it is consistent with the fundamental federalism principles and preemption requirements described in the E.O. Our analysis follows.

It is well-settled that States may not regulate in categories reserved for regulation by the Coast Guard. It is also well-settled, now, that all of the categories covered in 46 U.S.C. §§ 3306, 3703, 7101, and 8101 (design, construction, alteration, repair, maintenance, operation, equipping, personnel qualification, and manning of vessels), as well as the reporting of casualties and any other category in which Congress intended the Coast Guard to be the sole source of a vessel's obligations, are within fields foreclosed from regulation by the States. (See the decision of the Supreme Court in the consolidated cases of United States v. Locke and Intertanko v. Locke, 529 U.S. 89, 120 S.Ct. 1135 (March 6, 2000).) This interim rule amends existing regulations for tank vessels and the maritime transportation of certain bulk dangerous cargoes, which, under the principles discussed in Locke, fall within the categories enumerated in 46 U.S.C. §§ 3306 and 3703 and are within fields in which the states are foreclosed from regulating. Therefore, because the States may not regulate within these categories, this rule is consistent with the fundamental federalism principles and preemption requirements described in E.O. 13132 .

#### F. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531-1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of \$100,000,000 (adjusted for inflation) or more in any one year. Though this rule will not result in such an expenditure, we do discuss the effects of this rule elsewhere in this preamble.

#### G. Taking of Private Property

This interim rule will not cause a taking of private property or otherwise have taking implications under E.O. 12630 (“Governmental Actions and Interference with Constitutionally Protected Property Rights”).

#### H. Civil Justice Reform

This interim rule meets applicable standards in sections 3(a) and 3(b)(2) of E.O. 12988 (“Civil Justice Reform”) to minimize litigation, eliminate ambiguity, and reduce burden.

#### I. Protection of Children

We have analyzed this interim rule under E.O. 13045 (“Protection of Children from Environmental Health Risks and Safety Risks”). This interim rule is not an economically significant rule and does not create an environmental risk to health or risk to safety that may disproportionately affect children.

#### J. Indian Tribal Governments

This interim rule does not have tribal implications under E.O. 13175 (“Consultation and Coordination with Indian Tribal Governments”) because it does not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

#### K. Energy Effects

We have analyzed this interim rule under E.O. 13211 (“Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use”). We have determined that it is not a “significant energy action” under that E.O. because it is not a “significant regulatory action” under E.O. 12866 and is not likely to have a significant

adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under E.O. 13211.

#### L. Technical Standards

The National Technology Transfer and Advancement Act (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through the OMB, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies. This interim rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

#### M. Environment

We have analyzed this interim rule under Department of Homeland Security Management Directive 023-01 and Commandant Instruction M16475.ID, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA)(42 U.S.C. 4321-4370f), and have made a preliminary determination that this action is one of a category of actions that do not individually or cumulatively have a significant effect on the human environment. A preliminary environmental analysis checklist supporting this determination is available in the docket where indicated under the “Public Participation and Request for Comments” section of this preamble. This interim rule involves administrative updates of existing chemical transport regulations

and updates provisions relating to the chemical properties of liquid chemical substances approved for maritime transportation in bulk. The update incorporates changes in how approved substances are categorized by their chemical properties. This interim rule promotes the Coast Guard's maritime safety and stewardship missions. It is therefore included in the Coast Guard's Commandant Instruction (COMDTINST) M16475.1D, Figure 2-1, which includes categorical exclusions (CEs) under categories (34)(a), "regulations which are editorial or procedural, such as those updating addresses or establishing application procedures," and 34 (d), "regulations concerning manning, documentation, admeasurement, inspection, and equipping of vessels," as well as in the "Appendix to National Environmental Policy Act: Coast Guard Procedures for Categorical Exclusions, Notice of Final Agency Policy" (see 67 FR 48243) under paragraph 6 (a), "regulations concerning vessel operation safety standards...equipment approval, and/or equipment carriage requirements...and visual distress signals." We seek any comments or information that may lead to the discovery of a significant environmental impact from this interim rule.

#### List of Subjects

##### 46 CFR Part 30

Cargo vessels, Foreign relations, Hazardous materials transportation, Penalties, Reporting and recordkeeping requirements, Seamen

##### 46 CFR Part 150

Hazardous materials transportation, Marine safety, Occupational safety and health, Reporting and recordkeeping requirements

##### 46 CFR Part 151

Cargo vessels, Hazardous materials transportation, Marine safety, Reporting and recordkeeping requirements, Water pollution control

46 CFR Part 153

Administrative practice and procedure, Cargo vessels, Hazardous materials transportation, Marine safety, Reporting and recordkeeping requirements, Water pollution control

For the reasons set out in the preamble, the Coast Guard amends 46 CFR parts 30, 150, 151, and 153 as follows:

**PART 30—GENERAL PROVISIONS**

1. The authority citation for part 30 continues to read as follows:

Authority: 46 U.S.C. 2103, 3306, 3703; Pub. L. 103-206, 107 Stat. 2439; 49 U.S.C. 5103, 5106; Department of Homeland Security Delegation No. 0170.1; Section 30.01-2 also issued under the authority of 44 U.S.C. 3507; Section 30.01-05 also issued under the authority of Sec. 4109, Pub. L. 101-380, 104 Stat. 515.

2. Revise § 30.25-1 to read as follows:

§30.25-1 Cargoes carried in vessels certificated under the rules of this subchapter.

(a) Table 30.25-1 lists flammable or combustible cargoes that, when transported in bulk, must be in vessels certificated under this subchapter D.

(b) A mixture or blend of two or more cargoes appearing in Table 30.25-1 may be transported under this subchapter D.

(c) A mixture or blend of one or more cargoes appearing in Table 30.25-1 and one or more cargoes appearing in Table 2, 46 CFR part 153, may be carried under this subchapter D if the mixture is flammable or combustible.

(d) Any mixture containing one or more substance categorized by the International Maritime Organization (IMO) and listed in Table 30.25-1 as a category X, Y, or Z noxious liquid substance (NLS) may be carried in bulk—

(1) Under this subchapter D if the vessel is not regulated under 46 CFR part 153;

(2) Under part 153 if the vessel is regulated under that part; or alternatively under 33 CFR part 151 in the case of a category Y oil-like NLS; or

(3) Under 33 CFR part 151 if the cargo is a category Z NLS or a mixture of non-NLS and category Z NLS cargoes.

TABLE 30.25–1–LIST OF FLAMMABLE AND COMBUSTIBLE BULK LIQUID CARGOES

*See NOTES at the end of the Table for explanation of symbols and terms used. See Table 2, 46 CFR part 153, for additional cargoes that may be carried by tank barge.*

Cargo Name	IMO Annex II Pollution Category
Acetochlor*	X
Acetone	Z
Acetophenone	#
Acrylonitrile-Styrene copolymer dispersion in polyether polyol	Y
Alcohol(C6–C17)(secondary) poly(3-6)ethoxylates	Y
Alcohol(C6–C17)(secondary) poly(7-12)ethoxylates	Y
Alcohol(C9–C11) poly(2.5-9)ethoxylate	Y
<i>Alcohol(C12–C15) poly( ... )ethoxylates, see Alcohol(C12–C16) poly( ... ) ethoxylates</i>	.....
Alcohol(C12–C16) poly(1-6)ethoxylates	Y
Alcohol(C12–C16) poly(7-19)ethoxylates	Y
Alcohol(C12–C16) poly(20+)ethoxylates	Y
Alcohols (C13+)	Y
Alcoholic beverages, n.o.s.	Z

Cargo Name	IMO Annex II Pollution Category
Aliphatic oil	I
Alkanes (C6–C9)	X
Iso-and cyclo-alkanes (C10–C11)	Y
Iso-and cyclo-alkanes (C12+)	Y
n-Alkanes (C10+)	Y
Alkaryl polyethers (C9–C20)	Y
Alkenyl(C11+) amide*	X
Alkenyl(C8+) amine, Alkenyl(C12+) acid ester mixture	#
Alkyl acrylate-Vinylpyridine copolymer in toluene*	Y
Alkylbenzene, alkylindane, alkylindene mixture (each C12-C17)*	Z
Alkyl(C3-C4) benzenes*	Y
Alkyl(C5-C8) benzenes*	X
Alkyl(C8-C9) phenylamine in aromatic solvents*	Y
Alkyl(C9+) benzenes	Y
<b>Alkyl(C11–C17) benzene sulfonic acid</b>	<b>Y</b>
Alkylbenzene sulfonic acid (4% or less)	#
<b>Alkyl dithiocarbamate (C19–C35)</b>	<b>Y</b>
Alkyl dithiothiadiazole (C6–C24)	Y
Alkyl ester copolymer (C4–C20)	Y
Alkyl(C7–C11)phenol poly(4-12) ethoxylate	Y
<i>Alkyl phenol sulfide (C8–C40), see Alkyl(C8–C40) phenol sulfide</i>	.....
Alkyl(C8–C40) phenol sulfide	Z
Alkyl(C8-C9) phenylamine in aromatic solvents*	Y
Alkyl(C9–C15) phenyl propoxylate	Z
Alkyl(C8-C10) polyglucoside solution (65% or less)*	Y
Alkyl(C12-C14) polyglucoside solution (55% or less)*	Y
Alkyl(C8-C10)/(C12-C14):(40% or less/60% or more) polyglucoside solution (55% or less)*	Y

Cargo Name	IMO Annex II Pollution Category
Alkyl(C8-C10)/(C12-C14):(60% or more/40% or less) polyglucoside solution (55% or less)*	Y
Alkyl(C8-C10)/(C12-C14):(50%/50%) polyglucoside solution (55% or less)*	Y
Alkyl(C10-C20, saturated and unsaturated) phosphate*	Y
<i>n-Alkyl phthalates, see individual phthalates</i>	.....
Alkyl sulfonic acid ester of phenol	Y
Aminoethyldiethanolamine/Aminoethylethanolamine solution	Z
2-Amino-2-methyl-1-propanol*	Z
Amyl acetate (all isomers)	Y
Amyl alcohol (iso-, n-, sec-, primary, tert-)	Z
tert-Amyl ethyl ether*	Z
tert-Amyl methyl ether	X
<i>Amyl methyl ketone, see Methyl amyl ketone</i>	.....
<i>Amylene, see Pentene (all isomers)</i>	.....
Animal acid oil	#
Animal and Fish acid oils and distillates, n.o.s.	#
Animal and Fish oils, n.o.s.	#
Animal oil	#
Aromatic oil	I
Aryl polyolefins (C11–C50)	Y
Asphalt	I
Asphalt blending stocks:	
Roofers flux	I
Straight run residue	I
Aviation alkylates (C8 paraffins and iso-paraffins BPT 95-120°C)*	X
Barium long-chain alkyl (C8–C14) phenate sulfide	#
Beechnut oil	#

Cargo Name	IMO Annex II Pollution Category
<i>Behenyl alcohol, see Alcohols (C13+)</i>	.....
Benzene tricarboxylic acid, trioctyl ester	Y
Benzyl acetate*	Y
Benzyl alcohol	Y
Brake fluid base mix: Poly(2-8)alkylene(C2–C3) glycols/Polyalkylene(C2–C10) glycols monoalkyl(C1–C4) ethers and their borate esters	Z
<i>Butene, see Butylene</i>	.....
Butene oligomer	X
Butyl acetate (all isomers)	Y
<i>Butyl alcohol (iso-, n-, sec-, tert-), see Butyl alcohol (all isomers)</i>	.....
Butyl alcohol (all isomers)	Z
Butylbenzene (all isomers)*	X
Butyl benzyl phthalate	X
Butyl butyrate (all isomers)*	Y
Butylene glycol	Z
<i>1,3-Butylene glycol, see Butylene glycol</i>	.....
iso-Butyl formate	#
n-Butyl formate	#
Butyl heptyl ketone	#
<i>Butyl methyl ketone, see Methyl butyl ketone</i>	.....
n-Butyl propionate	Y
Butyl stearate	#
Butyl toluene	#
gamma-Butyrolactone	Y
Calcium alkyl(C9)phenol sulfide, polyolefin phosphorosulfide mixture	#
<i>Calcium alkyl salicylate, see Calcium long-chain alkyl salicylate (C13+)</i>	.....
Calcium long-chain alkaryl sulfonate (C11–C50)	#

Cargo Name	IMO Annex II Pollution Category
<i>Calcium long-chain alkyl phenate (C8–C40), see Calcium long-chain alkyl(C5–C10) phenate or Calcium long-chain alkyl(C11–C40) phenate</i>	.....
Calcium long-chain alkyl(C5–C10) phenate	Y
Calcium long-chain alkyl(C11–C40) phenate	Y
Calcium long-chain alkyl phenolic amine (C8–C40)	#
Calcium long-chain alkyl salicylate (C13+)	Y
<i>Candelilla wax, see Waxes</i>	.....
<i>Caprolactam solutions, see epsilon-Caprolactam (molten or aqueous solutions)</i>	.....
epsilon-Caprolactam (molten or aqueous solutions)*	Z
<i>Carnauba wax, see Waxes</i>	.....
<i>Cetyl alcohol, see Alcohols (C13+)</i>	.....
<i>Cetyl- stearyl alcohol, see Alcohols (C13+)</i>	.....
Chlorinated paraffins (C10–C13)*	X
1-(4-Chlorophenyl)-4,4-dimethyl-pentan-3-one*	Y
Citric acid (70% or less)*	Z
Clarified oil	I
Coal oil	#
Coconut oil fatty acid methyl ester*	Y
Cod liver oil	#
Copper salt of long-chain (C17+) alkanolic acid	Y
Corn acid oil	#
Cotton seed acid oil	#
<i>Cotton seed, fatty acid, see Cotton seed oil, fatty acid</i>	.....
Cotton seed oil, fatty acid	#
Crude Isononylaldehyde	#
Crude Isopropanol	@Z
† Crude oil	I

Cargo Name	IMO Annex II Pollution Category
<i>Cumene</i> , <i>see</i> Propylbenzene (all isomers)	.....
Cycloheptane*	X
Cyclohexane	Y
Cyclohexanol	Y
Cyclohexyl acetate*	Y
1,3-Cyclopentadiene dimer (molten)	Y*
Cyclopentane*	Y
Cyclopentene*	Y
p-Cymene	Y
Dark mixed acid oil	#
Decahydronaphthalene	Y
iso-Decaldehyde	#
n-Decaldehyde	#
<i>Decane</i> , <i>see</i> n-Alkanes (C10+)	.....
Decanoic acid*	X
Decene	X
Decyl acetate	#
Decyl alcohol (all isomers)	Y
<i>n-Decylbenzene</i> , <i>see</i> Alkyl(C9+)benzenes	.....
<i>Detergent alkylate</i> , <i>see</i> Alkyl(C9+)benzenes	.....
Diacetone alcohol	Z
<i>Dialkyl(C10–C14) benzenes</i> , <i>see</i> Alkyl(C9+) benzenes	.....
Dialkyl(C8–C9) diphenylamines	Z
Dialkyl(C7–C13) phthalates	X
<i>Including:</i>	
<i>Diisodecyl phthalate</i>	
<i>Diisononyl phthalate</i>	
<i>Dinonyl phthalate</i>	

Cargo Name	IMO Annex II Pollution Category
<i>Ditridecyl phthalate</i>	
<i>Diundecyl phthalate</i>	
<i>Dibutyl carbinol, see</i> Nonyl alcohol (all isomers)	.....
Dibutyl hydrogen phosphonate*	Y
2,6-Di-tert-butylphenol*	X
Dibutyl phthalate*	X
<i>ortho-Dibutyl phthalate, see</i> Dibutyl phthalate	.....
Dibutyl terephthalate*	Y
<i>Dicyclopentadiene, see</i> 1,3-Cyclopentadiene dimer (molten)	.....
Diesel oil	I
Diethylbenzene	Y
Diethylene glycol	Z
<i>Diethylene glycol butyl ether, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether	.....
<i>Diethylene glycol butyl ether acetate, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether acetate	.....
Diethylene glycol diethyl ether	Z
<i>Diethylene glycol ethyl ether, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether	.....
<i>Diethylene glycol ethyl ether acetate, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether acetate	.....
<i>Diethylene glycol n-hexyl ether, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether	.....
<i>Diethylene glycol methyl ether, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether	.....
<i>Diethylene glycol methyl ether acetate, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether acetate	.....
Diethylene glycol phenyl ether	#
Diethylene glycol phthalate	Y
<i>Diethylene glycol propyl ether, see</i> Poly(2-8)alkylene glycol	.....

Cargo Name	IMO Annex II Pollution Category
monoalkyl(C1–C6) ether	
Di-(2-ethylhexyl)adipate	Y
<i>Di-(2-ethylhexyl)phthalate, see Dioctyl phthalate</i>	.....
Diethyl phthalate	Y
Diglycidyl ether of bisphenol A	X
Diglycidyl ether of bisphenol F*	Y
Diheptyl phthalate	Y
Di-n-hexyl adipate*	X
Dihexyl phthalate	Y
<i>Diisobutyl carbinol, see Nonyl alcohol (all isomers)</i>	.....
Diisobutylene	Y
Diisobutyl ketone	Y
Diisobutyl phthalate	X
<i>Diisodecyl phthalate, see Dialkyl(C7–C13) phthalates</i>	.....
Diisononyl adipate	Y
<i>Diisononyl phthalate, see Dialkyl(C7–C13) phthalates</i>	.....
Diisooctyl phthalate	Y
Diisopropylbenzene ( <i>all isomers</i> )	X
Diisopropylnaphthalene	Y
Dimethyl adipate	X
<i>Dimethylbenzene, see Xylenes</i>	.....
Dimethyl glutarate	Y
Dimethyl octanoic acid*	Y
Dimethyl phthalate	Y
Dimethylpolysiloxane	Y
2,2-Dimethylpropane-1,3-diol (molten or solution)	Z
Dimethyl succinate	Y
Dinonyl phthalate	Y

Cargo Name	IMO Annex II Pollution Category
Diocetyl phthalate	X
Dipentene	Y
Diphenyl	X
Diphenylamine (molten)*	Y
Diphenylamines, alkylated*	Y
Diphenyl/Diphenyl ether mixtures	X
Diphenyl ether	X
Diphenyl ether/Diphenyl phenyl ether mixture	X
Diphenylol propane-epichlorohydrin resins*	X
Dipropylene glycol	Z
<i>Dipropylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	.....
Dipropylene glycol dibenzoate	#
<i>Dipropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	.....
Dithiocarbamate ester (C7-C35)*	X
Distillates:	
Flashed feed stocks	I
Straight run	I
Diundecyl phthalate	Y
Dodecane (all isomers)	Y
<i>Dodecanol, see Dodecyl alcohol</i>	.....
Dodecene (all isomers)	X
Dodecyl alcohol	Y
<i>Dodecyl benzene, see Alkyl (C9+) benzenes</i>	.....
Dodecyl hydroxypropyl sulfide	X
Dodecyl phenol	X
Dodecyl xylene	Y

Cargo Name	IMO Annex II Pollution Category
Drilling brines (containing zinc salts) (if flammable or combustible)*	X
Drilling brines, including: calcium bromide solution, calcium chloride solution and sodium chloride solution (if flammable or combustible)*	Z
Drilling mud (low toxicity) (if flammable or combustible)	#
<i>ETBE, see Ethyl tert-butyl ether</i>	.....
2-Ethoxyethyl acetate	Y
<i>Ethoxylated alkyloxy alkyl amine, see Ethoxylated long-chain (C16+) alkyloxyalkylamine</i>	.....
Ethoxy triglycol (crude)	#
Ethyl acetate	Z
Ethyl acetoacetate	Z
Ethyl alcohol	Z
Ethyl amyl ketone	Y
Ethylbenzene	Y
Ethyl butanol	#
Ethyl tert-butyl ether	Y
Ethyl butyrate	Y
Ethyl cyclohexane	Y
S-Ethyl dipropylthiocarbamate*	Y
Ethylene carbonate	Z
Ethylene glycol	Y
Ethylene glycol acetate	Y
Ethylene glycol butyl ether acetate	Y
Ethylene glycol diacetate	Y
Ethylene glycol dibutyl ether	#
<i>Ethylene glycol ethyl ether acetate, see 2-Ethoxyethyl acetate</i>	.....
Ethylene glycol methyl butyl ether	#
Ethylene glycol methyl ether acetate	Y

Cargo Name	IMO Annex II Pollution Category
Ethylene glycol phenyl ether	Z
Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture	Z
Ethyl-3-ethoxypropionate	Y
<i>2-Ethylhexaldehyde, see Octyl aldehydes</i>	.....
2-Ethylhexanoic acid	Y
<i>Ethylhexoic acid, see 2-Ethylhexanoic acid</i>	.....
<i>2-Ethylhexanol, see Octanol (all isomers)</i>	.....
Ethyl hexyl phthalate	#
2-Ethyl-2-(hydroxymethyl) propane-1,3-diol, (C8–C10) ester	Y
Ethyl propionate	Y
Ethyl toluene	Y
Fatty acid (saturated, C13+)	Y
Fatty acids, (C16+)*	Y
Fatty acids, essentially linear (C6–C18) 2-ethylhexyl ester*	Y
Fish acid oil	#
Formamide	Y
Furfuryl alcohol	Y
† Gas oil, cracked	I
Gas oil, high pour	I
Gas oil, low pour	I
Gas oil, low sulfur	I
Gasoline blending stocks:	
Alkylates	I
† Reformates	I
Gasolines:	
† Automotive ( <i>containing not over 4.23 grams lead per gallon</i> )	I
† Aviation ( <i>containing not over 4.86 grams lead per gallon</i> )	I
Casinghead ( <i>natural</i> )	I

Cargo Name	IMO Annex II Pollution Category
Polymer	I
† Straight run	I
Gasoline (Natural gas condensate)	I
Glycerine	Z
Glycerine (83%), Dioxanedimethanol (17%) mixture	#
<i>Glycerol, see Glycerine</i>	.....
Glycerol ethoxylated*	OS
Glycerol monooleate	Y
Glycerol polyalkoxylate	#
Glycerol, propoxylated and ethoxylated*	Z
Glycerol/sucrose blend propoxylated and ethoxylated*	Z
Glyceryl triacetate	Z
<i>Glycidyl ester of tridecyl acetic acid, see Glycidyl ester of C10 trialkylacetic acid</i>	.....
<i>Glycidyl ester of versatic acid, see Glycidyl ester of C10 trialkylacetic acid</i>	.....
Glycidyl ester of C10 trialkylacetic acid	Y
<i>Glycol diacetate, see Ethylene glycol diacetate</i>	.....
<i>Glycol triacetate, see Glyceryl triacetate</i>	.....
Glyoxal solution (40% or less)	Y
Glyphosate solution (not containing surfactant)	Y
Groundnut acid oil	#
Groundnut oil*	Y
Hazelnut oil	#
Heartcut distillate	I
<i>Heptadecane, see n-Alkanes (C10+)</i>	.....
Heptane (all isomers)	X
<i>Heptanoic acid, see n-Heptanoic acid</i>	.....

Cargo Name	IMO Annex II Pollution Category
<i>n</i> -Heptanoic acid*	Z
Heptanol (all isomers)	Y
Heptene (all isomers)	Y
Heptyl acetate	Y
<i>Herbicide (C<sub>15</sub>H<sub>22</sub>NO<sub>2</sub>Cl)</i> , see N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methylchloroacetanilide	.....
<i>Hexadecanol</i> , see Alcohol (C 13+)	.....
1-Hexadecylnaphthalene/1,4-Bis(hexadecyl)naphthalene mixture	Y
<i>Hexaethylene glycol</i> , see Polyethylene glycol	.....
Hexamethylene glycol	Z
Hexamethylenetetramine solutions	Z
Hexane (all isomers)	Y
1,6-Hexanediol, distillation overheads*	Y
Hexanoic acid	Y
Hexanol	Y
Hexene (all isomers)	Y
Hexyl acetate	Y
Hexylene glycol	Z
Hydrogenated starch hydrolysate*	OS
2-Hydroxy-4-(methylthio)butanoic acid	Z
<i>Hydroxy terminated polybutadiene</i> , see Polybutadiene, hydroxy terminated	.....
Illipe oil*	Y
Isoamyl alcohol*	Z
Isobutyl alcohol*	Z
Isobutyl formate*	Z
Isobutyl methacrylate*	Z
Isopropyl acetate*	Z

Cargo Name	IMO Annex II Pollution Category
Isopropyl alcohol*	Z
Isopropylcyclohexane*	Y
Jatropha oil*	Y
Jet fuels:	
‡ JP-4	I
JP-5 ( <i>kerosene, heavy</i> )	I
JP-8	I
Kerosene	I
Lactic acid	Z
Lanolin oil	#
Lard acid oil	#
Latex: Carboxylated styrene-Butadiene copolymer; Styrene-Butadiene rubber*	Z
Lauric acid*	X
Lecithin	OS
Long-chain alkaryl polyether (C11–C20)	Y
Long-chain alkaryl sulfonic acid (C16–C60)	Y
Long-chain alkylphenate/Phenol sulfide mixture	Y
Lubricating oil	I
L-Lysine solution (60% or less)*	Z
Magnesium long-chain alkaryl sulfonate (C11–C50)	Y
Magnesium long-chain alkyl phenate sulfide (C8–C20)	#
Magnesium long-chain alkyl salicylate (C11+)	Y
<i>Magnesium nonyl phenol sulfide, see</i> Magnesium long-chain alkyl phenate sulfide (C8–C20)	.....
Mango kernel oil*	Y
2-Mercaptobenzothiazol ( <i>in liquid mixtures</i> )	#
3-Methoxy-1-butanol	Z

Cargo Name	IMO Annex II Pollution Category
3-Methoxybutyl acetate	Y
1-Methoxy-2-propyl acetate	#
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methylchloroacetanilide*	X
<i>Methoxy triglycol</i> , see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether	.....
Methyl acetate	Z
Methyl acetoacetate	Z
Methyl alcohol	Y
Methylamyl acetate	Y
Methylamyl alcohol	Z
Methyl amyl ketone	Z
<i>Methyl butanol</i> , see the amyl alcohols	.....
Methylbutenol	Y
Methyl tert-butyl ether	Z
Methyl butyl ketone	Y
Methylbutynol*	Z
Methyl butyrate	Y
Methylcyclohexane*	Y
Methylcyclopentadiene dimmer*	Y
Methyl 3-(3,5 di-tert-butyl-4-hydroxyphenyl)propionate crude melt*	[Y]
Methyl ethyl ketone	Z
N-Methylglucamine solution (70% or less)	Z
Methyl heptyl ketone	#
<i>Methyl isobutyl carbinol</i> , see Methyl amyl alcohol	.....
Methyl isobutyl ketone	Z
3-Methyl-3-methoxybutanol	Z
3-Methyl-3-methoxybutyl acetate	#
<i>Methyl pentene</i> , see Hexene (all isomers)	.....

Cargo Name	IMO Annex II Pollution Category
<i>Methyl tert-pentyl ether, see tert-Amyl methyl ether</i>	.....
2-Methyl-1,3-propanediol	Z
Methyl propyl ketone	Z
N-Methyl-2-pyrrolidone	Y
Methyl salicylate*	Y
<i>Metolachlor, see N-(2-Methoxy-1-methylethyl)-2-ethyl-6-methylchloroacetanilide</i>	.....
Mineral oil	I
Mineral seal oil	I
Mineral spirits	I
Mixed acid oil	#
Mixed general acid oil	#
Mixed hard acid oil	#
Mixed soft acid oil	#
Motor oil	I
<i>MTBE, see Methyl tert-butyl ether</i>	.....
Myrcene	X
Naphtha:	
‡ Aromatic ( <i>having less than 10% Benzene</i> )	I
Heavy	I
Paraffinic	I
‡ Petroleum	I
‡ Solvent	I
Stoddard Solvent	I
‡ Varnish makers' and painters' (75%)	I
Naphthenic acid	#
Neatsfoot oil	#
Neodecanoic acid*	Y

Cargo Name	IMO Annex II Pollution Category
Nitrilotriacetic acid, trisodium salt solution*	Y
Nonane (all isomers)	X
Nonanoic acid (all isomers)	Y
Nonanoic, Tridecanoic acid mixture	#
Nonene (all isomers)	Y
Nonyl acetate	#
Nonyl alcohol (all isomers)	Y
Nonyl methacrylate monomer	Y
Nonylphenol	X
Nonylphenol poly(4+)ethoxylate	Y
<i>Nonyl phenol sulfide (90% or less), see Alkyl (C8–C40) phenol sulfide</i>	.....
Noxious liquid, F, (2) n.o.s. (“trade name” contains “principle components”) ST 1, Cat X	X
Noxious liquid, F, (4) n.o.s. (“trade name” contains “principle components”) ST 2, Cat X	X
Noxious liquid, F, (6) n.o.s. (“trade name” contains “principle components”) ST 2, Cat Y	Y
Noxious liquid, F, (8) n.o.s. (“trade name” contains “principle components”) ST 3, Cat Y	Y
Noxious liquid, F, (10) n.o.s. (“trade name” contains “principle components”) ST 3, Cat Z	Z
Noxious liquid, (11) n.o.s. (“trade name” contains “principle components”) Cat Z (if flammable or combustible)	Z
Non noxious liquid, (12) n.o.s. (“trade name” contains “principle components”) Cat OS (if flammable or combustible)	OS
Nutmeg butter oil	#
<i>Octadecanol, see Alcohols (C13+)</i>	.....
<i>Octadecene, see the olefin or alpha-olefin entries</i>	.....
Octadeceneamide solution	#
Octamethylcyclotetrasiloxane*	Y

Cargo Name	IMO Annex II Pollution Category
Octane (all isomers)	X
Octanoic acid (all isomers)	Y
Octanol (all isomers)	Y
Octene (all isomers)	Y
<i>Octyl acetate, see n-Octyl acetate</i>	.....
n-Octyl acetate*	Y
<i>Octyl alcohol (iso-, n-), see Octanol (all isomers)</i>	.....
Octyl aldehydes	Y
Octyl decyl adipate	Y
<i>Octyl phthalate, see Dioctyl phthalate</i>	.....
Oil, edible: Poppy seed	I
Oil, fuel:	
No. 1 ( <i>kerosene</i> )	I
No. 1-D	I
No. 2	I
No. 2-D	I
No. 4	I
No. 5	I
No. 6	I
Oiticica oil	#
alpha-Olefins (C6–C18) mixtures	X
<i>alpha-Olefins (C13–C18) mixtures, see alpha-Olefins (C6–C18)</i>	.....
Olefins (C13+, all isomers)	Y
Olefin-Alkyl ester copolymer (molecular weight 2000+)	Y
Olefin mixtures (C5–C7)	Y
Olefin mixtures (C5–C15)	X
Oleic acid	Y
<i>Oleyl alcohol, see Alcohols (C13+)</i>	.....

Cargo Name	IMO Annex II Pollution Category
Orange juice (concentrated)*	OS
Palm kernel acid oil, methyl ester	#
Palm kernel olein*	Y
Palm kernel stearin*	Y
Palm mid-fraction*	Y
Palm oil fatty acid methyl ester*	Y
Palm olein *	Y
Palm stearin*	Y
Paraffin wax	Y
<i>n</i> -Paraffins (C10–C20), see n-Alkanes (C10+)	.....
<i>Peanut oil</i> , see Groundnut oil	.....
Peel oil (oranges and lemons)	#
Penetrating oil	I
<i>Pentadecanol</i> , see Alcohols (C13+)	.....
<i>Pentaethylene glycol</i> , see Polyethylene glycols	.....
Pentane (all isomers)	Y
Pentanoic acid	Y
Pentene (all isomers)	Y
<i>n</i> -Pentyl propionate	Y
Perilla oil	#
Petrolatum	Y
1-Phenyl-1-xylyl ethane	Y
Phosphate esters, alkyl (C12–C14) amine	Y
Phosphosulfurized bicyclic terpene	#
Pilchard oil	#
<i>Pinene</i> , see the <i>alpha</i> - or <i>beta</i> - isomers	.....
alpha-Pinene	X
beta-Pinene	X

Cargo Name	IMO Annex II Pollution Category
Pine oil*	X
Polyalkyl(C18–C22) acrylate in xylene*	Y
Polyalkylene glycols, polyalkylene glycol monoalkyl ethers mixtures	#
Polyalkylalkenaminesuccinimide, molybdenum oxysulfide*	Y
<i>Polyalkylene glycol butyl ether, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether	.....
Poly(2-8)alkylene glycol monoalkyl (C1–C6) ether	Z
<i>Including:</i>	
<i>Diethylene glycol butyl ether</i>	
<i>Diethylene glycol ethyl ether</i>	
<i>Diethylene glycol n-hexyl ether</i>	
<i>Diethylene glycol methyl ether</i>	
<i>Diethylene glycol n-propyl ether</i>	
<i>Dipropylene glycol butyl ether</i>	
<i>Dipropylene glycol methyl ether</i>	
<i>Polypropylene glycol methyl ether</i>	
<i>Triethylene glycol butyl ether</i>	
<i>Triethylene glycol ethyl ether</i>	
<i>Triethylene glycol methyl ether</i>	
<i>Tripropylene glycol methyl ether</i>	
Poly(2-8)alkylene glycol monoalkyl (C1–C6) ether acetate	Y
<i>Including:</i>	
<i>Diethylene glycol butyl ether acetate</i>	
<i>Diethylene glycol ethyl ether acetate</i>	
<i>Diethylene glycol methyl ether acetate</i>	
Polyalkylene oxide polyol	#
Polyalkyl(C10–C20) methacrylate	Y
Polyalkyl(C10-C18) methacrylate/ethylene-propylene copolymer	Y

Cargo Name	IMO Annex II Pollution Category
mixture*	
Polybutadiene, hydroxy terminated	#
Polybutene	Y
Polybutenyl succinimide	Y
Poly(2+)cyclic aromatics*	X
<i>Polydimethylsiloxane, see Dimethylpolysiloxane</i>	.....
Polyether (molecular weight 1350+)	Y
Polyether polyols	#
Polyethylene glycol	Z
Polyethylene glycol dimethyl ether	Z
Poly(ethylene glycol) methylbutenyl ether (MW>1000)*	Z
<i>Polyethylene glycol monoalkyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	.....
Polyglycerine, sodium salt solution (containing less than 3% sodium hydroxide)	Z
Polyglycerol	#
Polyisobutenamine in aliphatic (C10–C14) solvent*	Y
Polyisobutenyl anhydride adduct	Z
Poly(4+)isobutylene	Y
Polymerized esters	#
Polyolefin amide alkeneamine (C17+)	Y
<i>Polyolefin amide alkeneamine (C28+), see Polyolefin amide alkeneamine (C17+)</i>	.....
Polyolefin amide alkeneamine borate (C28–C250)	Y
Polyolefin amide alkeneamine/Molybdenum oxysulfide mixture	#
Polyolefin amide alkeneamine polyol	Y
Polyolefinamine (C28–C250)*	Y
Polyolefinamine in alkyl (C2–C4) benzenes*	Y
Polyolefinamine in aromatic solvent*	Y

Cargo Name	IMO Annex II Pollution Category
Polyolefin aminoester salts (molecular weight 2000+)*	Y
Polyolefin anhydride	Y
Polyolefin ester (C28–C250)	Y
Polyolefin phenolic amine (C28–C250)	Y
Polyolefin phosphorosulfide, barium derivative (C28–C250)	Y
Poly(20)oxyethylene sorbitan monooleate	Y
Poly(5+)propylene	Y
<i>Polypropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	.....
Polysiloxane	Y
Poppy oil	#
Potassium oleate	Y
Potassium salt of polyolefin acid	#
<i>n-Propoxypropanol, see Propylene glycol monoalkyl ether</i>	.....
<i>n</i> -Propyl acetate	Y
<i>n</i> -Propyl alcohol	Y
<i>iso</i> -Propylbenzene, <i>see</i> Propylbenzene (all isomers)	.....
<i>n</i> -Propylbenzene, <i>see</i> Propylbenzene (all isomers)	.....
Propylbenzene (all isomers)	Y
Propylene-Butylene copolymer	#
Propylene carbonate	Z
Propylene dimer	#
Propylene glycol	Z
<i>Propylene glycol n-butyl ether, see Propylene glycol monoalkyl ether</i>	.....
<i>Propylene glycol ethyl ether, see Propylene glycol monoalkyl ether</i>	.....
<i>Propylene glycol methyl ether, see Propylene glycol monoalkyl ether</i>	.....
Propylene glycol methyl ether acetate	Z
Propylene glycol monoalkyl ether	Z

Cargo Name	IMO Annex II Pollution Category
<i>Including:</i>	
<i>n-Propoxypropanol</i>	
<i>Propylene glycol n-butyl ether</i>	
<i>Propylene glycol ethyl ether</i>	
<i>Propylene glycol methyl ether</i>	
<i>Propylene glycol propyl ether</i>	
Propylene glycol phenyl ether	Z
<i>Propylene glycol propyl ether, see Propylene glycol monoalkyl ether</i>	.....
Propylene polymer ( <i>in liquid mixtures</i> )	#
Propylene tetramer	X
Propylene trimer	Y
<i>Pseudocumene, see Trimethylbenzenes</i>	.....
Raisin seed oil	#
Rapeseed acid oil	#
Rape seed oil fatty acid methyl esters*	Y
Residual oil	I
Road oil	I
Rosin*	Y
Rosin oil	#
<i>Rum, see Alcoholic beverages, n.o.s.</i>	.....
Safflower acid oil	#
Salad oil	#
Seal oil	I
Sesame oil	#
Soapstock oil	#
Sodium acetate, Glycol, Water mixture (containing 1% or less, Sodium hydroxide) (if flammable or combustible)	#
Sodium benzoate	Z

Cargo Name	IMO Annex II Pollution Category
Sodium long-chain alkyl salicylate (C13+)	#
Sodium thiocyanate solution (56% or less)*	Y
Soya acid oil	#
Soyabean fatty acid methyl ester	#
Soyabean oil (epoxidized)	#
Spindle oil	I
<i>Stearic acid, see Fatty acid (saturated, C13+)</i>	.....
<i>Stearyl alcohol, see Alcohols (C13+)</i>	.....
Sulfohydrocarbon (C3–C88)	Y
Sulfohydrocarbon, long-chain (C18+) alkylamine	#
Sulfolane	Y
Sulfurized fat (C14–C20)	Z
Sulfurized polyolefinamide alkene(C28–C250) amine	Z
<i>Sunflower oil, see Sunflower seed acid oil</i>	.....
Sunflower seed acid oil	#
Tall oil, distilled*	Y
Tall oil, fatty acid	#
Tallow	Y
<i>Tallow alcohol, see Alcohols (C13+)</i>	.....
Tallow alkyl nitrile	#
Tallow fatty acid	Y
<i>TAME, see tert-Amyl methyl ether</i>	.....
<i>Tetradecanol, see Alcohols (C13+)</i>	.....
<i>Tetradecene, see alpha-Olefins (C6-C18) mixtures, Olefin mixtures (C5–C15), or Olefins (C13+, all isomers)</i>	.....
<i>Tetradecylbenzene, see Alkyl(C9+)benzenes</i>	.....
Tetraethylene glycol	Z
Tetraethyl silicate monomer/oligomer (20% in ethanol)*	Z

Cargo Name	IMO Annex II Pollution Category
Tetrahydronaphthalene	Y
Tetramethylbenzene (all isomers)*	X
<i>Tetrapropylbenzene, see Alkyl(C9+)benzenes</i>	.....
Toluene	Y
Transformer oil	I
<i>Triarylphosphate, see Triisopropylated phenyl phosphates</i>	.....
Tributyl phosphate	Y
Tridecane	Y
Tridecanoic acid	Y
<i>Tridecanol, see Alcohols (C13+)</i>	.....
<i>Tridecene, see Olefins (C13+, all isomers)</i>	.....
Tridecyl acetate	Y
<i>Tridecylbenzene, see Alkyl(C9+)benzenes</i>	.....
Triethylbenzene	X
Triethylene glycol	Z
<i>Triethylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	.....
Triethylene glycol butyl ether mixture	#
Triethylene glycol di-(2-ethylbutyrate)	#
Triethylene glycol ether mixture	#
<i>Triethylene glycol ethyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	.....
<i>Triethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	.....
Triethyl phosphate	Z
Triisooctyl trimellitate	#
Triisopropanolamine	Z
Triisopropylated phenyl phosphates	X
Trimethylbenzene (all isomers)	X

Cargo Name	IMO Annex II Pollution Category
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	Y
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate*	Y
2,2,4-Trimethyl-3-pentanol-1-isobutyrate	#
<i>Tripropylene, see Propylene trimer</i>	.....
Tripropylene glycol	Z
<i>Tripropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	.....
<i>Trixylyl phosphate, see Trixylyl phosphate</i>	.....
Trixylyl phosphate	X
Tucum oil	#
Turbine oil	I
Turpentine	X
† <i>Turpentine substitute, see White spirit (low (15–20%) aromatic)</i>	.....
Undecanoic acid	Y
<i>1-Undecanol, see Undecyl alcohol</i>	.....
<i>Undecene, see 1-Undecene</i>	.....
1-Undecene	X
<i>1-Undecyl alcohol, see Undecyl alcohol</i>	.....
Undecyl alcohol	X
<i>Undecylbenzene, see Alkyl(C9+)benzenes</i>	.....
Vegetable oils, n.o.s.	#
Vegetable protein solution (hydrolyzed) (if flammable or combustible)*	OS
Walnut oil	#
Waxes	Y
† <i>White spirit, see White spirit (low (15–20%) aromatic)</i>	.....
† White spirit, low (15–20%) aromatic	Y
<i>Wine, see Alcoholic beverages, n.o.s.</i>	.....
Xylenes	Y

Cargo Name	IMO Annex II Pollution Category
Xylenes/Ethylbenzene (10% or more) mixture*	Y
Zinc alkaryl dithiophosphate (C7–C16)	Y
Zinc alkenyl carboxamide	Y
Zinc alkyl dithiophosphate (C3–C14)	Y
<p>NOTES</p> <p>“#” = NLS status is undetermined – see 46 CFR 153.900(c) for shipping on an oceangoing vessel.</p> <p>“†” = Marine occupational safety and health regulations for benzene, 46 CFR part 197, subpart C, may apply to this cargo.</p> <p>“[ ]” = Provisional categorization to which the United States is party.</p> <p>“@” = The NLS category has been assigned by the U.S. Coast Guard, in absence of one assigned by the IMO. The category is based upon a GESAMP Hazard Profile or by analogy to a closely related product having an NLS assigned.</p> <p>“*” = From the March 2012 Annex to the 2007 edition of the IBC Code.</p> <p>“Cat” = Pollution category.</p> <p>“F” = Flammable (flash point less than or equal to 60 degrees C (140 degrees F) NLS.</p> <p>“T” = An “oil” under MARPOL Annex I.</p> <p><i>Italicized</i> words are not part of the cargo name but may be used in addition to the cargo name.</p> <p>“n.o.s.” = Not otherwise specified.</p> <p>“OS” = An “other substance” considered at present to present no harm to marine resources, human health, amenities, or other legitimate uses of the sea when discharged into the sea from tank cleaning or deballasting operations.</p> <p>“see” = A redirection to the preferred, alternative cargo name – for example in “<i>Diethyl ether, see Ethyl ether,</i>” the pollution category for “diethyl ether” will be found under the preferred, alternative cargo name “ethyl ether.”</p> <p>“ST” = Ship type.</p>	

Cargo Name	IMO Annex II Pollution Category
“X,” “Y,” and “Z” = NLS categories under MARPOL Annex II.	

PART 150—COMPATIBILITY OF CARGOES

3. The authority citation for part 150 continues to read as follows:

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

4. Revise Table I to Part 150 to read as follows:

TABLE I TO PART 150—ALPHABETICAL LIST OF CARGOES

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Acetaldehyde	19		AAD	
Acetic acid	4	2	AAC	
Acetic anhydride	11	2	ACA	
Acetochlor	10		ACG	
Acetone	18	2	ACT	
Acetone cyanohydrin	0	1, 2	ACY	
Acetonitrile	37		ATN	
Acetonitrile (low purity grade)*	37	3	AIL	
Acetophenone	18		ACP	
<i>Acid oil mixture from soybean, corn (maize) and sunflower oil refining, see Oil, misc: Acid mixture from soybean, corn (maize) and sunflower oil refining*</i>	34	3		AOM
Acrolein	19	2	ARL	
Acrylamide solution (50% or less)*	10	3	AAM	AAO

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Acrylic acid	4	2	ACR	
Acrylic acid / ethenesulfonic acid copolymer with phosphonate groups, sodium salt solution*	30	3	APG	
Acrylonitrile	15	2	ACN	
Acrylonitrile-Styrene copolymer dispersion in Polyether polyol	20		ALE	
Adiponitrile	37		ADN	
Alachlor technical (90% or more)*	33	3	ALH	ALI
Alcohol (C12-C13, branched and linear) poly (4-8) propoxy sulfates, sodium salt 25-30% solution*	41	3	ABL	
Alcohol (C9-C11) poly (2.5-9) ethoxylates*	40	3	AET	ALY/APV APW
Alcohol (C6-C17) (secondary) poly (3-6) ethoxylates*	40	3	AEA	AEB
Alcohol (C6-C17) (secondary) poly (7-12) ethoxylates*	40	3	AEB	AEA
Alcohol (C12-C16) poly (1-6) ethoxylates*	40	3	AED	AET/ALY APW
Alcohol (C12-C16) poly (7-19) ethoxylates*	40	3	APV	AET/ALY APV
Alcohol (C12-C16) poly (20+) ethoxylates*	40	3	APW	AET/ALY
Alcoholic beverages, n.o.s.*	20	3	ABV	
Alcohols (C13+)	20		ALY	ASY/AYK
<i>Including:</i>				
<i>Oleyl alcohol (octadecenol)</i>				
<i>Pentadecanol</i>				
<i>Tallow alcohol</i>				
<i>Tetradecanol</i>				
<i>Tridecanol</i>				

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Alcohol polyethoxylates	20			AEA/AEB AED/AET APV/APW
Alcohol polyethoxylates, secondary	20			AEA/AEB
<i>Alcohol (C12–C15) poly (...) ethoxylate, see</i> Alcohol (C12–C16) poly (...) ethoxylate	20			
Alcohols (C12+), primary, linear*	20	3	ASY	ALR/AYK AYL
Alcohols (C8–C11), primary, linear and essentially linear	20		ALR	AYK/AYL
Alcohols (C12–C13), primary, linear and essentially linear*	20	3	AYK	ALR/ASY AYL
Alcohols (C14–C18), primary, linear and essentially linear*	20	3	AYL	ALR/ASY AYK
Alkanes (C6–C9)	31		ALK	
<i>Including:</i>				
<i>Heptanes</i>				
<i>Hexanes</i>				
<i>Nonanes</i>				
<i>Octanes</i>				
iso- & cyclo-Alkanes (C10–C11)	31		AKI	
iso- & cyclo-Alkanes (C12+)	31		AKJ	
Alkanes (C10–C26), linear and branched (flash point > 60 °C)*	31	3	ABD	
n-Alkanes (C10+) (all isomers)	31		ALV	ALJ
<i>Including:</i>				
<i>Decanes</i>				
<i>Dodecanes</i>				
<i>Heptadecanes</i>				
<i>Tridecanes</i>				

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Undecanes</i>				
<i>Alkane (C14–C17) sulfonic acid, sodium salt solutions, see Sodium alkyl (C14–C17) sulfonates (60-65% solution)</i>	34		AKA	SAA (AKE/SSU)
Alkaryl polyethers (C9–C20)	41		AKP	
Alkenoic acid, polyhydroxy ester borated*	0	1,3	AAV	
Alkenyl(C11+)amide	10		AKM	
Alkenyl (C8+) amine, Alkenyl (C12+) acid ester mixture				
Alkenyl (C16–C20) succinic anhydride	11		AAH	
Alkyl acrylate-Vinyl pyridine copolymer in Toluene	32		AAP	
Alkyl amine (C17+)	7		AKY	
Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomers)	34		ADP	
Alkylated (C4–C9) hindered phenols*	21	3	AYO	
Alkyl(C3-C4)benzenes	32		AKC	
<i>Including:</i>				
<i>Butylbenzenes</i>				
<i>Cumene</i>				
<i>Propylbenzenes</i>				
Alkyl(C5-C8)benzenes	32		AKD	
<i>Including:</i>				
<i>Amylbenzenes</i>				
<i>Heptylbenzenes</i>				
<i>Hexylbenzenes</i>				
<i>Octylbenzenes</i>				
Alkyl(C9+)benzenes	32		AKB	
<i>Including:</i>				

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Decylbenzenes</i>				
<i>Dodecylbenzenes</i>				
<i>Nonylbenzenes</i>				
<i>Tetradecylbenzenes</i>				
<i>Tetrapropylbenzenes</i>				
<i>Tridecylbenzenes</i>				
<i>Undecylbenzenes</i>				
Alkylbenzene, Alkylindane, Alkylindene mixture (each C12–C17)	32		AIH	
Alkyl benzene distillation bottoms*	0	1,3	ABB	
Alkylbenzene mixtures (containing at least 50% of Toluene)*	32	3	AZT	
Alkyl (C11–C17) benzene sulfonic acid*	0	1,3	ABN	ABS/ABQ
Alkylbenzenesulfonic acid (less than 4%)	0	1, 2	ABQ	ABS/ABN
Alkylbenzene sulfonic acid, sodium salt solution	33		ABT	
Alkyl (C12+) dimethylamine*	7	3	ADM	
Alkyl dithiocarbamate (C19–C35)*	34	3	ADB	
Alkyl dithiothiadiazole (C6–C24)	33		ADT	
<i>Alkyl polyglucoside solution, see individual polyglucoside solution</i>	43		AGD	AGL/AGM AGN/AGO AGP
Alkyl ester copolymer (C4–C20)	34		AES	AEQ
Alkyl (C8–C10)/(C12–C14):(40% or less/60% or more) polyglucoside solution (55% or less)*	43	3	AGN	AGD/AGL AGM/AGO AGP
Alkyl (C8–C10)/(C12–C14):(50%/50%) polyglucoside solution (55% or less)*	43	3	AGO	AGD/AGL/ AGN/AGP
Alkyl (C8–C10)/(C12–C14):(60% or more/40% or less) polyglucoside solution (55% or less)*	43	3	AGP	AGD/AGL/ AGM/AGN/ AGO

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Alkyl(C7–C9) nitrates	34	2	AKN	ONE
Alkyl (C4–C9) phenols	21		AYI	BLT/BTP/NP/OPH
Alkyl(C7–C11) phenol poly(4-12)ethoxylate	40		APN	NPE
Alkyl (C8–C40) phenol sulfide	34		AKS	
<i>Alkyl phenol sulfide (C8–C40), see</i> Alkyl (C8–C40) phenol sulfide	34			AKS
Alkyl(C8–C9) phenylamine in aromatic solvents	9		ALP	
Alkyl(C9–C15) phenyl propoxylate	40		AXL	
Alkyl (C8–C10) polyglucoside solution (65% or less)*	43	3	AGL	AGD/AGM/AGN/AGO/AGP
Alkyl (C12–C14) polyglucoside solution (55% or less)*	43	3	AGM	AGD/AGL/AGN/AGO/AGP
Alkyl (C12–C16) propoxyamine ethoxylate*	8	3	AXE	LPE
Alkyl ester copolymer in mineral oil	34		AEQ	AES
<i>Alkyl phthalates, see</i> individual phthalates	34		AYS	
Alkyl(C10–C20), saturated and unsaturated) phosphite	34		AKL	
Alkyl succinic anhydride	11		AUA	
Alkyl sulfonic acid ester of phenol	34		AKH	
Alkyl (C18+) toluenes*	32	3	AUS	AYL
Alkyl toluene	32		AYL	AUS
Alkyl (C18–C28) toluenesulfonic acid*	0	1,3	AUU	
Alkyl (C18–C28) toluenesulfonic acid, Calcium salts, borated*	34	3	AUB	
Alkyl (C18–C28) toluenesulfonic acid, Calcium salts, low overbase*	33	3	AUL	
Alkyl (C18–C28) toluenesulfonic acid,	33	3	AUC	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Calcium salts, high overbase*				
Allyl alcohol	15	2	ALA	
Allyl chloride	15		ALC	
<i>Aluminum chloride, Hydrochloric acid solution, see "Aluminum chloride/Hydrogen chloride solution"</i>	0	1	AHS	AHG
Aluminum chloride/Hydrogen chloride solution*	0	1,3	AHG	AHS
Aluminum hydroxide, sodium hydroxide, sodium carbonate solution (40% or less)*	43	3	AHN	
Aluminum sulfate solution	43	2	ASX	ALM
Amine C-6, morpholine process residue	9		AOI	
2-(2-Aminoethoxy)ethanol	8		AEX	
Aminoethyldiethanolamine/ Aminoethylethanolamine solution	8		ADY	
Aminoethylethanolamine	8		AEE	
N-Aminoethylpiperazine	7		AEP	
2-Amino-2-hydroxymethyl-1,3-propanediol solution	43		AHL	
2-Amino-2-methyl-1-propanol	8		APZ	APQ/APR
Ammonia, anhydrous	6		AMA	
<i>Ammonia, aqueous (28% or less Ammonia), see Ammonium hydroxide</i>	6			AMH
Ammonium bisulfite solution (70% or less)	43	2	ABX	ASU
Ammonium chloride solution (less than 25%)*	43	3	AIS	AMC
Ammonium hydrogen phosphate solution	0	1	AMI	
Ammonium hydroxide (28% or less Ammonia)	6		AMH	
<i>Ammonium lignosulfonate solution, see also Lignin liquor</i>	43		ALG	LNL
Ammonium nitrate solution (93% or less)	0	1	ANW	AMN/AND/ ANR

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Ammonium nitrate solution (45% or less)	0	1	AND	AMN/ANR/ ANW
<i>Ammonium nitrate/Urea solution (containing Ammonia), see Urea/ Ammonium nitrate solution (containing more than 2% Ammonia)</i>	6			UAS (ANU/UAT/ UAU/UAV)
<i>Ammonium nitrate/Urea solution (containing less than 2% free Ammonia), see Urea/Ammonium nitrate solution (containing less than 2% free Ammonia)</i>	6			UAT (ANU/UAS/ UAU/UAV)
<i>Ammonium nitrate/Urea solution (not containing Ammonia), see Urea/ Ammonium nitrate solution (containing less than 1% Ammonia)</i>	6			UAU (ANU/UAS/ UAT/UAV)
<i>Ammonium phosphate/Urea solution, see Urea/Ammonium phosphate solution</i>	43			UAP (APP/URE)
Ammonium polyphosphate solution	43		AMO	
Ammonium sulfate solution	43		ASW	AME/AMS
Ammonium sulfate solution (20% or less)	43		AME	AMS/ASW
Ammonium sulfide solution (45% or less*)	5	3	ASS	ASF
Ammonium thiocyanate/Ammonium thiosulfate solution	0	1	ACV	ACS
Ammonium thiosulfate solution (60% or less*)	43	3	ATV	ATF
Amyl acetate (all isomers*)	34	3	AEC	IAT/AML/ AAS/AYA
Amy acid phosphate	34		AIA	
n*-Amyl alcohol	20	3	AAN	AAI/AAL/A PM/ASE/IA A
Amyl alcohol, primary*	20	3	APM	AAI/AAL/A NN/APM/I AA
sec – Amyl alcohol*	20	3	ASE	AAI/AAL/A NN/APM/I AA

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
tert – Amyl alcohol*	20	3	AAL	AAI/APM/ ASE/IAA
<i>Amylene, see Pentene (all isomers)</i>	30		AMW	PTX (AMX/AM Z/PTE)
<i>tert-Amylenes, see Pentene</i>	30		AMZ	PTX (AMW)
<i>tert-Amyl methyl ether</i>	41		AYE	
<i>Amyl methyl ketone, see Methyl amyl ketone</i>	18		AMJ	MAK (AMK)
Aniline	9		ANL	
Animal and Fish oils, n.o.s.	34		AFN	
<i>Including:</i>				
<i>Cod liver oil</i>				
<i>Lanolin</i>				
<i>Neatsfoot oil</i>				
<i>Pilchard oil</i>				
<i>Sperm oil</i>				
Animal and Fish acid oils and distillates, n.o.s.	34		AFA	
<i>Including:</i>				
<i>Animal acid oil</i>				
<i>Fish acid oil</i>				
<i>Lard acid oil</i>				
<i>Mixed acid oil</i>				
<i>Mixed general acid oil</i>				
<i>Mixed hard acid oil</i>				
<i>Mixed soft acid oil</i>				
Anthracene oil (Coal tar fraction), see Coal tar	33		AHO	COR
Apple juice	43		APJ	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Argon, <i>liquefied</i>	0	1	ARG	
Aryl polyolefins (C11–C50)	32		AYF	
Asphalt	33		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 iso-paraffins BPT 95-120°C*)	31	3	AVA	GAK/GAV
Barium long-chain (C11–C50) alkaryl sulfonate	34		BCA	
Barium long- chain alkyl(C8–C14)phenate sulfide	34		BCH	
Behenyl alcohol	20		BHY	
Benzene	32	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 sulfonyl chloride	0	1, 2	BSC	
Benzene/Toluene/Xylene mixtures (having 10% Benzene or more)	32		BTX	BHB/BNZ/ PYG/TOL/ XLX/XLM/ XLO/XLP
Benzenetricarboxylic acid, trioctyl ester	34		BCE	
Benzyl acetate	34		BZE	
Benzyl alcohol	21		BAL	
Benzyl chloride	36		BCL	
Bio-fuel blends of Diesel/gas oil and Alkanes (C10–C26), linear and branched with a flash	33	3	BIF	BIG/BIH/BI I/BIJ/BIK

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
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)*	33	3	BIG	BIF/BIH/BI I/BIJ/BIK
Bio-fuel blends of Diesel/gas oil and FAME (>25% but <99% by volume)*	34	3	BIH	BIF/BIG/BI I/BIJ/BIK
Bio-fuel blends of Diesel/gas oil and vegetable oil (>25% but <99% by volume)*	34	3	BII	BIF/BIG/BI H/BIJ/BIK
Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume)*	20	3	BIJ	BIF/BIG/BI H/BII/BIK
Boronated Calcium sulfonate	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	41		BER	
Bromochloromethane	36		BCM	
Butadiene (all isomers)	30		BDI	
Butadiene/Butylene mixtures (containing Acetylenes)	30		BBM	BBX/BDI/B TN/IBL
Butane (all isomers)	31		BMX	IBT/BUT
Butane/Propane mixture	31		BUP	LPG
<i>1,4-Butanediol, see</i> Butylene glycol	20		BDO	BUG
<i>2-Butanone, see</i> Methyl ethyl ketone	18			MEK
<i>Butene, see</i> Butylene				BUT/IBL
Butene oligomer	30		BOL	
Butyl acetate (all isomers*)	34	3	BAX	BCN/BTA/ BYA/IBA
Butyl acrylate (all isomers*)	14	3	BAR	BAI/BTC
<i>Butyl alcohol (iso-, n-, sec-, tert-), see</i> Butyl alcohol (all isomers)	20	2		BAN/BAS/ BAT/BAY/I AL

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Butyl alcohol (all isomers*)	20	2,3	BAY	BAN/BAS/ BAT/IAL
Butylamine (all isomers*)	7	3	BTY	BAM/BTL/ BUA/IAM
<i>Butylbenzene (all isomers*), see Alkyl(C3–C4)benzenes</i>	32	3	BBE	AKC
Butyl benzyl phthalate	34		BPH	
Butyl butyrate (all isomers*)	34	3	BBA	BIB/BUB
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture*	14	3	DER	BMH/BMI/ BMN/CEM
Butylenes (all isomers)	30		BTN	IBL
n-Butyl ether	41		BTE	
Butylene glycol	20	2	BUG	BDO
1,2-Butylene oxide	16		BTO	
n-Butyl ether	41	3	BTE	
n-Butyl formate	34		BFN	BFI/BFO
Butyl heptyl ketone	18		BHK	
Butyl methacrylate	14		BMH	BMI/BMN
<i>Butyl methacrylate, Decyl methacrylate, Cetyl-Eicosyl methacrylate mixture, see Butyl/Decyl/Cetyl/Eicosyl methacrylate</i>	34			DER (BMH/BMI/ BMN/CEM)
<i>Butyl methyl ketone, see Methyl butyl ketone</i>	18			MBJ (MBK/MIK )
n-Butyl propionate	34		BPN	
Butyl stearate	34		BST	
Butyl toluene	32		BUE	
Butyraldehyde (all isomers*)	19	3	BAE	BAD/BTR
Butyric acid	4		BRA	IBR
gamma-Butyrolactone	0	1, 2	BLA	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Calcium alkaryl sulfonate (C11–C50), see Calcium long-chain alkaryl sulfonate (C11–C50)*</i>	34	3	CAE	CAY
Calcium alkyl(C9)phenol sulfide, polyolefin phosphorosulfide mixture	34		CPX	
Calcium alkyl (C10–C28) salicylate*	34	3	CAJ	
<i>Calcium alkyl salicylate, see Calcium long-chain alkyl salicylate (C13+), Calcium long-chain alkyl (C18–C28) salicylate, or Calcium alkyl (C10–C28) salicylate</i>	34			CAJ/CAK/CAZ
<i>Calcium bromide solution, see Drilling brines</i>	43		CBI	DRS
<i>Calcium bromide/Zinc bromide solution, see Drilling brine (containing Zinc salts)</i>	43			DZB
Calcium carbonate slurry	34		CSR	
Calcium chloride solution	43		CCS	CLC
Calcium hydroxide slurry	5		COH	CAH
Calcium hypochlorite solution (15% or less*)	5	3	CHU	CHY/CHZ
Calcium hypochlorite solution (more than 15%*)	5	3	CHZ	CHU/CHY
<i>Calcium lignosulfonate solution, see also Lignin liquor</i>	43		CLL	LNL
Calcium long-chain alkaryl sulfonate (C11–C50)	34		CAY	
Calcium long-chain alkyl (C5–C10*) phenate	34	3	CAU	CAN/CAQ/CAV/CAW
Calcium long-chain alkyl (C5–C20) phenate	34		CAV	CAN/CAQ/CAU/CAW
Calcium long-chain alkyl (C11–C40) phenate*	34	3	CAW	CAN/CAQ/CAU/CAV
<i>Calcium long-chain alkyl (C8–C40) phenate, see Calcium long-chain alkyl (C5–C10) phenate or Calcium long-chain alkyl (C11–C40) phenate</i>	34		CAQ	CAU/CAV (CAN/CAW)

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Calcium long-chain alkyl phenate sulfide (C8–C40)	34		CPI	
Calcium long-chain alkyl phenolic amine (C8–C40)	9		CPQ	
Calcium long-chain alkyl salicylate (C13+)	34		CAK	CAJ/CAZ
Calcium long-chain alkyl (C18–C28) salicylate*	34	3	CAJ	
Calcium nitrate solutions (50% or less*)	34	3	CNU	CNT
Calcium nitrate/Magnesium nitrate/ Potassium chloride solution	34		CLM	CNT/CNU/ MGN/MGO /PCS/PCU/P SD
Calcium salts of fatty acids	34		CFF	
Calcium stearate	34		CSE	
Calcium sulfonate/Calcium carbonate/ Hydrocarbon solvent mixture	33		CSH	
Camelina oil*	34	3	CEL	
Camphor oil (light)	18		CPO	
<i>Canola oil, see</i> Oil, edible: Repeseed, (low erucic acid containing less than 4% free fatty acids)	34			ORO (ORP)
epsilon-Caprolactam (molten or aqueous solutions)*	22	3	CLU	CLS
Caramel solution	43		CML	
Carbolic oil	21		CBO	
Carbon dioxide, <i>liquefied</i>	0	1	CDO	CDH/CDQ
Carbon dioxide (high purity)	0	1	CDH	CDO/CDQ
Carbon dioxide (reclaimed quality)	0	1	CDQ	CDH/CDO
Carbon disulfide	38		CBB	
Carbon tetrachloride	36	2	CBT	CBU
<i>Cashew nut shell oil (untreated), see</i> Oil, misc:	4			OCN

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Cashew nut shell (untreated)				
<i>Castor oil, see</i> Oil, edible: Castor	34			OCA (VEO)
Catoxid feedstock	36	2	CXF	
Caustic potash solution	5	2	CPS	
Caustic soda solution	5	2	CSS	
Cesium formate solution*	34	3	CSM	
<i>Cetyl alcohol, see</i> Alcohols (C13+)	20			ALY (ASY/AYL)
Cetyl/Eicosyl methacrylate mixture	14	1	CEM	
Cetyl/Stearyl alcohol, <i>see</i> Alcohols (C13+)	20			ALY (ASY/AYL)
Chlorinated paraffins (C10–C13)	36		CLH	CLG/CLJ/C LQ
Chlorinated paraffins (C14–C17) (with 50% Chlorine or more, and less than 1% C13 or shorter chains*)	36	3	CLJ	CLG/CLH/ CLQ
Chlorinated paraffins (C14–C17) (with 52% Chlorine)	36		CLQ	CLG/CLH/ CLJ
Chlorinated paraffins (C18+) with any level of chlorine	36		CLG	CLH/CLJ
Chlorine	0	1	CLX	
Chloroacetic acid (80% or less*)	4	3	CHM	CHL/MCA
Chlorobenzene	36		CRB	
Chlorodifluoromethane ( <i>monochlorodifluoromethane</i> )	36		MCF	
2-Chloro-4-ethylamino-6-isopropylamino-5-triazine solution	0	1	CET	
Chloroform	36		CRF	
Chlorohydrins (crude*)	17	3	CHD	
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution	9		CDM	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
o-Chloronitrobenzene	42		CNO	CNP
1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one	18	2	CDP	
2-or 3-Chloropropionic acid	4		CPM	CLA/CLP
Chlorosulfonic acid	0	1	CSA	
m-Chlorotoluene*	36	3	CTM	CHI/CRN/CTO
o-Chlorotoluene*	36	3	CTO	CHI/CRN/CTM
p-Chlorotoluene*	36	3	CRN	CHI/CTM/CTO
Chlorotoluenes (mixed isomers)*	36	3	CHI	CRN/CTM/CTO
Choline chloride solution	20		CCO	
Citric acid (70% or less*)	4	3	CIS	CIT
Clay slurry	43		CLY	
Coal slurry	43		COG	COA
Coal tar	33		COR	OCT
Coal tar crude bases	33		CTB	
<i>Coal tar distillate, see Naphtha: Coal tar solvent</i>	33		CDL	NCT (CTU)
<i>Coal tar naphtha solvent, see Naphtha: Coal tar solvent</i>	33			NCT (CDL/CTU)
Coal tar pitch (molten*)	33	3	CTP	
<i>Cocoa butter, see Oil, edible: Cocoa butter</i>	34			OCB (VEO)
<i>Coconut oil, see Oil, edible: Coconut</i>	34			OCC (VEO)
<i>Coconut oil, fatty acid, see Oil, misc: Coconut fatty acid</i>	34	2		CFA
<i>Coconut oil, fatty acid methyl ester, see Oil, misc: Coconut fatty acid methyl ester*</i>	34	3		OCM
Copper salt of long-chain (C17+) alkanolic acid	34		CUS	CFT

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Copper salt of long-chain (C3–C16) fatty acid	34		CFT	CUS
<i>Corn oil, see Oil, edible: Corn</i>	34			OCO (VEO)
<i>Cotton seed oil, see Oil, edible: Cotton seed</i>	34			OCS (VEO)
Cottonseed oil, fatty acid	34		CFY	
Creosote	21	2	CCW	CCT/CWD
Creosote (coal tar*)	21	2,3	CCT	CCW
Creosote (wood tar*)	21	2,3	CWD	CCT/CCW
Cresols (all isomers*)	21	3	CRS	CFO/CFP/CRL/CRO/CSO
<i>Cresols with less than 5% Phenol, see Cresols (all isomers)</i>	21		CFO	CRS (CFP/CRL/CRO/CSO)
<i>Cresols with 5% or more Phenol, see Phenol</i>	21		CFP	PHN (CFO/CRL/CRO/CRS/CSO)
<i>Cresylate spent caustic, see Cresylic acid, sodium salt solution</i>	5		CSC	CYD
Cresylic acid, dephenolized	21		CAD	CRY/CYN
Cresylic acid, sodium salt solution	5		CYD	CSC
Cresylic acid with 5% or more phenol	21		CYN	CAD/CRY
Cresylic acid tar	21		CRX	
Crotonaldehyde	19	2	CTA	
<i>Crude isononylaldehyde, see Isononylaldehyde (crude)</i>	19			INC
<i>Crude isopropanol, see Isopropanol, crude</i>	20			IPB (IPA/PAL)
<i>Crude piperazine, see Piperazine, crude</i>	7			PZC (PPZ/PIZ)
<i>Cumene, see Propylbenzene (all isomers)</i>	32		CUM	AKD (PBY/PBZ)

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1,5,9-Cyclododecatriene	30		CYT	
Cycloheptane	31		CYE	
Cyclohexane	31		CHX	
Cyclohexanol	20		CHN	
Cyclohexanone	18	2	CCH	
Cyclohexanone/Cyclohexanol mixture	18	2	CYX	
Cyclohexyl acetate	34		CYC	
Cyclohexylamine	7		CHA	
1,3-Cyclopentadiene dimer (molten*)	30	3	CPD	DPT/DPV
Cyclopentadiene/Styrene/Benzene mixture	30		CSB	
Cyclopentane	31		CYP	
Cyclopentene	30		CPE	
p*-Cymene	32		CMP	
Decahydronaphthalene	33		DHN	
Decaldehyde	19		DAY	IDA/DAL
<i>Decane (all isomers), see n-Alkanes (C10+)</i> (all isomers)	31		DCC	ALV (ALJ)
Decanoic acid	4		DCO	NEA
Decene	30		DCE	
Decyl acetate	34		DYA	
Decyl acrylate	14		DAT	IAI/DAR
Decyl alcohol (all isomers*)	20	2,3	DAX	ISA/DAN
Decyl/Dodecyl/Tetradecyl alcohol mixture*	20	3	DYO	DAN/DAX/ DDN/ISA
<i>Decylbenzene, see Alkyl(C9+) benzenes</i>	32		DBZ	AKB
Decyloxytetrahydrothiophene dioxide	0	1	DHT	
Detergent alkylate	32		DKY	AKB/DBZ/ DDB/TDB/ TRB/UDB

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
<i>Dextrose solution, see</i> Glucose solution	43		DTS	GLU
Diacetone alcohol	20	2	DAA	
<i>Dialkyl(C10–C14) benzenes, see</i> Alkyl(C9+) benzenes	32		DAB	AKB
Dialkyl(C8–C9) diphenylamines	9		DAQ	
Dialkyl(C7–C13) phthalates	34		DAH	
<i>Including:</i>				
<i>Di-(2-ethylhexyl) phthalate</i>				
<i>Diheptyl phthalate</i>				
<i>Dihexyl phthalate</i>				
<i>Diisooctyl phthalate</i>				
<i>Diisodecyl phthalate</i>				
<i>Diisononyl phthalate</i>				
<i>Dinonyl phthalate</i>				
<i>Dioctyl phthalate</i>				
<i>Ditridecyl phthalate</i>				
<i>Diundecyl phthalate</i>				
<i>Dialkyl (C9–C10) phthalates, see</i> Dialkyl (C7–C13) phthalates	34		DLK	DLH (DAP/DHL/ DHP/DID/D IE/DIF/DIN /DIO/DIT/D OP/DPA/D TP/DUP)
Dialkyl thiophosphates sodium salts solution*	34	3	DYH	
Dibromomethane	36		DBH	
Dibutylamine	7		DBA	
<i>Dibutyl carbinol, see</i> Nonyl alcohol (all isomers)	20			NNS (DBC/NNI/ NNN)
Dibutyl hydrogen phosphonate	34		DHD	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Dibutylphenols	21		DBT	DBV/DBW
2,6-Di-tert-butylphenol*	21	3	DBW	DBF/DBT/DBV
Dibutyl phthalate	34		DPA	DIT
Dibutyl terephthalate*	34	3	DYE	
Dichlorobenzene (all isomers*)	36	3	DBX	DBM/DBO/DBP
3,4-Dichloro-1-butene	36		DCD	DCB
Dichlorodifluoromethane	36		DCF	
1,1-Dichloroethane	36	2	DCH	
Dichloroethyl ether*	41	3	DYR	DEE
1,6-Dichlorohexane	36		DHX	
2,2'-Dichloroisopropyl ether	41		DCI	
Dichloromethane	36	2	DCM	
2,4-Dichlorophenol	21		DCP	
2,4-Dichlorophenoxyacetic acid/ Diethanolamine salt solution	43		DDE	
2,4-Dichlorophenoxyacetic acid/ Dimethylamine salt solution (70% or less)*	0	1, 2,3	DDA	DAD/DSX
2,4-Dichlorophenoxyacetic acid/ Triisopropanolamine salt solution	43	2	DTI	
1,1-Dichloropropane	36		DPB	DPC/DPL/DPP/DPX
1,2-Dichloropropane*	36	3	DPP	DPB/DPC/DPL/DPX
1,3-Dichloropropane	36		DPC	DPB/DPL/DPP/DPX
Dichloropropene (all isomers)	15		DCW	DPF/DPU
1,3-Dichloropropene	15			DCW/DPF
Dichloropropene/Dichloropropane mixtures	15		DMX	DCW/DPB/DPC/DPL/D

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
				PP/DPU/DP X
2,2-Dichloropropionic acid	4		DCN	
<i>Dicyclopentadiene, see 1,3-Cyclopentadiene dimer (molten)</i>	30		DPT	CPD (DPV)
Dicyclopentadiene, Resin Grade, 81-89%*	30	3	DPV	CPD/DPT
Diethanolamine	8		DEA	
<i>Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution</i>	43		DZZ	DDE
Diethylamine	7		DEN	
Diethylaminoethanol	8		DAE	
2,6-Diethylaniline	9		DMN	DIY
Diethylbenzene	32		DEB	
Diethylene glycol	40	2	DEG	
<i>Diethylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether</i>	40		DME	PAG
<i>Diethylene glycol butyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate</i>	34		DEM	PAF
Diethylene glycol dibutyl ether	40		DIG	
Diethylene glycol diethyl ether	40		DGS	
<i>Diethylene glycol ethyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether</i>	40		DGE	PAG
<i>Diethylene glycol ethyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetates</i>	34		DGA	PAF
<i>Diethylene glycol n-hexyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether</i>	40		DHE	PAG
<i>Diethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether</i>	40		DGM	PAG

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Diethylene glycol methyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate</i>	34		DGR	PAF
Diethylene glycol phenyl ether	40		DGP	
Diethylene glycol phthalate	34		DGL	
<i>Diethylene glycol propyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether</i>	40		DGO	PAG
Diethylenetriamine	7	2	DET	
Diethylenetriaminepentaacetic acid, pentasodium salt solution	43		DYS	
<i>Diethylethanolamine, see Diethylaminoethanol</i>	8			DAE
Diethyl ether	8		EET	
<i>Diethyl hexanol, see Decyl alcohol (all isomers)</i>	20			DAX
Di-(2-ethylhexyl) adipate	34		DEH	
Di-(2-ethylhexyl) phosphoric acid	1		DEP	
<i>Di-(2-ethylhexyl) phthalate, see Dialkyl (C7-C13) phthalate</i>	34		DIE	DAH
Di-(2-ethylhexyl) terephthalate	34		DHH	
Diethyl phthalate	34		DPH	
Diethyl sulfate	34		DSU	
Diglycidyl ether of Bisphenol A	41		BDE	
Diglycidyl ether of Bisphenol F	41		DGF	
<i>Diheptyl phthalate, see Dialkyl (C7-C13) phthalate</i>	34		DHP	DAH
Di-n-hexyl adipate	34		DHA	
Dihexyl phthalate	34		DHL	
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution	5		DDH	
Diisobutylamine	7		DBU	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
<i>Diisobutyl carbinol, see</i> Nonyl alcohol (all isomers)	20		DBC	NNS
Diisobutylene	30		DBL	
Diisobutyl ketone	18		DIK	
Diisobutyl phthalate	34		DIT	DPA
<i>Diisodecyl phthalate, see</i> Dialkyl(C7–C13) phthalates	34		DID	DAH
Diisononyl adipate	34		DNY	
<i>Diisononyl phthalate, see</i> Dialkyl (C7–C13) phthalates	34	2	DIN	DAH
<i>Diisooctyl phthalate, see</i> Dialkyl (C7–C13) phthalate	34		DIO	DAH/(DIE/DOP)
Diisopropanolamine	8		DIP	
Diisopropylamine	7		DIA	DNA
Diisopropylbenzene (all isomers)	32		DIX	
Diisopropyl naphthalene	32		DII	
N,N-Dimethylacetamide	10		DAC	DLS
N,N-Dimethylacetamide solution (40% or less*)	10	3	DLS	DAL
Dimethyl adipate	34		DLA	
Dimethylamine	7		DMA	DMC/DMG/DMY
Dimethylamine solution (45% or less*)	7	3	DMG	DMA/DMC/DMY
Dimethylamine solution (greater than 45% but not greater than 55%)*	7	3	DMY	DMA/DMC/DMG
Dimethylamine solution (greater than 55% but not greater than 65%)*	7	3	DMC	DMA/DMG/DMY
<i>Dimethylamine salt of 4-Chloro-2-methylphenoxyacetic acid solution, see</i> 4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution	9			CDM

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
<i>Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (70% or less)</i>	9		DAD	DDA (DSX)
2,6-Dimethylaniline	9		DMM	DDL
<i>Dimethylbenzene, see Xylenes</i>	32			XLX/XLM/XLO/XLP
N,N-Dimethylcyclohexylamine	7		DXN	
Dimethyl disulfide*	0	1,2,3	DSK	
<i>Dimethyldodecylamine, see N,N-Dimethyldodecylamine</i>	7			DDY
N,N-Dimethyldodecylamine	7		DDY	
Dimethylethanolamine	8		DMB	
Dimethyl ether	41		DIM	
Dimethylformamide	10		DMF	
Dimethyl glutarate	34		DGT	
Dimethyl hydrogen phosphite	34	2	DPI	
Dimethyl octanoic acid	4		DMO	
Dimethyl phthalate	34		DTL	
Dimethylpolysiloxane	34		DMP	
2,2-Dimethylpropane-1,3-diol (molten or solution*)	20	3	DDI	
Dimethyl succinate	34		DSE	
Dinitrotoluene (molten*)	42	3	DNM	DNL/DNU/DTT
<i>Dinonyl phthalate, see Dialkyl (C7–C13) phthalates</i>	34		DIF	DAH
<i>Diocetyl phthalate, see Dialkyl (C7–C13) phthalates</i>	34		DOP	DAH (DIE/DIO)
1,4-Dioxane	41		DOX	
Dipentene	30		DPN	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Diphenyl	32		DIL	
Diphenylamine (molten)	9		DAG	DAM
Diphenylamine, reaction product with 2,2,4-trimethylpentene	9		DAK	
Diphenylamines, alkylated	9		DAJ	
Diphenyl/Diphenyl ether mixtures	33		DDO	
Diphenyl ether	41		DPE	
<i>Diphenyl ether/Biphenyl ether mixture, see Diphenyl/Diphenyl ether mixture</i>	41			DDO
Diphenyl ether/Diphenyl phenyl ether mixture	41		DOB	
Diphenylmethane diisocyanate	12		DPM	
Diphenylol propane-Epichlorohydrin resins	0	1	DPR	
<i>Diphenyl oxide, see Diphenyl ether</i>	40			DPE
Di-n-propylamine	7		DNA	DIA
Dipropylene glycol	40		DPG	
<i>Dipropylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether</i>	40		DBG	PAG
Dipropylene glycol dibenzoate	34		DGY	
<i>Dipropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether</i>	40		DPY	PAG
Distillates, flashed feed stocks	33		DFE	
Distillates, straight run	33		DSR	
Di-tert-butyl phenol	21		DBF	DBT/DBV/ DBW
2,4-Di-tert-butyl phenol	21		DBV	DBF/DBT/ DBW
2,6-Di-tert-butyl phenol	21		DBW	DBF/DBT/ DBV
Dithiocarbamate ester (C7-C35)	34		DHO	
Ditridecyl adipate	34		DTY	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Ditridecyl phthalate, see</i> Dialkyl (C7–C13) phthalate	34		DTP	DAH
<i>Diundecyl phthalate, see</i> Dialkyl (C7–C13) phthalates	34		DUP	DAH
<i>Dodecane (all isomers), see</i> Alkanes (C10+) (all isomers)	31		DOF	ALV (ALJ/DOC)
tert-Dodecanethiol	0	1,2	DDL	LRM
Dodecene (all isomers*)	30	3	DOZ	DDC/DOD
<i>Dodecanol (all isomers), see</i> Dodecyl alcohol (all isomers)	20	2	DDN	LAL
2-Dodecenylsuccinic acid, dipotassium salt solution	34		DSP	
Dodecyl alcohol (all isomers)	20		DDN	ASK/ASY/ LAL
Dodecylamine/Tetradecylamine mixture	7		DTA	
<i>Dodecylbenzene, see</i> Alkyl (C9+) benzenes	32		DDB	AKB
Dodecyldimethylamine/ Tetradecyldimethylamine mixture	7		DOT	
Dodecyl diphenyl ether disulfonate solution	43		DTA	
Dodecyl hydroxypropyl sulfide	0	1	DOH	
Dodecyl methacrylate	14		DDM	
Dodecyl/Octadecyl methacrylate mixture	14		DOM	DDM
Dodecyl/Pentadecyl methacrylate mixture	14		DDP	
Dodecyl phenol	21		DOL	
Dodecyl xylene	32		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

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Drilling mud (low toxicity) ( <i>if flammable or combustible</i> )	33		DRO	DRM/DRN/DRP
Drilling mud (low toxicity) ( <i>if non-flammable or non-combustible</i> )	43		DRP	DRM/DRN/DRO
Epichlorohydrin	17		EPC	
Epoxy resin	18		EPN	
<i>ETBE, see</i> Ethyl tert-butyl ether	40			EBE
Ethane	31		ETH	
Ethanolamine	8		MEA	
<i>2-Ethoxyethanol, see</i> Ethylene glycol monoalkyl ethers	40		EEO	EGC (EGE)
2-Ethoxyethyl acetate	34	2	EEA	EGA
Ethoxylated alkyloxy alkyl amine	8		ELM	
<i>Ethoxylated alcohols, C11–C15, see the</i> alcohol polyethoxylates	40			AEA/AEB/AED/AET/APV/APW/APX
Ethoxylated long-chain (C16+) alkyloxyalkylamine	8		ELA	
Ethoxylated tallow alkyl amine	7		TAY	TAG/TAR
Ethoxylated tallow amine (>95%)*	7	3	TAR	TAG/TAY
Ethoxylated tallow alkyl amine, glycol mixture	7		TAG	TAR/TAY
<i>Ethoxy triglycol, see</i> Poly (2-8) alkylene glycol monoalkyl (C1–C6) ether	40		ETG	PAG (ETR/TGE)
Ethoxy triglycol (crude)	40		ETR	
Ethyl acetate	34	2	ETA	
Ethyl acetoacetate	34		EAA	
Ethyl acrylate	14	2	EAC	
Ethyl alcohol	20	2	EAL	
Ethylamine	7	2	EAM	EAN/EAO

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Ethylamine solution (72% or less*)	7	3	EAN	EAM/EAO
Ethyl amyl ketone	18		EAK	ELK
Ethylbenzene	32		ETB	
Ethyl butanol	20		EBT	
N-Ethyl-butylamine	7		EBA	
Ethyl tert-butyl ether	41	2	EBE	
Ethyl butyrate	34		EBR	
Ethyl chloride	36		ECL	
Ethyl cyclohexane	31		ECY	
N-Ethylcyclohexylamine	7		ECC	
2-Ethyl-2-(2,4-dichlorophenoxy) acetate	34		EDY	
2-Ethyl-2-(2,4-dichlorophenoxy) propionate	34		EDP	
S-Ethyl dipropylthiocarbamate*	34	3	ECB	
Ethylene	30		ETL	
Ethylene carbonate	34		ECR	
Ethylene chlorohydrin	20		ECH	
Ethylene cyanohydrin	20	2	ETC	
Ethylenediamine	7	2	EDA	EMX
Ethylenediaminetetraacetic acid/ tetrasodium salt solution	43		EDS	
Ethylene dibromide	36		EDB	
Ethylene dichloride	36	2	EDC	
Ethylene glycol	20	2	EGL	EAG
Ethylene glycol acetate	34		EGO	
<i>Ethylene glycol butyl ether, see Ethylene glycol monoalkyl ethers</i>	40		EGM	EGC
<i>Ethylene glycol tert-butyl ether, see Ethylene glycol monoalkyl ethers</i>	40		EGG	EGC
Ethylene glycol butyl ether acetate	34		EMA	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Ethylene glycol diacetate	34		EGY	
Ethylene glycol dibutyl ether	40		EGB	
<i>Ethylene glycol ethyl ether, see Ethyl glycol monoalkyl ethers</i>	40		EGE	EGC/EEO
<i>Ethylene glycol ethyl ether acetate, see 2-Ethoxyethyl acetate</i>	34	2	EGA	EEA
<i>Ethylene glycol hexyl ether, see Ethylene glycol monoalkyl ethers</i>	40		EGH	EGC
<i>Ethylene glycol isobutyl ether, see Ethylene glycol monoalkyl ethers</i>	40			EGC (EGG/EGM)
<i>Ethylene glycol isopropyl ether, see Ethylene glycol monoalkyl ethers</i>	40		EGI	EGN/EGP
<i>Ethylene glycol methyl butyl ether, see Ethylene glycol monoalkyl ethers</i>	40		EMB	EGC
<i>Ethylene glycol methyl ether, see Ethylene glycol monoalkyl ethers</i>	40		EME	EGC
Ethylene glycol methyl ether acetate	34		EGT	
Ethylene glycol monoalkyl ethers	40	2	EGC	
<i>Including:</i>				
<i>Ethylene glycol butyl ether</i>				
<i>Ethylene glycol isobutyl ether</i>				
<i>Ethylene glycol methyl butyl ether</i>				
<i>Ethylene glycol tert-butyl ether</i>				
<i>Ethylene glycol ethyl ether</i>				
<i>Ethylene glycol hexyl ether</i>				
<i>Ethylene glycol methyl ether</i>				
<i>Ethylene glycol propyl ether</i>				
<i>Ethylene glycol iso-propyl ether</i>				
Ethylene glycol phenyl ether	40		EPE	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture	40		EDX	
<i>Ethylene glycol propyl ether, see</i> Ethylene glycol monoalkyl ethers	40		EGP	EGC/EGI/EGN
<i>Ethylene glycol iso-propyl ether, see</i> Ethylene glycol monoalkyl ethers	40		EGI	EGC/EGN/EGP
<i>Ethylene glycol n-propyl ether, see</i> Ethylene glycol monoalkyl ethers	40		EGN	EGC (EGI/EGP)
Ethylene oxide	0	1	EOX	
Ethylene oxide/Propylene oxide mixture	16		EPF	EPM
Ethylene oxide/Propylene oxide mixture with an Ethylene oxide content not more than 30% by mass*	16	3	EPM	EPF
Ethylene-Propylene copolymer (in liquid mixtures)	31		EPY	
Ethylene-Vinyl acetate copolymer (emulsion)	43		ECV	
<i>Ethyl ether, see</i> Diethyl ether	41			EET
Ethyl-3-ethoxypropionate	34		EEP	
<i>2-Ethylhexaldehyde, see</i> Octyl aldehydes	19		EHA	OAL (OLX)
<i>2-Ethylhexanoic acid, see</i> Octanoic acid	4		EHO	OAY (OAA)
<i>2-Ethylhexanol, see</i> Octanol	20		EHX	OCA (OTA)
2-Ethylhexyl acrylate	14		EAI	
2-Ethylhexylamine	7		EHM	
Ethyl hexyl phthalate	34		EHE	
Ethyl hexyl tallate	34		EHT	
2-Ethyl-2-(hydroxymethyl) propane-1,3-diol, (C8–C10) ester	34		EHD	
Ethyl lactate	34		ELT	
Ethylidene norbornene	30	2	ENB	
Ethyl methacrylate	14		ETM	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
N-Ethylmethylallylamine	7		EML	
Ethyl propionate	34		EPR	
2-Ethyl-3-propylacrolein	19	2	EPA	
Ethyl toluene	32		ETE	
Fatty acids (saturated, C13+)	34		FAB	FAD
<i>Fatty acids (saturated, C14+), see Fatty acids (saturated, C13+)</i>	34		FAD	FAB
Fatty acid methyl esters*	4	3	FME	
Fatty acids, (C8–C10)*	4	3	FDS	
Fatty acids, (C12+)*	4	3	FDT	FAB/FAD/F AI/FDI
Fatty acids, (C16+)*	4	3	FDI	
Fatty acids, essentially linear (C6–C18) 2-ethylhexyl ester*	4	2,3	FAE	
Ferric chloride solution	1		FCS	FCL
Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution	43	2	FHX	STA
Ferric nitrate/Nitric acid solution	3	2	FNN	
<i>Fish oil, see Oil, edible: Fish</i>	34	2		OFS (AFN)
Fish solubles ( <i>water based fish meal extracts</i> )	43		FSO	
Fluorosilicic acid (20-30%) in water solution*	1	3	FSK	FSJ/FSL/HF S
Fluorosilicic acid (30% or less)	1		FSJ	FSK/FSL/H FS
Formaldehyde (50% or more), Methanol mixtures	19	2	MTM	
Formaldehyde solutions (37% - 50%)	19	2	FMS	FMG/FMR
Formaldehyde solutions (45% or less*)	19	2,3	FMR	FMG/FMS
Formamide	10		FAM	
Formic acid	4	2	FMA	FMB

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Formic acid (85% or less)	19	2	FMB	FMA
Formic acid (over 85%)*	4	2, 3	FMD	
Formic acid mixture (containing up to 18% Propionic acid and up to 25% Sodium formate)*	4	2,3	FMC	FMA/FMB
Fructose solution	43		FTS	FRT
Fumaric adduct of Rosin, water dispersion	43		FAR	
Furfural	19		FFA	
Furfuryl alcohol	20	2	FAL	
<i>Gas oil, cracked, see Oil, misc: Gas, cracked</i>	33			GOC
Gasoline blending stock, alkylates	33		GAK	
Gasoline blending stock, reformates	33		GRF	
Gasolines:				
Automotive (containing <i>not over 4.23 grams lead per gal.</i> )	33		GAT	
Aviation (containing <i>not over 4.86 grams lead per gal.</i> )	33		GAV	AVA
Casinghead ( <i>natural</i> )	33		GCS	
Polymer	33		GPL	
Straight run	33		GSR	
<i>Gasolines: Pyrolysis (containing Benzene), see Pyrolysis gasoline (containing Benzene)</i>	33		GPY	PYG
Glucitol/Glycerol blend propoxylated (containing less than 10% amines)*	40	3	GGA	
Glucose solution	43		GLS	DTS
Glutaraldehyde solutions (50% or less)	19		GTA	
Glycerine	20	2	GCR	
Glycerine (83%)/Dioxanedimethanol (17%) mixture	20		GDN	GDM
<i>Glycerol, see Glycerine</i>	20			GCR

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Glycerol ethoxylated	40		GXA	
Glycerol monooleate	20		GMO	
Glycerol polyalkoxylate	40		GPA	
Glycerol propoxylated*	40	3	GXP	
Glycerol, propoxylated and ethoxylated*	40	3	GXE	
Glycerol/Sucrose blend propoxylated and ethoxylated*	40	3	GSB	
Glyceryl triacetate	34		GCT	
<i>Glycidyl ester of tertiary carboxylic acid, see Glycidyl ester of C10 trialkyl acetic acid</i>	34		GLT	GLU
<i>Glycidyl ester of tridecyl acetic acid, see Glycidyl ester of C10 trialkyl acetic acid</i>	34		GLT	GLU
Glycidyl ester of C10 trialkyl acetic acid	34		GLU	GLT
<i>Glycidyl ester of Versatic acid, see Glycidyl ester of C10 trialkyl acetic acid</i>	34		GLT	GLU
Glycine, sodium salt solution	7		GSS	
Glycol mixture, crude	20		GMC	
<i>Glycol diacetate, see Ethylene glycol diacetate</i>	34			EGY
Glycolic acid solution (70% or less*)	4	3	GLC	
<i>Glycol triacetate, see Glyceryl triacetate</i>	34			GCT
Glyoxal solution (40% or less*)	19	3	GOS	
Glyoxylic acid solution (50% or less*)	4	3	GAC	
Glyphosate solution (not containing surfactant)	7		GIO	RUP
<i>Groundnut oil, see Oil, edible: Groundnut</i>	34			OGN (VEO)
<i>Heptadecane (all isomers), see Alkanes (C10+) (all isomers)</i>	31			ALV (ALJ)
<i>Heptane (all isomers), see Alkanes (C6–C9)</i>	31		HMX	ALK(HPI/HPT)
n-Heptanoic acid	4		HEN	HEP

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Heptanol (all isomers*)	20	3	HTX	HTN
Heptene (all isomers*)	30	3	HPX	THE
Heptyl acetate	34		HPE	
<i>Heptylbenzenes, see</i> Alkyl (C3–C4) benzenes	32			AKD
<i>Herbicide (C15-H22-NO2-Cl), see</i> Metolachlor	34			MCO
<i>Hexadecanol, see</i> Alcohols (C13+)	20			ALY (ASY/AYL)
1-Hexadecylnaphthalene/1,4-bis(Hexadecyl)naphthalene mixture	32		HNH	HNI
1-n-Hexadecylnaphthalene (90%)/1,4-di-n-(Hexadecyl)naphthalene (10%)	32		HNI	HNH
<i>Hexaethylene glycol, see</i> Polyethylene glycol	20		HMG	PEG
Hexamethylenediamine adipate solution	43		HAN	HAM
Hexamethylenediamine adipate (50% in water)	43		HAM	HAN
Hexamethylenediamine (molten*)	7	3	HME	HMD/HMC
Hexamethylenediamine solution	7		HMC	HMD/HME
Hexamethylene diisocyanate	12		HMS	HDI
Hexamethylene glycol	20		HMG	HXG
Hexamethyleneimine	7		HMI	
Hexamethylenetetramine solutions	7		HTS	HMT
1,6-Hexanediol, distillation overheads*	4	2,3	HDO	
Hexanoic acid	4		HXO	
Hexanol	20		HXM	HEW/HEZ/ HXN
Hexene (all isomers*)	30	3	HEX	HXE/HXT/ HXU/HXV/ MPN/MTN
Hexyl acetate	34		HAE	
<i>Hexylbenzenes, see</i> Alkyl (C3–C4) benzenes	32			AKD
<i>Hexylene glycol, see</i> Hexamethylene glycol	20		HXG	HMG

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
<i>Hog grease, see Lard</i>	34			LRD
Hydrochloric acid	1		HCL	
<i>Hydrofluorosilicic acid (25% or less), see Fluorosilicic acid (30% or less)</i>	1			FSJ(FSK/FSL/HFS)
Hydrogenated starch hydrolysate*	0	1,3	HSH	
bis(Hydrogenated tallow alkyl)methyl amines	7		HTA	
Hydrogen peroxide solutions (over 8% but not over 60% by mass)*	0	1,3	HPN	HPO/HPS
Hydrogen peroxide solutions (over 60% but not over 70% by mass*)	0	1,3	HPS	HPN/HPO
alpha-Hydro-omega-hydroxytetradeca(oxytetramethylene)	40		HTO	PYS/PYT
2-Hydroxyethyl acrylate	14	2	HAI	
N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution	43		HET	
2-Hydroxy-4-(methylthio)butanoic acid	4		HBA	
<i>Hydroxy terminated polybutadiene, see Polybutadiene, hydroxy terminated</i>	31			PHT
<i>Illipe oil, see Oil, edible: Illipe</i>	34			ILO (VEO)
Isoamyl alcohol*	20	3	IAA	AAI/AAL/AN/APM/ASE
Isobutyl alcohol*	20	2,3	IAL	BAN/BAS/BAT/BAY
Isobutyl formate*	34	3	BFI	BFN/BFO
Isobutyl methacrylate*	14	3	BMI	BMH/BMN
Isononylaldehyde (crude)	19		INC	
Isophorone	18	2	IPH	
Isophoronediamine	7		IPI	
Isophorone diisocyanate	12		IPD	
Isoprene (all isomers)	30		IPR	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Isoprene (part refined)	30		IPS	IPR/ISC
Isoprene concentrate (Shell)	30		ISC	
Isopropanolamine*	8	3	MPA	IPF/PAX/PLA
Isopropanolamine solution*	8	3	PAI	MPA/PAY/PLA/PRG
Isopropyl acetate*	34	3	IAC	PAT
Isopropyl alcohol*	20	2,3	IPA	IPB/PAL
Isopropylamine*	7	3	IPP	IPO/IPQ/PRA
Isopropylamine (70% or less) solution*	7	3	IPQ	IPO/IPP/PRA
<i>Isopropylbenzenes, see</i> Alkyl (C3–C4) benzenes	32			AKC(CUM/PBY/PBZ)
Isopropylcyclohexane*	31	3	IPX	
Isopropyl ether*	41	3	IPE	PRL/PRN
<i>Jatropha oil, see</i> Oil, misc: <i>Jatropha</i>	34			JTO
Jet fuels:				
JP-4	33		JPF	
JP-5	33		JPV	
JP-8	33		JPE	
Kaolin clay solution	43		KLC	KLS
Kaolin slurry	43		KLS	KLC
Kerosene	33		KRS	
Kraft black liquor	5		KBL	KPL
Kraft pulping liquors (free alkali content 3% or more) ( <i>Black, Green, or White</i> )	5		KPL	KBL
Lactic acid	0	1	LTA	
Lactonitrile solution (80% or less*)	37	3	LNI	
Lard	34		LRD	OLD

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Latex, ammonia (1% or less*)- inhibited	30	3	LTX	
Latex: Carboxylated Styrene-Butadiene copolymer; Styrene-Butadiene rubber*	43	3	LCC	LCB/LSB
Latex, liquid synthetic	43		LLS	LCB/LCC/L SB
Lauric acid	34		LRA	
Lauric acid methyl ester/Myristic acid methyl ester mixture	34		LMM	
<i>Lauryl polyglucose, see</i> Alkyl(C12 –C14) polyglucoside solution (55% or less)	43			AGM/LAP
<i>Lauryl polyglucose (50% or less), see</i> Alkyl (C12–C14) polyglucoside solution (55% or less)	43		LAP	AMG
Lecithin	34		LEC	
Lignin liquor	43		LNL	ALG/CLL/L GA/LGM/L SL/SHC/SH P/SHQ/SLP
Ligninsulfonic acid, magnesium salt solution*	43	3	LGM	LGA/LNL/ LSL
<i>Ligninsulfonic acid, sodium salt solution, see</i> Lignin liquor or Sodium lignosulfonate solution	43		LGA	LNL or SLG
<i>d-Limonene, see</i> Dipentene	30			DPN
Linear alkyl (C12–C16) propoxyamine ethoxylate	8		LPE	
<i>Linseed oil, see</i> Oil, misc: Linseed	34			OLS
<i>Liquefied Natural Gas, see</i> Methane	34		LNG	MTH
Liquid chemical wastes*	0	1,3	LCW	
Long-chain alkaryl polyether (C11–C20)	41		LCP	
Long-chain alkaryl sulfonic acid (C16–C60)	0	1	LCS	
Long-chain alkyl amine	7		LAA	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Long-chain alkylphenate/Phenol sulfide mixture	21		LPS	
Long-chain alkyl (C13+) salicylic acid	4		LAS	
L-Lysine solution (60% or less*)	43	3	LYS	
Magnesium chloride solution	0	1, 2	MGL	
Magnesium hydroxide slurry	5		MHS	
Magnesium long-chain alkaryl sulfonate (C11–C50)	34		MAS	MSE
Magnesium long-chain alkyl phenate sulfide (C8–C20)	34		MPS	
Magnesium long-chain alkyl salicylate (C11+)	34		MLS	
Magnesium nitrate solution (66.7%)	43		MGP	MGN/MGO
<i>Magnesium nonyl phenol sulfide, see</i> Magnesium long-chain alkyl phenate sulfide (C8–C20)	34			MPS
<i>Magnesium sulfonate, see</i> Magnesium long-chain alkaryl sulfonate (C11–C50)	34		MSE	MAS
Maleic anhydride	11		MLA	
Maltitol solution*	0	1,3	MTI	
<i>Mango kernel oil, see</i> Oil, edible: Mango kernel	34			MKO (VEO)
2-Mercaptobenzothiazol (in liquid mixture)	5		BTM	SMD
Mercaptobenzothiazol, sodium salt solution	5		SMB	MBT
Mesityl oxide	18	2	MSO	
Metam sodium solution	7		MSS	SMD
Methacrylic acid	4		MAD	
Methacrylic acid - Alkoxypoly(alkylene oxide) methacrylate copolymer, sodium salt aqueous solution (45% or less)*	20	3	MAQ	
Methacrylic resin in ethylene dichloride	14		MRD	
Methacrylonitrile	15	2	MET	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Methane	31		MTH	LNG
3-Methoxy-1-butanol	20		MTX	
3-Methoxybutyl acetate	34		MOA	
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide, <i>see</i> Metolachlor	34			MCO
1-Methoxy-2-propyl acetate	34		MXP	
<i>Methoxy triglycol, see</i> Poly (2-8) alkylene glycol monoalkyl (C1–C6) ether	40		MTG	PAG (TGY)
Methyl acetate	34		MTT	
Methyl acetoacetate	34		MAE	
Methyl acetylene/Propadiene mixture	30		MAP	
Methyl acrylate	14		MAM	
Methyl alcohol	20	2	MAL	
Methylamine solutions (42% or less*)	7	3	MSZ	
Methylamyl acetate	34		MAC	
Methylamyl alcohol	20		MAA	MIC
Methyl amyl ketone	18		MAK	
N-Methylaniline*	9	3	MAN	
alpha-Methylbenzyl alcohol with Acetophenone (15% or less)*	20	3	MBA	
Methyl bromide	36		MTB	
<i>Methyl butanol, see the amyl alcohols</i>	20			AAI/AAL/AN/APM/ASE/IAA
Methyl butenol	20		MBL	
<i>Methyl butenes, see</i> Pentene	30			PTX (AMW/AMZ/PTE)
Methyl tert-butyl ether	41	2	MBE	
Methyl butyl ketone	18	2	MBB	MBK/MIK

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Methyl 3- (3,5 di-tert-butyl-4-hydroxyphenyl) propionate crude melt	20		MYP	
Methylbutynol	20		MBY	MHB
Methyl butyrate	34		MBU	
Methyl chloride	36		MTC	
Methylcyclohexane	31		MCY	
Methylcyclohexanemethanol (crude)	20		MYH	
Methylcyclopentadiene dimer	30		MCK	
Methylcyclopentadienyl manganese tricarbonyl*	0	1,3	MCT	MCW
Methylcyclopentadienyl manganese tricarbonyl (60-70%) in mineral oil	0	1	MCW	MCT
Methyl diethanolamine	8		MDE	MAB
Methylene bridged isobtylenated phenols	21		MBP	
<i>Methylene chloride, see</i> Dichloromethane	21			DCM
2-Methyl-6-ethyl aniline	9		MEN	
Methyl ethyl ketone	18	2	MEK	
2-Methyl-5-ethyl pyridine	9		MEP	
Methyl formate	34		MFM	
N-Methylglucamine solution (70% or less*)	43	3	MGC	
2-Methylglutaronitrile	37		MLN	MGN
2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less)*	37	3	MGE	MLN
Methyl heptyl ketone	18		MHK	
2-Methyl-2-hydroxy-3-butyne	20		MHB	MBY
<i>Methyl isoamyl ketone, see</i> Methyl amyl ketone	18		MAJ	MAK
<i>Methyl isobutyl carbinol, see</i> Methyl amyl alcohol	20		MIC	MAA
Methyl isobutyl ketone	18		MIK	MBB/MBK

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Methyl methacrylate	14		MMM	
3-Methyl-3-methoxybutanol	20		MXB	
3-Methyl-3-methoxybutyl acetate	34		MMB	
Methyl naphthalene (molten*)	32	3	MNA	
Methylolurea	19		MUT	
2-Methyl pentane, <i>see</i> Hexane (all isomers)	31			HXS (ALK/HXA/ IHA/NHX)
2-Methyl-1,5-pentanediamine	7		MPM	
2-Methyl-1-pentene, <i>see</i> Hexene (all isomers)	30		MPN	HEX (HXE/HXT/ HXU/HXV/ MTN)
4-Methyl-1-pentene, <i>see</i> Hexene (all isomers)	30		MTN	HEX (HXE/HXT/ HXU/HXV/ MPN)
Methyl tert-pentyl ether, <i>see</i> tert-Amyl methyl ether	41			AYE
2-Methyl-1,3-propanediol	20		MDL	
Methyl propyl ketone	18		MKE	
Methylpyridine, <i>see</i> the Methylpyridines	9		MPQ	MPE/MPF/ MPR
2-Methylpyridine*	9	3	MPR	MPE/MPF/ MPQ
3-Methylpyridine*	9	3	MPE	MPF/MPQ/ MPR
4-Methylpyridine*	9	3	MPF	MPE/MPQ/ MPR
N-Methyl-2-pyrrolidone	9	2	MPY	
Methyl salicylate	34		MES	
alpha-Methylstyrene	30		MSR	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
3-(Methylthio)propionaldehyde	19		MTP	
Metolachlor	34		MCO	
Microsilica slurry	4		MOS	
Milk	43		MLK	
Mineral spirits	33		MNS	
Mixed C4 Cargoes	30		MIX	
Molasses	20		MOL	MON
Molasses residue (from fermentation)	0	1	MON	MOL
Molybdenum polysulfide long-chain alkyl dithiocarbamide complex*	0	1,3	MOP	
Monochlorodifluoromethane	36		MCF	
<i>Monoethanolamine, see Ethanolamine</i>	8		MEA	
<i>Monoisopropanolamine, see Isopropanolamine</i>	8			MPA (PLA/PLX)
<i>Monoethylamine, see Methylamine</i>	7			EAM (EAN/EAO)
Morpholine	7	2	MPL	
Motor fuel anti-knock compound (containing lead alkyls)	0	1	MFA	
<i>MTBE, see Methyl tert-butyl ether</i>	41			MBE
Myrcene	30		MRE	
Naphtha:				
Aromatic	33		NAR	
Coal tar solvent	33		NCT	
Heavy	33		NAG	
Paraffinic	33		NPF	
Petroleum	33		PTN	
Solvent	33		NSV	
Stoddard solvent	33		NSS	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Varnish Makers' and Painters'	33		NVM	
Naphthalene (molten*)	32	3	NTM	
Naphthalene sulfonic acid-Formaldehyde copolymer, sodium salt solution	0	1	NFS	
Naphthalene sulfonic acid, sodium salt solution	34		NSB	NSA
Naphthenic acid	4		NTI	
Naphthenic acid, sodium salt solution	43		NTS	
Neodecanoic acid	4		NEA	DCO/NAT
Nitrating acid (mixture of Sulfuric and Nitric acids)	0	1	NIA	
Nitric acid (70% and over)*	3	2,3	NCE	NAC/NCD
Nitric acid (less than 70%)	3	2	NCD	NAC/NCE
Nitrilotriacetic acid, trisodium salt solution*	34	3	NCA	
Nitrobenzene	42		NTB	
<i>o</i> -Nitrochlorobenzene, see <i>o</i> -Chloronitrobenzene	42			CNO (CNP)
Nitroethane	42		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	NXX	
Nitrophenol (mixed isomers)	42		NPX	NIP/NPH/N PX
<i>o</i> -Nitrophenol (molten)	0	1, 2	NTP	NIP/NPH/N PX
1-or 2-Nitropropane	42		NPM	NPN/NPP
Nitropropane (60%)/Nitroethane (40%) mixture	42		NNM	NNL/NNO/ NPM/NPN/

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
				NPP/NTE
o- or p-Nitrotoluenes*	42	3	NIT	NIE/NTR/N TT
<i>Nonane (all isomers), see Alkanes (C6–C9)</i>	31		NAX	ALK (NAN)
Nonanoic acid (all isomers)	4		NNA	NAI/NIN
Nonanoic/Tridecanoic acid mixture	4		NAT	NAI/NIN/N NA
<i>Non-edible industrial grade palm oil, see Oil, misc: Palm, non-edible industrial grade</i>	34			OPB
Nonene (all isomers)	30		NOO	NNE/NON/ OAM/OFX/ OFY
Nonyl acetate	34		NAE	
Non-noxious Liquid Substance, (12) n.o.s. Cat OS	0	1	NOL	
Nonyl alcohol (all isomers)	20	2	NNS	ALR/DBC/ NNI/NNN
<i>Nonylbenzene, see Alkyl(C9+)benzenes</i>	32			AKB
Nonyl methacrylate monomer	14		NMA	
Nonyl phenol	21		NNP	
Nonylphenol (48-62%) / Phenol (42-48%)/ Dinonylphenol (1-10%) mixture	21		NYL	
<i>Nonyl phenol poly(4+)ethoxylate, see Alkyl (C7–C11) phenol poly (4-12) ethoxylate</i>	40		NPE	APN
<i>Nonyl phenol sulfide (90% or less) solution, see Alkyl phenol sulfide (C8–C40)</i>	34			AKS (NPS)
Noxious Liquid Substance, n.o.s. (NLS')	0	1		
<i>1-Octadecanol, see Stearyl alcohol</i>	20			SYL (ALY/ASY)
<i>1-Octadecene, see the olefin or alpha-olefin entries</i>	30			OAM/OFZ

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Octadecenoamide solution	10		ODD	
<i>Octadecenol, see</i> Alcohols (C13+)	20			ALY (AYL/ASY/ OYL)
Octamethylcyclotetrasiloxane*	34	3	OSA	
<i>Octane (all isomers), see</i> Alkanes (C6–C9)	31		OAX	ALK (IOO/OAN)
Octanoic acid (all isomers)	4		OAY	EHO/OAA
Octanol (all isomers)	20	2	OCX	EHX/OPA/ OTA
Octene (all isomers)	30	2	OTX	OAM/OFC/ OFY/OFW/ OTE
n-Octyl acetate	34		OAF	OAE
<i>Octyl alcohol, see</i> Octanol (all isomers)	20	2		OCX (EHX/IOA/ OTA)
Octyl aldehydes	19		OAL	EHA/IOC// OLX
<i>Octylbenzenes, see</i> Alkyl (C3–C4) benzenes	32			AKD
Octyl decyl adipate	34		ODA	
n-Octyl Mercaptan	34		OME	
<i>Octyl nitrates (all isomers), see</i> Alkyl(C7–C9) nitrates	34	2	ONE	AKN
Octyl phenol	21		OPH	
<i>Octyl phthalate, see</i> Dialkyl (C7–C13) phthalates	34			DAH (DIE/DIO/D LK/DOP)
Oil, edible:				
Beechnut	34		OBN	VEO
Castor	34		OCA	VEO
Cocoa butter	34		OCB	VEO

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Coconut	34	2	OCC	VEO
Cod liver	34		OCL	AFN
Corn	34		OCO	VEO
Cotton seed	34		OCS	VEO
Fish	34	2	OFS	AFN
Groundnut	34		OGN	VEO
Hazelnut	34		OHN	VEO
Illipe	34		ILO	VEO
Lard	34		OLD	AFN
<i>Maize, see</i> Oil, edible: Corn	34			OCO (VEO)
Mango kernel*	34	3	MKO	
Nutmeg butter	34		ONB	VEO
Olive	34		OOL	VEO
Palm	34	2	OPM	VEO
Palm kernel	34		OPO	VEO
Palm kernel olein	34		PKO	VEO
Palm kernel stearin	34		PKS	VEO
Palm mid fraction	34		PFM	VEO
Palm olein	34		PON	VEO
Palm stearin	34		PMS	VEO
Peanut	34		OPN	VEO
Poppy	34		OPY	VEO
Poppy seed	34		OPS	VEO
Raisin seed	34		ORA	VEO
Rapeseed (low erucic acid containing less than 4% free fatty acids)	34		ORO	ORP/VEO
Rice bran	34		ORB	VEO
Safflower	34		OSF	VEO

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Salad	34		OSL	VEO
Sesame	34		OSS	VEO
Shea butter	34		OSH	VEO
Soya bean	34		OSB	VEO
<i>Sunflower, see</i> Oil, edible Sunflower seed	34			OSN (VEO)
Sunflower seed	34		OSN	VEO
Tucum	34		OTC	VEO
Vegetable	34		OVG	VEO
Walnut	34		OWN	VEO
Oil, fuel:				
No. 1	33		OON	
No. 1-D	33		OOD	
No. 2	33		OTW	
No. 2-D	33		OTD	
No. 4	33		OFR	
No. 5	33		OFV	
No. 6	33		OSX	
Oil, misc:				
Acid mixture from soybean, corn (maize) and sunflower oil refining	34		AOM	
Aliphatic	33		OML	
Animal	34		OMA	AFN
Aromatic	33		OMR	
Camelina	34		OCI	
Cashew nut shell (untreated)	4		OCN	
Clarified	33		OCF	
Coal	33		OMC	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Coconut fatty acid	34	2	CFA	
Coconut oil, fatty acid methyl ester	34		OCM	
Cotton seed oil, fatty acid	34		CFY	
Crude	33		OFA	
Diesel	33		ODS	
Disulfide	0	1	ODI	
Gas, cracked	33		GOC	
Gas, high pour	33		OGP	
Gas, low pour	33		OGL	
Gas, low sulfur	33		OGS	
Heartcut distillate	33		OHD	
Jatropha	34		JTO	
Lanolin	34		OLL	AFN
Linseed	33		OLS	
Lubricating	33		OLB	
Mineral	33		OMN	
Mineral seal	33		OMS	
Motor	33		OMT	
Neatsfoot	33		ONF	AFN
Oiticica	34		OOI	
Palm acid	34		PLM	
Palm fatty acid distillate	34		PFD	
Palm oil fatty acid methyl ester	34		OPE	
Palm kernel acid	34		OPK	
Palm kernel fatty acid distillate	34		PNG	
Palm, non-edible industrial grade	34		OPB	
Penetrating	33		OPT	
Perilla	34		OPR	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Pilchard	34		OPL	AFN
Pine	33		OPI	PNL
Rape seed fatty acid methyl esters*	34	3	ORP	
Residual	33		ORL	
Resin, distilled	34		ORR	
Road	33		ORD	
Rosin	33		ORN	
Seal	34		OSE	
Soapstock	34		OIS	
Soyabean (epoxidized)	34		OSC	
Soyabean fatty acid methyl ester	34			OST
Spindle	33		OSD	
Tall	34		OTL	OTI/OTJ
Tall, crude	34	2	OTI	OTJ/OTL
Tall, distilled	34	2	OTJ	OTI/OTL
Tall, fatty acid	34	2	OTT	
Tall fatty acid (resin acids less than 20%)	34	2	OTK	OTT
Tall pitch	34		OTP	
Transformer	33		OTF	
Tung	34		OTG	
Turbine	33		OTB	
Vacuum gas oil	32		OVC	
<i>Oleamide solution, see</i> Octadecenoamide solution	10			ODD
Olefin-Alkyl ester copolymer (molecular weight 2000+)	34		OCP	
Olefin mixture (C7–C9) C8 rich, stabilized*	30	3	OFC	OFW/OFY/ OFX

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Olefin mixtures (C5–C7)*	30	3	OFX	OAM/OFX/ OFW/OFX/ OFZ
Olefin mixtures (C5–C15)*	30	3	OFY	OAM/OFX/ OFW/OFX/ OFZ
Olefins (C13+, all isomers)	30		OFZ	OAM/OFW
alpha-Olefins (C6–C18) mixtures	30		OAM	OFX/OFW/ OFX/OFY/ OFZ
Oleic acid	34		OLA	
Oleum	0	1, 2	OLM	SAC/SFX
<i>Oleyl alcohol, see</i> Alcohols (C13+)	20		OYL	ALY (ASY)
Oleylamine	7		OLY	
<i>Olive oil, see</i> Oil, edible: Olive	34			OOL (VEO)
Orange juice (concentrated)*	0	1,3	OJC	OJN
Orange juice (not concentrated)*	0	1,3	OJN	OJC
Organomolybdenum amide	10		OGA	
<i>ORIMULSION, see</i> Asphalt emulsion	33			ASQ
Oxyalkylated alkyl phenol formaldehyde	33		OPF	
Oxygenated aliphatic hydrocarbon mixture*	0	1,3	OAH	
<i>Palm acid oil, see</i> Oil, misc: Palm acid*	34	3		PLM
<i>Palm fatty acid distillate, see</i> Oil, misc: Palm fatty acid distillate*	34	3		PFD
<i>Palm kernel acid oil, see</i> Oil, misc: Palm kernel acid	34			PNO
<i>Palm kernel acid oil, methyl ester, see</i> Oil, misc: Palm kernel acid, methyl ester	34			PNF
<i>Palm kernel oil fatty acid distillate, see</i> Oil, misc: Palm kernel fatty acid distillate	34			PNG
<i>Palm kernel oil, see</i> Oil, edible: Palm kernel	34			OPO (VEO)

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
<i>Palm kernel olein, see Oil, edible: Palm kernel olein*</i>	34	3		PKO (VEO)
<i>Palm kernel stearin, see Oil, edible: Palm kernel stearin*</i>	34	3		PKS (VEO)
<i>Palm mid fraction, see Oil, edible: Palm mid fraction*</i>	34	3		PFM (VEO)
<i>Palm oil, see Oil, edible: Palm*</i>	34	3		OPM (VEO)
<i>Palm oil fatty acid methyl ester, see Oil, misc: Palm fatty acid methyl ester*</i>	34	3		OPE
<i>Palm olein, see Oil, edible: Palm Olein*</i>	34	3		PON (VEO)
<i>Palm stearin, see Oil, edible: Palm stearin</i>	34			PMS (VEO)
Parachlorobenzotrifluoride	32		PBF	
<i>n-Paraffins (C10–C20), see n-Alkanes (C10+)</i>	31		PFN	ALJ
<i>Paraffin wax, see Waxes: Paraffin*</i>	31	3		WPF
Paraldehyde	19		PDH	
Paraldehyde-Ammonia reaction product	9		PRB	
Pentachloroethane	36		PCE	
<i>Pentadecanol, see Alcohols (C13+)</i>	20		PDC	ALY
1,3-Pentadiene	30		PDE	PDN
1,3-Pentadiene (greater than 50%), Cyclopentene and isomers, mixtures*	30	3	PMM	
<i>Pentaethylene glycol, see Polyethylene glycols</i>	20			PEG
<i>Pentaethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1–C6) ether</i>	40			PAG
Pentaethylenhexamine	7		PEN	
Pentaethylenhexamine/ Tetraethylenepentamine mixture	7		PEP	
Pentane (all isomers)	31		PTY	IPT/PTA
Pentanoic acid	4		POC	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
n-Pentanoic acid (64%)/2-Methyl butyric acid (36%) mixture	4		POJ	POC
<i>Pentasodium salt of Diethylenetriamine pentaacetic acid solution, see Diethylenetriamine pentaacetic acid, pentasodium salt solution</i>	43			DYS
Pentene (all isomers)	30		PTX	PTE
n-Pentyl propionate	34		PPE	
Perchloroethylene	36	2	PER	TTE
Petrolatum	33		PTL	
Phenol	21	2	PHN	PNS
Phenol solutions (2% or less)	43		PNS	PHN
1-Phenyl-1-xylyl ethane	32		PXE	
Phosphate esters	34		PZE	
Phosphate esters, alkyl (C12–C14) amine	7		PEA	
Phosphoric acid	1		PAC	
Phosphorus, yellow or white	0	1	PPW	PPB/PPR
Phosphosulfurized bicycle terpene	0	1	PBT	
Phthalate based polyester polyol	0	1, 2	PBE	
Phthalic anhydride (molten)	11		PAN	
alpha-Pinene	30		PIO	PIB/PIN
beta-Pinene	30		PIP	PIN/PIO
<i>Pine oil, see Oil, misc: Pine</i>	33		PNL	OPI
Piperazine (crude)	34		PZC	PPZ/PIZ
Piperazine (70% or less)	30		PIZ	PPB/PPZ
Piperylene concentrate	30		PIC	PDE/PDN
Polyacrylic acid solution (40% or less)	43		PYA	
Polyalkenyl succinic anhydride amine	7		PSN	
Polyalkyl acrylate	14		PAY	

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Polyalkyl (C18–C22) acrylate in Xylene	14		PIX	
Polyalkyl alkenamine succinimide, molybdenum oxysulfide	7		PSO	
Polyalkylene glycols/Polyalkylene glycol monoalkyl ether mixtures	40		PPX	
<i>Polyalkylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	40		PGB	PAG
Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether	40		PAG	
<i>Including:</i>				
<i>Diethylene glycol butyl ether</i>				
<i>Diethylene glycol ethyl ether</i>				
<i>Diethylene glycol n-hexyl ether</i>				
<i>Diethylene glycol methyl ether</i>				
<i>Diethylene glycol propyl ether</i>				
<i>Dipropylene glycol butyl ether</i>				
<i>Dipropylene glycol methyl ether</i>				
<i>Polyalkylene glycol butyl ether</i>				
<i>Polyethylene glycol monoalkyl ether</i>				
<i>Polypropylene glycol methyl ether</i>				
<i>Triethylene glycol butyl ether</i>				
<i>Triethylene glycol ethyl ether</i>				
<i>Triethylene glycol methyl ether</i>				
<i>Tripropylene glycol methyl ether</i>				
Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether acetate	34		PAF	
<i>Including:</i>				
<i>Diethylene glycol butyl ether acetate</i>				
<i>Diethylene glycol ethyl ether acetate</i>				

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Diethylene glycol methyl ether acetate</i>				
Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures	40		PPX	
Polyalkylene oxide polyol	20		PAO	
Polyalkyl (C10–C20) methacrylate	14		PMT	PYY
Polyalkyl methacrylate in mineral oil	14		PYY	PMT
Polyalkyl(C10–C18) methacrylate/Ethylene-Propylene copolymer mixture	14		PEM	
Polyalpha olefins	31		PYO	
Polyaluminum chloride solution	1		PLS	
Polybutadiene, hydroxyl terminated	20		PHT	
Polybutene	33		PLB	
Polybutenyl succinimide	10		PBS	
<i>Polycarboxylic ester (C9+), see</i> Ditridecyl adipate	34			DTY
Poly(2+)cyclic aromatics	32		PCA	
<i>Polydimethylsiloxane, see</i> Dimethylpolysiloxane	34			DMP
Polyether, borated	41		PED	
Polyether (molecular weight 1350+)	41		PYR	
Polyether polyols	41		PEO	
Polyethylene glycol	40		PEG	
Polyethylene glycol dimethyl ether	40		PEF	
Poly (ethylene glycol) methylbutenyl ether (MW > 1000)	40		PBN	
<i>Polyethylene glycol monoalkyl ether, see</i> Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether	40		PEE	PAG
Polyethylene polyamines	7	2	PEB	PEY

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Polyethylene polyamines (more than 50% C5–C20 Paraffin oil)*	7	2,3	PEY	PEB
Polyferric sulfate solution	34		PSS	
Polyglycerine/Sodium salts solution (containing less than 3% Sodium hydroxide)	20	2	PGT	PGS
Polyglycerol	20		PGL	
Poly(iminoethylene)-graft-N-poly(ethyleneoxy) solution (90% or less)*	7	3	PIG	PIM
Polyisobutenamine in aliphatic (C10–C14) solvent	7		PIB	PIA
Polyisobutenyl anhydride adduct	11		PBA	
Polyisobutenyl succinimide	10		PIS	
Poly(4+)isobutylene	30		PIL	
Polyisobutylene succinic anhydride	11		PYS	
Polymerized esters	34		PYM	
Polymethylene polyphenyl isocyanate	12		PPI	
Polyolefin (molecular weight 300+)	31		PMW	PLF
Polyolefin amide alkeneamine (C17+)	33		POH	POD
<i>Polyolefin amide alkeneamine (C28+), see Polyolefin amide alkenamine (C17+)</i>	33		POD	POH
Polyolefin amide alkeneamine borate (C28–C250)	34		PAB	
Polyolefin amide alkeneamine in mineral oil	33		PLK	
Polyolefin amide alkeneamine/Molybdenum oxysulfide mixture	7		PMO	
Polyolefin amide alkeneamine polyol	20		PAP	
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	34		PAE	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
2000+)				
Polyolefin anhydride	11		PAR	
Polyolefin ester (C28–C250)	34		POS	
Polyolefin in mineral oil	30		PLF	PMW
Polyolefin phenolic amine (C28–C250)	9		PPH	
Polyolefin phosphorosulfide, barium derivative (C28–C250)	34		PPS	
Poly (oxyalkylene) alkenyl ether (MW>1000)	41		PXY	
Polyoxybutylene alcohol	41		PXA	
Poly(20)oxyethylene sorbitan monooleate	34		PSM	
Polyoxypropylenediamine (MW 2000)	7		PYD	
Poly(5+)propylene	30		PLQ	PLP
Polypropylene glycol	40		PGC	
<i>Polypropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1–C6) ether</i>	40		PGM	PAG
Polysiloxane	34		PSX	
Polysiloxane/White spirit, low (15-20%) aromatic	34		PWS	
Potassium chloride solution	43		PCU	PCD/PSD
Potassium chloride solution (10% or more)	43		PCS	PCD/PCU
Potassium chloride solution (less than 26%)	43		PSD	CLM/DRL/ PCS/PCU
Potassium formate solutions	34		PFR	
Potassium hydroxide solution, <i>see</i> Caustic potash solution	5	2		CPS/PTH
Potassium oleate	34		POE	
Potassium polysulfide/Potassium thiosulfide solution (41% or less)	0	1	PYP	PSF/PTF
Potassium salt of polyolefin acid	34		PSP	
Potassium thiosulfate (50% or less)	43		PTF	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Propane	31		PRP	LPG
<i>iso-Propanolamine, see</i> Isopropanolamine	8			MPA (PAX/PLA)
n-Propanolamine	8		PLA	MPA/PAX
2-Propene-1-aminiium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer solution*	0	1,3	PLN	
beta-Propiolactone*	18	3	PLT	
Propionaldehyde	19		PAD	
Propionic acid	4		PNA	
Propionic anhydride	11		PAH	
Propionitrile	37		PCN	
<i>n-Propoxypropanol, see</i> Propylene glycol monoalkyl ether	40		PXP	PGE
n-Propyl acetate	34		PAT	IAC
n-Propyl alcohol	20	2	PAL	IPA
n-Propylamine	7		PRA	IPO/IPP/IP Q
<i>iso-Propylamine solution, see</i> Isopropylamine (70% or less) solution	7			IPQ (IPO/IPP/P RA)
<i>Propylbenzenes, see</i> Alkyl (C3–C4) benzens	32		PBY	AKC (CUM/PBZ)
<i>iso-Propyl cyclohexane, see</i> Isopropylcyclohexane	34			IPX
Propylene	30		PPL	
Propylene-Butylene copolymer	30		PBP	
Propylene carbonate	34		PLC	
Propylene dimer	30		PDR	
Propylene glycol	20	2	PPG	
<i>Propylene glycol n-butyl ether, see</i> Propylene glycol monoalkyl ether	40		PGD	PGE

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
<i>Propylene glycol ethyl ether, see</i> Propylene glycol monoalkyl ether	40		PGY	PGE
<i>Propylene glycol methyl ether, see</i> Propylene glycol monoalkyl ether	40		PME	PGE
Propylene glycol methyl ether acetate	34		PGN	
Propylene glycol monoalkyl ether	40		PGE	
<i>Including:</i>				
<i>n-Propoxypropanol</i>				
<i>Propylene glycol n-butyl ether</i>				
<i>Propylene glycol ethyl ether</i>				
<i>Propylene glycol methyl ether</i>				
<i>Propylene glycol propyl ether</i>				
Propylene glycol phenyl ether	40		PGP	
<i>Propylene glycol propyl ether, see</i> Propylene glycol monoalkyl ether				PGE
Propylene oxide	16		POX	
Propylene tetramer	30		PTT	
Propylene trimer	30		PTR	
<i>Pseudocumene, see</i> Trimethylbenzene (all isomers)	32			TMB/TMD/ TME/TRE
Pyridine	9		PRD	
<i>Pyridine bases, see</i> Paraldehyde-Ammonia reaction product	9			PRB
Pyrolysis gasoline (containing Benzene)*	32	3	PYG	GPY
<i>Rapeseed oil, see</i> Oil, edible: Rapeseed	34			ORO (VEO)
<i>Rapeseed oil (low erucic acid containing less than 4% free fatty acids), see</i> Oil, edible: Rapeseed, (low erucic acid containing less than 4% free fatty acids)*	34	3		ORO (VEO)
<i>Rapeseed oil fatty acid methyl esters, see</i> Oil, misc: Rapeseed fatty acid methyl esters*	34	3		RSO

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Refrigerant gases	0	1	RFG	
<i>Resin oil, distilled, see Oil, misc: Resin, distilled*</i>	33	3		ORR (ORS)
<i>Rice bran oil, see Oil, misc: Rice bran</i>	34			ORB
<i>Rosin, see Oil, misc: Rosin</i>	33			ORN
ROUNDUP	7		RUP	GIO
<i>Rum, see Alcoholic beverages</i>	20			ABV
<i>Safflower oil, see Oil, edible: Safflower</i>	34			OSF (VEO)
Sewage sludge	43		SWS	
<i>Shea butter, see Oil, edible: Shea butter*</i>	34	3		OSH (VEO)
Silica slurry	43		SLC	
Siloxanes	34		SLX	
Sludge, treated	43		SWA	
Sodium acetate, Glycol, Water mixture (not containing Sodium hydroxide)	34	2	SAW	SAO/SAP/S AQ/SAY
Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide)	5		SAQ	SAO/SAP/S AW/SAY
Sodium acetate, Glycol, Water mixture (1% or less Sodium hydroxide) (if non-flammable or non-combustible)	5	2	SAY	SAO/SAP/S AQ/SAY
Sodium acetate solutions	34		SAN	
Sodium alkyl (C14–C17) sulfonates (60-65% solution)	34		SSA	AKA/AKE/ SSU
Sodium aluminate solution	5		SAV	SAU
Sodium aluminate solution (45% or less)	5		SAU	SAV
Sodium aluminosilicate slurry	34		SLR	
Sodium benzoate solution	34		SBN	SBM
Sodium bicarbonate solution (less than 10%)	34		SBC	
Sodium borohydride (15% or less)/ Sodium hydroxide solution	5		SBX	CSS/SBH/S BI/SHD

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Sodium bromide solution (less than 50%)*	43	3	SBL	SBR
Sodium carbonate solution	5		SCE	
Sodium chlorate solution (50% or less)	0	1, 2	SDD	SDC
Sodium cyanide solution	5		SCO	SCN/SCS
Sodium dichromate solution (70% or less)	0	1, 2	SDL	SCR
Sodium hydrogen sulfide (6% or less)/Sodium carbonate (3% or less) solution	0	1, 2	SSS	SCE/SHW
Sodium hydrogen sulfite solution (45% or less)	43		SHY	SHX
Sodium hydrosulfide/Ammonium sulfide solution	5	2	SSA	ASF/ASS
Sodium hydrosulfide solution (45% or less)	5	2	SHR	
<i>Sodium hydroxide solution, see</i> Caustic soda solution	5	2		CSS (SHD)
Sodium hypochlorite solution (15% or less)	5		SHP	SHC/SHQ
Sodium hypochlorite solution (20% or less)	5		SHQ	SHC/SHP
Sodium lignosulfonate solution	43		SLG	LNL
Sodium long-chain alkyl salicylate (C13+)	34		SLS	
<i>Sodium-2-mercaptobenzothiazol solution, see</i> Mercaptobenzothiazol, sodium salt solution	5			SMB
Sodium methoxide (25% in methanol)	5		SMO	
Sodium methylate 21-30% in methanol*	20	3	SMT	SMS
<i>Sodium naphthalene sulfonate solution, see</i> Naphthalene sulfonic acid (40% or less), sodium salt solution (40% or less)	34		SNS	NSA (NSB)
<i>Sodium naphthenate solution, see</i> Naphthenic acid, sodium salt solution	34			NTS
Sodium nitrite solution	5		SNI	SNT
Sodium petroleum sulfonate	34		SPS	
Sodium polyacrylate solution	43		SOO	SOP
Sodium poly(4+)acrylate solution	43	2	SOP	SOO

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Sodium salt of Ferric hydroxyethylethylenediaminetriacetic acid solution, see Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution</i>	34		STA	FHX
Sodium silicate solution	43	2	SSN	SSC
Sodium sulfate solution*	34	3	SST	SSO
Sodium sulfide/Hydrosulfide solution (H <sub>2</sub> S 15 ppm or less)	0	1, 2	SSH	SDS/SHR/S SI/SSJ
Sodium sulfide/Hydrosulfide solution (H <sub>2</sub> S greater than 15 ppm but less than 200 ppm)	0	1,2	SSI	SDS/SHR/S SH/SSJ
Sodium sulfide/Hydrosulfide solution (H <sub>2</sub> S greater than 200 ppm)	0	1,2	SSJ	SDS/SHR/S SH/SSI
Sodium sulfide solution (15% or less)	43		SDR	SDS
Sodium sulfite solution (25% or less)	43		SUP	SSF/SUS
Sodium thiocyanate solution (56% or less)	0	1, 2	STS	SCY
Sorbitol solution	20		SBU	SBT
<i>Soyabean fatty acid methyl ester, see Oil, misc: Soyabean fatty acid methyl ester</i>	34			OST
<i>Soyabean oil, see Oil, edible: Soyabean</i>	34			OSB (VEO)
<i>Stearic acid, see Fatty acids (saturated, C14+)</i>	34		SRA	FAD (FAB/FAE/ FDI/FDT)
Stearyl alcohol	20		SYL	ALY/ASY
<i>Stoddard solvent, see Naphtha: Stoddard solvent</i>	33			NSS
Styrene monomer	30		STY	
Sulfohydrocarbon (C3–C88)	33		SFO	
Sulfohydrocarbon, long-chain (C18+) alkylamine mixture	7		SFX	
Sulfolane	39		SFL	
Sulfonated polyacrylate solutions	43	2	SPA	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Sulfur (molten)	0	1,2	SXX	
Sulfur dioxide	0	1	SFD	
Sulfuric acid	2	2	SFA	SAC
Sulfuric acid, spent	2	2	SAC	SFA
Sulfurized fat (C14–C20)	33		SFT	
Sulfurized polyolefinamide	7		SPY	
Sulfurized polyolefinamide alkene(C28–C250) amine	7		SPO	
<i>Sunflower seed oil, see</i> Oil, edible: Sunflower seed	34			OSN (VEO)
<i>Tall oil, see</i> Oil, misc: Tall	34			OTL (OTI/OTJ)
<i>Tall oil, crude, see</i> Oil, misc: Tall, crude*	34	2,3		OTI (OTJ/OTL)
<i>Tall oil, distilled, see</i> Oil, misc: Tall, distilled*	34	3		OTJ (OTI/OTL)
Tall oil, fatty acid, <i>see</i> Oil, misc: Tall fatty acid	34			OTT
<i>Tall oil fatty acid (resin acids less than 20%), see</i> Oil, misc: Tall oil fatty acid (resin less than 20%)	34	2		OTK (OTT)
Tall oil soap (crude)	4		TOR	TOS
<i>Tall oil, pitch, see</i> Oil, misc: Tall pitch*	34	3		OTP (OTI/OTJ/OTL)
Tallow	34	2	TLO	
<i>Tallow alcohol, see</i> Alcohols (C13+)	20	2	TFA	ALY (ASY)
Tallow alkyl nitrile	37		TAN	
Tallow fatty acid	34	2	TFD	
<i>Tallow fatty alcohol, see</i> Alcohols (C13+)	20		TFA	ALY
<i>TAME, see</i> tert-Amyl methyl ether	40			AYE
Tertiary butyl phenols	21		BLT	BTP

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
1,1,2,2-Tetrachloroethane	36		TEC	TEE
<i>Tetradecanol, see Alcohols (C13+)</i>	20		TTN	ALY
<i>Tetradecene, see the olefins or alpha-olefin entries</i>	30			OAM/OFY/ OFW/OFZ/ TDD
<i>Tetradecylbenzene, see Alkyl(C9+) benzenes</i>	32		TDB	AKB
Tetraethylene glycol	40		TTG	
<i>Tetraethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether</i>	40			PAG
Tetraethylene pentamine	7	2	TTP	
Tetraethyl silicate monomer/oligomer (20% in ethanol)*	0	1,3	TSM	
Tetrahydrofuran	41		THF	
Tetrahydronaphthalene	32		THN	
Tetramethylbenzene (all isomers)	32		TTC	TTB
<i>Tetrapropylbenzene, see Alkyl(C9+)benzenes</i>	32			AKB
<i>Tetrasodium salt of ethylenediaminetetraacetic acid solution, see Ethylenediaminetetraacetic acid, tetrasodium salt solution</i>	43.			EDS
Titanium dioxide slurry	43		TDS	
Titanium tetrachloride	2		TTT	
Toluene	32		TOL	
Toluenediamine	9		TDA	
Toluene diisocyanate	12		TDJ	TDI/TDJ
o-Toluidine	9		TLI	TOD/TOI
<i>Triarylphosphate, see Triisopropylated phenyl phosphates</i>	34		TRA	TPL
Tributyl phosphate	34		TBP	
1,2,3-Trichlorobenzene (molten)*	36	3	TBZ	TCB
1,2,4-Trichlorobenzene	36		TCB	TBZ

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
1,1,1-Trichloroethane	36	2	TCE	TCM
1,1,2-Trichloroethane	36		TCM	TCE
Trichloroethylene	36	2	TCL	
1,2,3-Trichloropropane	36	2	TCN	
1,1,2-Trichloro-1,2,2-trifluoroethane	36		TTF	
Tricresyl phosphate (containing 1% or more ortho-isomer)*	34	3	TCO	TCP/TCQ
Tricresyl phosphate (containing less than 1% ortho-isomer)*	34	3	TCP	TCO/TCQ
<i>Tridecane (all isomers), see Alkanes (C10+)</i> (all isomers)	31		TRD	ALV (ALJ)
Tridecanoic acid	34		TDO	
<i>Tridecanol, see Alcohols (C13+)</i>	20		TDN	ALY (ASK/ASY/ AYK/LAL)
<i>Tridecene, see Olefins (C13+)</i>	30		TRD	OAM/OFY/ OFW/OFZ/ TDC
Tridecyl acetate	34		TAE	
<i>Tridecylbenzene, see Alkyl(C9+) benzenes</i>	32		TRB	AKB
Triethanolamine	8	2	TEA	
Triethylamine	7		TEN	
Triethylbenzene	32		TEB	
Triethylene glycol	40		TEG	
<i>Triethylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1–C6) ether</i>	40		TBE	PAG
Triethylene glycol butyl ether mixture	40		TBD	
Triethylene glycol di-(2-ethylbutyrate)	34		TGD	
Triethylene glycol ether mixture	40		TYM	
<i>Triethylene glycol ethyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	40		TGE	PAG

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Triethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	40		TGY	PAG
Triethylenetetramine	7	2	TET	
Triethyl phosphate	34		TPS	
Triethyl phosphite	34	2	TPI	
Triisobutylene	30		TIB	
Triisooctyl trimellitate	34		TIS	
Triisopropanolamine	8		TIP	
<i>Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution</i>	43			DTI
Triisopropylated phenyl phosphates	34		TPL	
Trimethylacetic acid	4		TAA	
Trimethylamine solution (30% or less)	7		TMT	TMA
Trimethylbenzene (all isomers)	32		TRE	TMB/TMD/TME
<i>Trimethyl nonanol, see Dodecanol</i>	20			DDN (ASK/ASY/LAL)
Trimethylol propane polyethoxylated	40		TPR	
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	34		TMQ	
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate	34		TMP	
2,2,4-Trimethyl-3-pentanol-1-isobutyrate	34		TMR	
1,3,5-Trioxane	41	2	TRO	
Triphenylborane (10% or less)/Caustic soda solution	5		TPB	
<i>Tripropylene, see Propylene trimer</i>	30			PTR
Tripropylene glycol	40		TGC	
<i>Tripropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether</i>	40		TGM	PAG

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
<i>Trisodium nitrilotriacetate solution, see</i> Nitrilotriacetic acid, trisodium salt solution	34		TSO	NCA (TSN)
Trisodium phosphate solution	5		TSP	
<i>Trisodium salt of N-</i> <i>(Hydroxyethyl)ethylenediaminetriacetic acid</i> <i>solution, see N-</i> <i>(Hydroxyethyl)ethylenediaminetriacetic acid,</i> <i>trisodium salt solution</i>	43			HET
<i>Trixylyl phosphate, see</i> Trixylyl phosphate	34			TRP
Trixylyl phosphate	34			TRP
<i>Tung oil, see</i> Oil, misc: Tung	34			OTG
Turpentine	30		TPT	
<i>Turpentine substitute, see</i> White spirit (low (15-20%) aromatic)	33			WSL (WSP)
Ucarsol CR Solvent 302 SG	8		UCS	
<i>Undecane (all isomers), see</i> Alkanes (C10+) (all isomers)	31		UDN	ALV (ALJ)
Undecanoic acid	4		UDA	
<i>Undecanol, see</i> Undecyl alcohol	20			UND (ALR)
Undecene	30		UDD	UDC
1-Undecene	30		UDC	UDD
Undecyl alcohol	20		UND	ALR
<i>Undecylbenzene, see</i> Alkyl(C9+) benzenes			UDB	AKB
Urea, Ammonium mono- and di-hydrogen phosphate/Potassium chloride solution	0	1	UPX	
Urea/Ammonium nitrate solution*	34	3	UAV	ANU/UAS/ UAT/UAU
Urea/Ammonium nitrate solution (containing less than 1% free Ammonia)	43		UAU	ANU/UAS/ UAT/UAU
Urea/Ammonium nitrate solution (containing less than 2% free Ammonia)	6		UAT	ANU/UAS/ UAU/UAU

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
Urea/Ammonium phosphate solution	43		UAP	
Urea solution	43		USL	URE
Valeraldehyde (all isomers)	19		VAK	IVA/VAL
Vanillin black liquor (free alkali content 3% or more)	5		VBL	
Vegetable oils, n.o.s.	34		VEO	
<i>Including:</i>				
<i>Beechnut oil</i>				
<i>Camelina oil</i>				
<i>Cashew nut shell</i>				
<i>Castor oil</i>				
<i>Cocoa butter</i>				
<i>Coconut oil</i>				
<i>Corn oil</i>				
<i>Cottonseed oil</i>				
<i>Croton oil</i>				
<i>Groundnut oil</i>				
<i>Hazelnut oil</i>				
<i>Illipe oil</i>				
<i>Jatropha oil</i>				
<i>Linseed oil</i>				
<i>Mango kernel oil</i>				
<i>Nutmeg butter</i>				
<i>Oiticica oil</i>				
<i>Olive oil</i>				
<i>Palm kernel oil</i>				
<i>Palm kernel olein</i>				
<i>Palm kernel stearin</i>				

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Palm mid fraction</i>				
<i>Palm, non-edible industrial grade</i>				
<i>Palm oil</i>				
<i>Palm olein</i>				
<i>Palm stearin</i>				
<i>Peanut oil</i>				
<i>Peel oil (oranges and lemons)</i>				
<i>Perilla oil</i>				
<i>Pine oil</i>				
<i>Poppy seed oil</i>				
<i>Poppy oil</i>				
<i>Raisin seed oil</i>				
<i>Rapeseed oil</i>				
<i>Rapeseed (low erucic acid containing less than 4% free fatty acids)</i>				
<i>Resin, distilled</i>				
<i>Resin oil</i>				
<i>Rice bran oil</i>				
<i>Rosin oil</i>				
<i>Safflower oil</i>				
<i>Salad oil</i>				
<i>Sesame oil</i>				
<i>Shea butter</i>				
<i>Soyabean oil</i>				
<i>Sunflower seed oil</i>				
<i>Tall</i>				
<i>Tall, crude</i>				
<i>Tall, distilled</i>				

<b>Chemical Name</b>	<b>Group No.</b>	<b>Footnote</b>	<b>CHRIS Code</b>	<b>Related CHRIS Codes</b>
<i>Tall, pitch</i>				
<i>Tucum oil</i>				
<i>Tung oil</i>				
<i>Walnut oil</i>				
Vegetable acid oils, n.o.s.	34		VAD	
<i>Including:</i>				
<i>Corn acid oil</i>				
<i>Cottonseed acid oil</i>				
<i>Dark mixed acid oil</i>				
<i>Groundnut acid oil</i>				
<i>Mixed acid oil</i>				
<i>Mixed general acid oil</i>				
<i>Mixed hard acid oil</i>				
<i>Mixed soft acid oil</i>				
<i>Rapeseed acid oil</i>				
<i>Safflower acid oil</i>				
<i>Soya acid oil</i>				
<i>Sunflower seed acid oil</i>				
Vegetable fatty acid distillates*	34	3	VFD	
<i>Including:</i>				
<i>Palm kernel fatty acid distillate</i>				
<i>Palm oil fatty acid distillate</i>				
<i>Tall fatty acid distillate</i>				
<i>Tall oil fatty acid distillate</i>				
Vegetable protein solution (hydrolyzed)	43		VPS	
Vinyl acetate	13	2	VAM	
Vinyl chloride	35		VCM	
Vinyl ethyl ether	13		VEE	

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
Vinylidene chloride	35		VCI	
Vinyl neodecanoate	13	2	VND	
Vinyltoluene	13		VNT	
Water	43		WTR	
Waxes:			WAX	
Candelilla	34		WCD	
Carnauba	34		WCA	
Paraffin	31		WPF	
Petroleum	33		WPT	
<i>White spirit, see</i> White spirit (low (15-20%) aromatic)	33		WSP	WSL
White spirit (low (15-20%) aromatic)	33		WSL	WSP
<i>Wine, see</i> Alcoholic beverages	20		ABV	
Wood lignin with Sodium acetate/oxalate*	0	1,3	WOL	
Xylenes	32		XLX	XLM/XLO/ XLP
Xylenes/Ethylbenzene (10% or more) mixture	32		XEB	
Xylenol	21		XYL	
Zinc alkaryl dithiophosphate (C7–C16)	34		ZAD	
Zinc alkenyl carboxamide	10		ZAA	
Zinc alkyl dithiophosphate (C3–C14)	34		ZAP	
<i>Zinc bromide/Calcium bromide solution, see</i> Drilling brine (containing Zinc salts)	43			DZB
NOTES				
1. Because of very high reactivity or unusual conditions of carriage or potential compatibility problems, this commodity is not assigned to a specific group in Figure 1 to 46 CFR part 150 (Compatibility Chart).				
2. See Appendix I to 46 CFR part 150 (Exceptions to the Chart).				

Chemical Name	Group No.	Footnote	CHRIS Code	Related CHRIS Codes
3. “*” From the March 2012 Annex to the 2007 edition of the IBC Code.				
4. <i>Italicized</i> words are not part of the cargo name but may be used in addition to the cargo name				

5. Revise Table II to Part 150 to read as follows:

TABLE II TO PART 150 – GROUPING OF CARGOES

Group	Cargo
0. Unassigned	Acetone cyanohydrin <sup>1,2</sup> Alkenoic acid, polyhydroxy ester borated <sup>1</sup> Alkyl (C8–C10)/(C12–C14) : (60% or more/40% or less) Alkyl (C18-C28) toluenesulfonic acid <sup>1</sup> Alkyl (C11-C17) benzene sulfonic acid polyglucoside solution (55% or less) <sup>1</sup> Alkylbenzenesulfonic acid <sup>1,2</sup> Alkyl benzene distillation bottoms <sup>1</sup> Aluminium chloride, Hydrochloric acid solution <sup>1</sup> Aluminum chloride/Hydrogen chloride solution <sup>1</sup> Ammonium hydrogen phosphate solution <sup>1</sup> Ammonium nitrate solution <sup>1</sup> Ammonium thiocyanate, Ammonium thiosulfate solution <sup>1</sup> Benzenesulfonyl chloride <sup>1,2</sup> gamma-Butyrolactone <sup>1,2</sup> Chlorine <sup>1</sup> Chlorosulfonic acid <sup>1</sup> Decyloxytetrahydro-thiophene dioxide <sup>1</sup> tert-Dodecanethiol <sup>1</sup> 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (70% or less) <sup>1,2</sup> Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid solution <sup>1,2</sup> Dimethyl disulfide <sup>1</sup> Diphenylol propane-Epichlorohydrin resins <sup>1</sup> Dodecylbenzenesulfonic acid <sup>1,2</sup> Dodecyl hydroxypropyl sulfide <sup>1,2</sup> Ethylene oxide <sup>1</sup> Hydrogen peroxide solutions <sup>1</sup> Hydrogenated starch hydrolysate <sup>1</sup> Lactic acid <sup>1,2</sup>

Group	Cargo
	Ligninsulfonic acid, sodium salt solution <sup>1</sup> Liquid chemical wastes <sup>1</sup> Long chain alkaryl sulfonic acid (C16–C60) <sup>1,2</sup> Magnesium chloride solution <sup>1,2</sup> Malitol solution <sup>1</sup> Methyl cyclopentadienyl manganese tricarbonyl <sup>1</sup> Methyl cyclopentadienyl manganese tricarbonyl (60-70%) in mineral oil <sup>1</sup> Molybdenum polysulfide long chain alkyl dithiocarbamide complex <sup>1</sup> Molasses residue <sup>1</sup> Motor fuel antiknock compounds containing Lead alkyls <sup>1</sup> Naphthalene sulfonic acid-formaldehyde copolymer, sodium salt solution <sup>1</sup> NIAX POLYOL APP 240C <sup>1,2</sup> Nitrating acid <sup>1</sup> Nitric acid (greater than 70%) <sup>1</sup> o-Nitrophenol <sup>1,2</sup> Noxious Liquid Substance, n.o.s. (NLS's) <sup>1</sup> Oleum <sup>1,2</sup> Orange juice (concentrated) <sup>1</sup> Orange juice (not concentrated) <sup>1</sup> Oxygenated aliphatic hydrocarbon mixture <sup>1</sup> Phosphorus <sup>1</sup> Phthalate based polyester polyol <sup>1,2</sup> Potassium polysulfide, Potassium thiosulfide solution (41% or less) <sup>1</sup> 2-Propene-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer solution <sup>1</sup> SAP 7001 <sup>1</sup> Sodium chlorate solution <sup>1,2</sup> Sodium dichromate solution <sup>1,2</sup> Sodium hydrogen sulfide, Sodium carbonate solution <sup>1,2</sup> Sodium sulfide, Hydrosulfide solution <sup>1,2</sup> Sodium thiocyanate solution <sup>1,2</sup> Sulfur <sup>1</sup> Tall oil fatty acid, barium salt <sup>1,2</sup> Tetraethyl silicate monomer/oligomer (20% in ethanol) <sup>1</sup> Urea, Ammonium mono- and di-hydrogen phosphate, Potassium chloride solution <sup>1</sup> Wood lignin with Sodium acetate/oxalate <sup>1</sup>
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 Phosphoric acid

Group	Cargo
	Polyaluminum chloride solution
2. Sulfuric Acids	Sulfuric acid <sup>2</sup> Sulfuric acid, spent Titanium tetrachloride
3. Nitric Acids	Ferric nitrate, Nitric acid solution Nitric acid (70% or less) Nitric acid (70% and over)
4. Organic Acids	Acetic acid <sup>2</sup> Acid oil mixture from soya bean, corn (maize) and sunflower oil refining Acrylic acid <sup>2</sup> Butyric acid i-Butyric acid Cashew nut shell oil (untreated) Citric acid (70% or less) Chloroacetic acid solution Chloroacetic acid (80% or less) Chloropropionic acid Decanoic acid 2,2-Dichloropropionic acid 2,2-Dimethyloctanoic acid 2-Ethylhexanoic acid Fatty acids, (C8–C10) Fatty acids, (C12+) Fatty acids, (C16+) Fatty acids, essentially linear (C6–C18) 2-ethylhexyl ester Fatty acid methyl esters Formic acid <sup>2</sup> Formic acid (over 85%) <sup>2</sup> Formic acid mixture (containing up to 18% Propionic acid and up to 25% Sodium formate) <sup>2</sup> Glycolic acid Glyoxylic acid n-Heptanoic acid 1,6-Hexanediol distillation overheads Hexanoic acid 2-Hydroxy-4-(methylthio)butanoic acid Jatropha oil Long chain alkyl (C13+) salicylic acid Metal fatty acid salt Metal long chain alkyl salt Methacrylic acid Microsilica slurry Naphthenic acid Neodecanoic acid

Group	Cargo
	Nonanoic acid Nonanoic, Tridecanoic acid mixture Octanoic acid (all isomers) n-Pentanoic acid, 2-Methyl butyric acid mixture Pentanoic acid Propionic acid Trimethylacetic acid Undecanoic acid
5. Caustics	Ammonium sulfide solution (45% or less) Calcium hypochlorite solutions Calcium hypochlorite solution (15% or less) Calcium hypochlorite solution (more than 15%) Caustic potash solution <sup>2</sup> Caustic soda solution <sup>2</sup> Cresylate spent caustic Cresylic acid, sodium salt solution Kraft black liquor Kraft pulping liquors Mercaptobenzothiazol, sodium salt solution Potassium hydroxide solution <sup>2</sup> Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide) Sodium aluminate solution Sodium borohydride, Sodium hydroxide solution Sodium carbonate solutions Sodium cyanide solution Sodium hydrosulfide solution <sup>2</sup> Sodium hydrosulfide, Ammonium sulfide solution <sup>2</sup> Sodium hydroxide solution <sup>2</sup> Sodium hypochlorite solution Sodium 2-mercaptobenzothiazol solution Sodium naphthenate solution Sodium nitrite solution Triphenylborane, Caustic soda solution Trisodium phosphate solution Vanillin black liquor
6. Ammonia	Ammonia, anhydrous Ammonia, aqueous Ammonium hydroxide (28% or less Ammonia) Ammonium nitrate, Urea solution (containing Ammonia) Urea, Ammonium nitrate solution (containing Ammonia)
7. Aliphatic Amines	Alkenylamine mixtures Alkyl (greater than C8) amine, Alkenyl (greater than C12) acid ester in mineral oil Alkyl amine (C17 or greater)

Group	Cargo
	Alkyl (C12+) dimethylamine
	N-Aminoethylpiperazine
	Butylamine (all isomers)
	Calcium long chain alkyl phenolic amine (C8–C40)
	Crude piperazine
	Cyclohexylamine
	Dibutylamine
	Diethylamine
	Diethylenetriamine <sup>2</sup>
	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
	Diphenylamine, reaction product with 2,2,4-Trimethylpentene
	Diphenylamines, alkylated
	Dodecylamine, Tetradecylamine mixture <sup>2</sup>
	Dodecyldimethylamine, Tetradecyldimethylamine mixture
	Ethoxylated tallow alkyl amine
	Ethoxylated tallow amine (>95%)
	Ethoxylated tallow alkyl amine, glycol mixture
	Ethylamine <sup>2</sup>
	Ethylamine solution (72% or less)
	Ethyleneamine EA 1302 <sup>2</sup>
	N-Ethyl-n-butylamine
	N-Ethyl cyclohexylamine
	Ethylenediamine <sup>2</sup>
	2-Ethyl hexylamine
	N-Ethylmethylallylamine
	Glyphosate solution (not containing surfactant)
	Hexamethylenediamine
	Hexamethylenediamine (molten)
	Hexamethylenediamine solution
	Hexamethylenetetramine
	Hexamethylenetetramine solutions
	Hexamethylenimine
	HiTec 321
	bis-(Hydrogenated tallow alkyl)methyl amines
	Isophorone diamine
	Isopropylamine
	Isopropylamine (70% or less) solution

Group	Cargo
	<p>Long chain alkyl amine  Long chain polyetheramine in alkyl(C2–C4)benzenes  Metam sodium solution  Methylamine solutions (42% or less)  Morpholine<sup>2</sup>  Oleylamine  Pentaethylenehexamine  Pentaethylenehexamine, Tetraethylenepentamine mixture  Phosphate esters, alkyl (C12–C14) amine  Polyalkenyl succinic anhydride amine  Polyalkyl alkeneamine succinimide, molybdenum oxysulfide  Polyethylene polyamines<sup>2</sup>  Polyethylene polyamines (more than 50% C5–C20 paraffin oil)  Poly(iminoethylene)-graft-N-poly (ethyleneoxy) solution (90% or less)  Polyisobutenamine in aliphatic (C10–C14) solvent  Polyolefin amide alkeneamine (C28+)  Polyolefin amide alkeneamine polyol  Poly olefin amine  Poly (C17+) olefin amine  Polyolefin amide alkeneamine/Molybdenum oxysulfide mixture  Polyoxypropylenediamine (MW 2000)  Propanil, Mesityl oxide, Isophorone mixture  Propylamine  iso-Propylamine solution  Roundup  Sulfohydrocarbon, long chain (C18+) alkylamine mixture  Tetraethylenepentamine<sup>2</sup>  Triethylamine  Triethylenetetramine<sup>2</sup>  Trimethylamine solution  Trimethylhexamethylene diamine (2,2,4- and 2,4,4-)</p>
8. Alkanolamines	<p>Alkyl (C12-C16) propoxyamine ethoxylate  2-(2-Aminoethoxy)ethanol  Aminoethyldiethanolamine, Aminoethylethanolamine solution  Aminoethylethanolamine  2-Amino-2-methyl-1-propanol  Diethanolamine  Diethylaminoethanol  Diethylethanolamine  Diisopropanolamine  Dimethylethanolamine  Ethanolamine  Ethoxylated alkyloxy alkyl amine  Ethoxylated long chain (C16+) alkyloxyalkanamine</p>

Group	Cargo
	Isopropanolamine Isopropanolamine solution N,N-bis (2-Hydroxyethyl) oleamide Linear alkyl (C12–C16) propoxyamine ethoxylate Methyl diethanolamine Propanolamine Triethanolamine <sup>2</sup> Triisopropanolamine Ucarsol CR Solvent 302 SG
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 Dimethylamine salt of 4-Chloro-2-methylphenoxyacetic acid solution 2,6-Dimethylaniline Diphenylamine Diphenylamine (molten) Diphenylamine, reaction product with 2,2,4-trimethylpentene Diphenylamines, alkylated 2-Ethyl-6-methyl-N-(1'-methyl-2-methoxyethyl)aniline N-Methylaniline 2-Methyl-6-ethyl aniline 2-Methyl-5-ethyl pyridine Methyl pyridine 2-Methylpyridine 3-Methylpyridine 4-Methylpyridine N-Methyl-2-pyrrolidone <sup>2</sup> Paraldehyde-Ammonia reaction product Polyolefin phenolic amine (C28–C250) Pyridine Pyridine bases Toluenediamine p-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

Group	Cargo
	Formamide N,N-bis(2-Hydroxyethyl) oleamide Octadecenoamide Organomolybdenum amide Polybutenyl succinimide Polyisobutenyl succinimide Zinc alkenyl carboxamide
11. Organic Anhydrides	Acetic anhydride Alkenylsuccinic anhydride Alkyl succinic anhydride Maleic anhydride Phthalate based polyester polyol Phthalic anhydride 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/Decyl/Cetyl/Eicosyl methacrylate mixture Butyl methacrylate i-Butyl methacrylate Butyl methacrylate, Decyl methacrylate, Cetyl-Eicosyl methacrylate mixture Cetyl-Eicosyl methacrylate mixture Decyl acrylate Dodecyl methacrylate Dodecyl-Octadecyl methacrylate mixture Dodecyl-Pentadecyl methacrylate mixture Ethyl acrylate 2-Ethylhexyl acrylate Ethyl methacrylate 2-Hydroxyethyl acrylate <sup>2</sup> Isobutyl methacrylate Methacrylic resin in Ethylene dichloride Methyl acrylate

Group	Cargo
	Methyl methacrylate Nonyl methacrylate Polyalkyl acrylate Polyalkyl(C18 - C22) acrylate in Xylene Polyalkyl (C10–C18) methacrylate/Ethylene Polyalkyl methacrylate Polyalkyl methacrylate in mineral oil Polyalkyl (C10–C20) methacrylate Polyalkyl methacrylate solution (containing max 40% active material) Propylene copolymer mixture Roehm monomer 6615
15. Substituted Allyls	Acrylonitrile <sup>2</sup> Allyl alcohol <sup>2</sup> Allyl chloride 1,3-Dichloropropene Dichloropropene Dichloropropene, Dichloropropane mixtures Methacrylonitrile
16. Alkylene Oxides	Butylene oxide Ethylene oxide, Propylene oxide mixtures Ethylene oxide/ Propylene oxide mixture with an Ethylene oxide content not more than 30% by mass) Propylene oxide
17. Epichlorohydrins	Chlorohydrins (crude) Epichlorohydrin
18. Ketones	Acetone <sup>2</sup> Acetophenone Amyl methyl ketone Butyl heptyl ketone Camphor oil 1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one <sup>2</sup> Cyclohexanone Cyclohexanone, Cyclohexanol mixtures <sup>2</sup> Diisobutyl ketone Ethyl amyl ketone Epoxy resin Ketone residue Isophorone <sup>2</sup> Mesityl oxide <sup>2</sup> Methyl amyl ketone Methyl butyl ketone Methyl ethyl ketone <sup>2</sup> Methyl heptyl ketone Methyl isoamyl ketone

Group	Cargo
	Methyl isobutyl ketone <sup>2</sup> Methyl propyl ketone beta-Propiolactone Trifluralin in Xylene
19. Aldehydes	Acetaldehyde Acrolein <sup>2</sup> Butyraldehyde (all isomers) Crotonaldehyde <sup>2</sup> Decaldehyde Ethylhexaldehyde 2-Ethyl-3-propylacrolein <sup>2</sup> Formaldehyde, Methanol mixtures <sup>2</sup> Formaldehyde solutions <sup>2</sup> Furfural Glutaraldehyde solution Glyoxal solutions 3-Methyl butyraldehyde Methylolureas 3-(Methylthio)propionaldehyde Octyl aldehyde Paraldehyde Pentyl aldehyde Propionaldehyde Valeraldehyde
20. Alcohols, Glycols	Acrylonitrile-Styrene copolymer dispersion in Polyether polyol Alcoholic beverages Alcohol polyethoxylates Alcohol polyethoxylates, secondary Alcohols (C13+) Alcohols (C12+), primary, linear Alcohols (C12-C13), primary, linear and essentially linear Alcohols (C14-C18), primary, linear and essentially linear Alkyl (C4-C9) phenols n-Amyl alcohol Amyl alcohol, primary sec - Amyl alcohol tert- Amyl alcohol Behenyl alcohol Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume) Brake fluid base mixtures Brake fluid base mix: Poly(2-8)alkylene (C2-C3) glycols/Polyalkylene (C2-C10) glycols monoalkyl (C1-C4) ethers and their borate esters 1,4-Butanediol Butyl alcohol <sup>2</sup> (all isomers)

Group	Cargo
	n-Butyl alcohol
	iso-Butyl alcohol
	t-Butyl alcohols
	Butylene glycol <sup>2</sup>
	Cetyl-Stearyl alcohol
	Choline chloride solutions
	Cyclohexanol
	Cyclopentanol
	Decyl alcohol (all isomers) <sup>2</sup>
	Decyl/Dodecyl/Tetradecyl alcohol mixture
	Diacetone alcohol <sup>2</sup>
	Diethyl hexanol
	Diethylene glycol
	Diethylene glycol dibenzoate
	Diisobutyl carbinol
	2,2-Dimethylpropane-1,3-diol
	Dodecanol
	Dodecyl alcohol
	Dodecyl hydroxypropyl sulfide
	Ethoxylated alcohols, C11–C15
	2-Ethoxyethanol
	Ethyl alcohol <sup>2</sup>
	Ethyl butanol
	Ethylene chlorohydrin
	Ethylene cyanohydrin
	Ethylene glycol <sup>2</sup>
	2-Ethylhexanol
	Furfuryl alcohol <sup>2</sup>
	Glycerine <sup>2</sup>
	Glycerine, Dioxanedimethanol mixture
	Glycerol monooleate
	Glycol
	Glycol mixture, crude
	Heptanol
	Hexamethylene glycol
	Hexanol
	Hexylene glycol
	Hydroxy terminated polybutadiene
	Icosa(oxypropane-2,3-diyl)s
	Isoamyl alcohol
	Isobutyl alcohol
	Isopropyl alcohol
	Lauryl polyglucose (50% or less)
	Methacrylic acid-alkyloxypoly (alkylene oxide) methacrylate copolymer sodium salt aqueous solution (45% or less)

Group	Cargo
	3-Methoxy-1-butanol Methyl alcohol <sup>2</sup> Methyl amyl alcohol alpha-Methylbenzyl alcohol with acetophenone (15% or less) Methyl butenol Methylbutynol 2-Methyl-2-hydroxy-3-butyne Methyl isobutyl carbinol 3-Methyl-3-methoxybutanol 2-Methyl-1,3-propanediol Molasses Nonyl alcohol <sup>2</sup> Octanol (all isomers) <sup>2</sup> Octyl alcohol <sup>2</sup> Penacosa(oxypropane-2,3-diyl)s Pentadecanol Polyalkylene oxide polyol Polybutadiene, hydroxy terminated Polyglycerol Polyglycerine, Sodium salts solution (containing less than 3% Sodium hydroxide) <sup>2</sup> Polyolefin amide alkeneamine polyol Propyl alcohol <sup>2</sup> Propylene glycol <sup>2</sup> Rum Sodium methylate solution (21-30% in Methanol) Sorbitol solutions Stearyl alcohol Tallow fatty alcohol Tetradecanol Tridecanol Trimethyl nonanol Trimethylol propane polyethoxylate Undecanol Undecyl alcohol
21. Phenols, Cresols	Alkylated (C4–C9) hindered phenols Benzyl alcohol Carbolic oil Creosote <sup>2</sup> Creosote (coal tar) <sup>2</sup> Creosote (wood tar) <sup>2</sup> Cresols (all isomers) Cresylic acid Cresylic acid dephenolized Cresylic acid, tar

Group	Cargo
	Dibutylphenols 2,4-Dichlorophenol Di-tert-butyl phenols 2,4-Di-tert-butyl phenols 2,6-Di-tert-butyl phenols Dodecyl phenol o-Ethylphenol Long chain alkylphenate/phenol sulfide mixture Methylene bridged isobutylenated phenols Nonyl phenol Nonyl phenol (48-62%)/Phenol (42-48%)/Dinonyl phenol (1-10%) mixture Octyl phenol Phenol Xylenols
22. Caprolactam Solutions	Caprolactam solution epsilon-Caprolactam (molten or aqueous solutions)
<i>23–29. Unassigned</i>	
30. Olefins	Acrylic acid/ethenesulfonic acid copolymer with phosphonate groups, sodium salt solution Amylene Aryl polyolefin (C11–C50) Butadiene Butadiene, Butylene mixtures (cont. Acetylenes) Butadiene Feedstock [Kirby] Butene Butene oligomer Butylene 1,5,9-Cyclododecatriene 1,3-Cyclopentadiene dimer (molten) Cyclopentadiene, Styrene, Benzene mixture Cyclopentene Decene Dichloropropene Dicyclopentadiene Dicyclopentadiene, Resin Grade, 81-89% Diisobutylene Dipentene Dodecene Ethylene Ethylene-Propylene copolymer Ethylidene norbornene <sup>2</sup> 1-Heptene Hexene (all isomers) Isoprene

Group	Cargo
	Isoprene concentrate (Shell) Latex (ammonia (1% or less) inhibited) Methyl acetylene, Propadiene mixture Methyl butene Methylcyclopentadiene dimer 2-Methyl-1-pentene 4-Methyl-1-pentene alpha-Methyl styrene Myrcene Nonene 1-Octadecene Octene Olefin mixtures Olefin mixture (C7-C9) C8 rich, stabilized Olefin mixtures (C5-C7) Olefin mixtures (C5-C15) alpha-Olefins (C6 - C18) mixtures alpha-Olefins (C13+) 1,3-Pentadiene 1,3-Pentadiene (greater than 50%), Cyclopentene and isomers, mixtures Pentene alpha-Pinene beta-Pinene Polybutene Poly(4+)isobutylene Polyolefin in mineral oil Polyolefin (molecular weight 300+) Polypropylene Poly(5+)propylene Propylene Propylene-butylene copolymer Propylene dimer Propylene, Propane, MAPP gas mixture Propylene tetramer Propylene trimer Styrene monomer Tetradecene Tridecene Triisobutylene Tripropylene Turpentine Undecene
31. Paraffins	Alkanes (C6–C9) Alkanes (C10–C26) linear and branched

Group	Cargo
	Alkanes (C10–C26) linear and branched (flash point > 60°C)n- Alkanes (C10+) iso- & cyclo-Alkanes (C10–C11) iso- & cyclo-Alkanes (C12+) Aviation alkylates (C8 paraffins and iso-paraffins BPT 95-120 °C) Butane Cycloheptane Cyclohexane Cyclopentane Decane Dodecane Ethane Ethyl cyclohexane Heptane Hexane <sup>2</sup> Isopropylcyclohexane Methane Methylcyclohexane 2-Methyl pentane Mineral oil Nonane Octane Paraffin wax Pentane Polyalpha olefins Polyolefin (molecular weight 300+) Propane iso-Propylcyclohexane Tridecane Waxes: Paraffin
32. Aromatic Hydrocarbons	Alkyl(C3–C4)benzenes Alkyl(C5–C8)benzenes Alkyl(C9+)benzenes Alkyl acrylate-Vinyl pyridine copolymer in Toluene Alkylbenzene, Alkylindane, Alkylindene mixture (each C12–C17) Alkylbenzene mixtures (containing at least 50% of Toluene) Alkyl toluene Alkyl (C18+) toluene Aryl polyolefin (C11–C50) Benzene Benzene hydrocarbon mixtures (having 10% Benzene or more) Benzene, Toluene, Xylene mixtures Butylbenzene (all isomers) Butyl phenol, Formaldehyde resin in Xylene

Group	Cargo
	Butyl toluene Cumene Cymene Decylbenzene Dialkyl(C10 - C14) benzenes Diethylbenzene Diisopropylbenzene (all isomers) Diisopropyl naphthalene Diphenyl Dodecylbenzene Dodecyl xylene Ethylbenzene Ethyl toluene 1-Hexadecylnaphthalene, 1,4-bis(Hexadecyl) 1,1-Hexadecylnaphthalene/1,4-bis (hexadecyl) naphthalene mixture 1,n-Hexadecylnaphthalene (90%),1,4-Di-n-(hexadecyl- naphthalene (10%) Isopropylbenzene Methyl naphthalene (molten) Naphthalene (molten) Naphthalene mixture Naphthalene still residue 1-Phenyl-1-xylyl ethane Parachlorobenzotrifluoride Poly(2+)cyclic aromatics Polyolefin amine in alkylbenzenes (C2–C4) Polyolefin amine in aromatic solvent Propylbenzene Pseudocumene Pyrolysis gasoline (containing Benzene) C9 Resinfeed (DSM) <sup>2</sup> Tetradecylbenzene Tetrahydronaphthalene 1,2,3,5-Tetramethylbenzene Toluene Tridecylbenzene Triethylbenzene Trimethylbenzene Undecylbenzene Xylene Xylenes, Ethylbenzene mixture
33. Miscellaneous Hydrocarbon Mixtures	Alachlor Alachlor technical (90% or more) Alkylbenzenesulfonic acid, sodium salt solutions Alkyl dithiothiadiazole (C6–C24)

Group	Cargo
	<p>Alkyl toluene sulfonic acid, calcium salts</p> <p>Alkyl (C18-C28) toluene sulfonic acid, Calcium salts, high overbase</p> <p>Alkyl (C18-C28) toluene sulfonic acid, Calcium salts, low overbase</p> <p>Asphalt blending stocks, roofers flux</p> <p>Asphalt blending stocks, straight run residue</p> <p>Asphalt emulsion</p> <p>Asphalt, kerosene, and other components</p> <p>Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flash point &gt; 60 °C (&gt;25% but &lt;99% by volume)</p> <p>Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flash point &lt; 60 °C (&gt;25% but &lt;99% by volume)</p> <p>Calcium sulfonate, Calcium carbonate, Hydrocarbon solvent mixture</p> <p>Coal tar</p> <p>Coal tar distillate</p> <p>Coal tar, high temperature</p> <p>Coal tar pitch (molten)</p> <p>Decahydronaphthalene</p> <p>Degummed C9 (DOW)</p> <p>Diphenyl, Diphenyl ether</p> <p>Distillates</p> <p>Distillates, flashed feed stocks</p> <p>Distillates, straight run</p> <p>Drilling mud (low toxicity) ( <i>if flammable or combustible</i> )</p> <p>Gas oil, cracked</p> <p>Gasoline blending stock, alkylates</p> <p>Gasoline blending stock, reformates</p> <p>Gasolines:</p> <p style="padding-left: 20px;">Automotive ( <i>not over 4.23 grams lead per gal.</i> )</p> <p style="padding-left: 20px;">Aviation ( <i>not over 4.86 grams lead per gal.</i> )</p> <p style="padding-left: 20px;">Casinghead ( <i>natural</i> )</p> <p>Polymer</p> <p>Straight run</p> <p>Jet Fuels:</p> <p style="padding-left: 20px;">JP-4</p> <p style="padding-left: 20px;">JP-5</p> <p style="padding-left: 20px;">JP-8</p> <p>Kerosene</p> <p>Maleated ethylene-propylene copolymer reaction product [synthetic rubber]</p> <p>Mineral spirits</p> <p>Naphtha:</p> <p style="padding-left: 20px;">Coal tar solvent</p> <p style="padding-left: 20px;">Petroleum</p> <p style="padding-left: 20px;">Solvent</p> <p style="padding-left: 20px;">Stoddard solvent</p>

Group	Cargo
	Varnish Makers' and Painters' Oil, fuel: No. 1 No. 1-D No. 2 No. 2-D No. 4 No. 5 No. 6 Oil, misc: Aliphatic Aromatic Clarified Coal Crude Diesel Gas, high pour Heartcut distillate Linseed Lubricating Mineral Mineral seal Motor Neatsfoot Penetrating Pine Rosin Sperm Spindle Turbine Residual Road Transformer Oxyalkylated alkyl phenol formaldehyde Petrolatum Pine oil Polybutene Polyolefin amine (C28–C250) Polyolefin amide alkeneamine (C17+) Polyolefin amide alkeneamine (C28+) Polyolefin amide alkeneamine borate (C28–C250) Polyolefin amide alkeneamine in mineral oil Resin oil, distilled Sodium petroleum sulfonate Sulfohydrocarbon (C3–C88)

Group	Cargo
	Waxes: Petroleum Sulfurized fat (C14–C20) Sulfurized polyolefinamide alkeneamines (C28–C250) White spirit (low (15-20%) aromatic)
34. Esters	Acid oil mixture from soybean, corn (maize) and sunflower oil refining Alkane (C14–C17) sulfonic acid, sodium salt solution Alkyl(C8+)amine, Alkenyl (C12+) acid ester mixture Alkylaryl phosphate mixtures, (more than 40% Diphenyl tolyl phosphate. Less than 0.02% ortho-isomer) Alkyl dithiocarbamate (C19–C35) Alkyl ester copolymer (C4–C20) Alkyl ester copolymer (C6–C18) Alkyl ester copolymer in mineral oil Alkyl(C7–C9) nitrates <sup>2</sup> Alkyl (C8–C40) phenol sulfide Alkyl (C10–C20, saturated and unsaturated) phosphite Alkyl sulfonic acid ester of phenol Alkyl (C18–C28) toluene sulfonic acid, Calcium salts, borated Alkylaryl phosphate mixtures (more than 40%) Amyl acetate (all isomers) Amyl acid phosphate t-Amyl formate Animal and Fish oils, n.o.s. Animal and Fish acid oils and distillates, n.o.s. Barium long chain alkaryl (C11–C50) sulfonate Barium long chain alkyl(C8–C14)phenate sulfide Benzene tricarboxylic acid trioctyl ester Benzyl acetate 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 Butyl acetate (all isomers) Butyl benzyl phthalate Butyl butyrate (all isomers) Butyl formate iso-Butyl isobutyrate n-Butyl propionate Butyl stearate Calcium alkaryl sulfonate (C11–C50) Calcium alkyl(C9)phenol sulfide, polyolefin phosphorosulfide mixture Calcium alkyl (C10–C28) salicylate Calcium carbonate slurry Calcium long chain alkaryl sulfonate (C11–C50)

Group	Cargo
	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 phenate sulfide (C8–C40)
	Calcium long chain alkyl phenates
	Calcium long chain alkyl salicylate (C13+)
	Calcium long chain alkyl (C18–C28) salicylate
	Calcium nitrate, Magnesium nitrate, Potassium chloride solution
	Calcium nitrate
	Calcium nitrate solutions (50% or less)
	Calcium salts of fatty acids
	Calcium stearate
	Camelina oil
	Cesium formate solution
	Cobalt naphthenate in solvent naphtha
	Coconut oil, fatty acid
	Coconut oil, fatty acid methyl ester
	Copper salt of long chain (C3–C16) fatty acid
	Copper salt of long chain (C17+) fatty acid
	Copper salt of long chain alkanolic acids
	Cottonseed oil, fatty acid
	Cyclohexyl acetate
	Decyl acetate
	Dialkyl(C7 - C13) phthalates
	Dialkyl(C7 - C17) phthalates
	Dialkyl thiophosphates sodium salts solution
	Dibutyl hydrogen phosphonate
	Dibutyl phthalate
	Dibutyl terephthalate
	Diethylene glycol butyl ether acetate
	Diethylene glycol dibenzoate
	Diethylene glycol ethyl ether acetate
	Diethylene glycol methyl ether acetate
	Diethylene glycol phthalate
	Di-(2-ethylhexyl)adipate
	Di-(2-ethylhexyl)phthalate
	Diethyl phthalate
	Diethyl sulfate
	Diheptyl phthalate
	Dihexyl phthalate
	Di-n-hexyl adipate
	Diisobutyl phthalate
	Diisodecyl phthalate
	Diisononyl adipate
	Diisononyl phthalate

Group	Cargo
	Diisooctyl phthalate
	Dimethyl adipate
	Dimethylcyclisiloxane hydrolyzate
	Dimethyl glutarate
	Dimethyl hydrogen phosphite <sup>2</sup>
	Dimethyl naphthalene sulfonic acid, sodium salt solution <sup>2</sup>
	Dimethyl phthalate
	Dimethyl polysiloxane
	Dimethyl succinate
	Dinonyl phthalate
	Dioctyl phthalate
	Diphenyl tolyl phosphate, less than 0.02% ortho-isomer)
	Dipropylene glycol dibenzoate
	Dithiocarbamate ester (C7–C35)
	Tridecyl adipate
	Tridecyl phthalate
	2-Dodecenylsuccinic acid, dipotassium salt solution
	Diundecyl phthalate
	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
	Ethylene glycol acetate
	Ethylene glycol butyl ether acetate
	Ethylene glycol diacetate
	Ethylene glycol ethyl ether acetate
	Ethylene glycol methyl ether acetate
	Ethyl-3-ethoxypropionate
	Ethyl hexyl phthalate
	2-Ethyl-2-(hydroxymethyl) propane-1,3-diol, C8–C10 ester
	Ethyl propionate
	Ethyl propionate
	Fatty acids (saturated, C14+)
	Glycerol polyalkoxylate
	Glyceryl triacetate
	Glycidyl ester of C10 trialkyl acetic acid
	Glycidyl ester of tridecylacetic acid
	Heptyl acetate
	Hexyl acetate
	Isobutyl formate

Group	Cargo
	Isopropyl acetate
	Lard
	Lauric acid
	Lecithin
	Magnesium long chain alkaryl sulfonate (C11–C50)
	Magnesium long chain alkyl phenate sulfide (C8–C20)
	Magnesium long chain alkyl phenate sulfide (C8–C40)
	Magnesium long chain alkyl salicylate (C11+)
	Magnesium long chain alkyl salicylate (C13+)
	Mango kernel
	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
	Metolachlor
	Naphthalene sulfonic acid, sodium salt solution (40% or less)
	Nitrilotriacetic acid, trisodium salt solution
	Nonyl acetate
	Octamethylcyclotetrasiloxane
	n-Octyl acetate
	Octyl decyl adipate
	Oil, edible:
	Beechnut
	Castor
	Cocoa butter
	Coconut <sup>2</sup>
	Cod liver
	Corn
	Cotton seed
	Fish <sup>2</sup>
	Groundnut
	Hazelnut
	Lard
	Lanolin
	Nutmeg butter
	Olive
	Palm <sup>2</sup>
	Palm kernel
	Peanut
	Poppy

Group	Cargo
	Poppy seed
	Raisin seed
	Rapeseed
	Rice bran
	Safflower
	Salad
	Sesame
	Soya bean
	Sunflower
	Sunflower seed
	Tucum
	Vegetable
	Walnut
	<i>Oil, misc:</i>
	Animal
	Coconut oil, fatty acid methyl ester
	Cotton seed oil, fatty acid
	Lanolin
	Palm kernel oil, fatty acid methyl ester
	Palm oil, methyl ester
	Pilchard
	Perilla
	Soapstock
	Soyabean (epoxidized)
	Tall
	Tall, fatty acid <sup>2</sup>
	Tung
	Olefin/Alkyl ester copolymer (molecular weight 2000+)
	Oleic acid
	Palm acid oil
	Palm fatty acid distillate
	Palm kernel acid oil
	Palm kernel acid oil, methyl ester
	Palm kernel oil fatty acid
	Palm mid fraction
	Palm oil
	Palm oil fatty acid
	Palm oil fatty acid methyl ester
	Palm kernel olein
	Palm kernel stearin
	Palm olein
	Palm stearin
	n-Pentyl propionate
	Phosphate esters
	Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate
	Polydimethylsiloxane

Group	Cargo
	Polyferric sulfate solution
	Polymethylsiloxane
	Polyolefin amide alkeneamine borate (C28–C250)
	Poly(20)oxyethylene sorbitan monooleate
	Polysiloxane
	Polysiloxane/White spirit, low (15-20%) aromatic
	Polyolefin aminoester salt
	Polyolefin ester (C28–C250)
	Polyolefin phosphorosulfide, barium derivative (C28–C250)
	Potassium formate solution
	Potassium formate solution (75% or more)
	Potassium oleate
	Potassium salt of polyolefin acid
	Propyl acetate
	Propylene carbonate
	Propylene glycol methyl ether acetate
	Rape seed oil fatty acid methyl esters
	Rapeseed oil (low erucic acid containing less than 4% free fatty acids)
	Shea butter
	Siloxanes
	Sodium acetate, Glycol, Water mixture (not containing Sodium hydroxide) <sup>2</sup>
	Sodium acetate solution
	Sodium alkyl (C14–C17) sulfonates 60-65% solution
	Sodium benzoate solution
	Sodium bicarbonate solution (less than 10%)
	Sodium bromide solution (less than 50%)
	Sodium dimethyl naphthalene sulfonate solution <sup>2</sup>
	Sodium long chain alkyl salicylate (C13+)
	Sodium naphthalene sulfonate solution
	Sodium petroleum sulfonate
	Sodium sulfate solutions
	Soyabean oil (epoxidized)
	Stearic acid
	Tall oil
	Tall oil, crude
	Tall oil, distilled
	Tall oil fatty acid ( <i>Resin acids less than 20%</i> ) <sup>2</sup>
	Tall oil, pitch
	Tall oil soap, crude
	Tallow <sup>2</sup>
	Tallow fatty acid <sup>2</sup>
	Tributyl phosphate
	Tricresyl phosphate

Group	Cargo
	Tricresyl phosphate (containing 1% or more ortho-isomer) Tricresyl phosphate (containing less than 1% ortho-isomer) Tridecanoic acid Tridecyl acetate Triethylene glycol dibenzoate Triethylene glycol di-(2-ethylbutyrate) Triethyl phosphate Triethyl phosphite <sup>2</sup> Triisooctyl trimellitate Triisopropylated phenyl phosphates 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate 2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate 2,2,4-Trimethyl-3-pentanol-1-isobutyrate Trimethyl phosphite <sup>2</sup> Trisodium nitrilotriacetate Trixylyl phosphate Trixylenyl phosphate Urea/Ammonium nitrate solution Vegetable acid oils and distillates, n.o.s. Vegetable fatty acid distillates Vegetable oils, n.o.s. Waxes: Carnauba Zinc alkaryl dithiophosphate (C7–C16) Zinc alkyl dithiophosphate (C3–C14)
35. Vinyl Halides	Vinyl chloride Vinylidene chloride
36. Halogenated Hydrocarbons	Benzyl chloride Bromochloromethane Carbon tetrachloride <sup>2</sup> Catoxid feedstock <sup>2</sup> 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 Chlorodifluoromethane Chloroform Chlorotoluene m-Chlorotoluene o-Chlorotoluene p-Chlorotoluene Chlorotoluenes (mixed isomers) Dibromomethane

Group	Cargo
	Dibutylphenols 3,4-Dichloro-1-butene Dichlorobenzene (all isomers) Dichlorodifluoromethane 1,1-Dichloroethane 1,6-Dichlorohexane Dichloromethane Dichloropropane Ethyl chloride Ethylene dibromide Ethylene dichloride <sup>2</sup> Methyl bromide Methyl chloride Monochlorodifluoromethane n-Propyl chloride Pentachloroethane Perchloroethylene 1,1,2,2-Tetrachloroethane 1,2,3-Trichlorobenzene 1,2,3-Trichlorobenzene (molten) 1,2,4-Trichlorobenzene 1,1,1-Trichloroethane <sup>2</sup> 1,1,2-Trichloroethane Trichloroethylene <sup>2</sup> 1,2,3-Trichloropropane 1,1,2-Trichloro-1,2,2-trifluoroethane
37. Nitriles	Acetonitrile Acetonitrile (low purity grade) Adiponitrile Lactonitrile solution (80% or less) 2-Methylglutaronitrile 2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less) Propionitrile Tallow nitrile
38. Carbon Disulfide	Carbon disulfide
39. Sulfolane	Sulfolane
40. Glycol Ethers	Alcohol (C9-C11) poly (2.5-9) ethoxylates Alcohol (C6-C17) (secondary) poly (3-6) ethoxylates Alcohol (C6-C17) (secondary) poly (7-12) ethoxylates Alcohol (C12-C16) poly (1-6) ethoxylates Alcohol (C12-C16) poly (7-19) ethoxylates Alcohol (C12-C16) poly (20+) ethoxylates Alkyl (C7-C11) phenol poly(4-12)ethoxylate Alkyl (C9-C15) phenyl propoxylate

Group	Cargo
	Diethylene glycol <sup>2</sup>
	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
	Dipropylene glycol methyl ether
	Ethoxy triglycol
	Ethylene glycol hexyl ether
	Ethylene glycol methyl butyl ether
	Ethylene glycol monoalkyl ethers
	Ethylene glycol tert-butyl ether
	Ethylene glycol butyl ether
	Ethylene glycol dibutyl ether
	Ethylene glycol ethyl ether
	Ethylene glycol isopropyl ether
	Ethylene glycol methyl ether
	Ethylene glycol phenyl ether
	Ethylene glycol phenyl ether, Diethylene glycol phenyl ether mixture
	Ethylene glycol propyl ether
	Glucitol/glycerol blend propoxylated (containing less than 10% amines)
	Glycerol, ethoxylated
	Glycerol, propoxylated
	Glycerol, propoxylated and ethoxylated
	Glycerol/Sucrose blend propoxylated and ethoxylated
	Hexaethylene glycol
	alpha-Hydro-omega-hydroxytetradeca (oxytetramethylene)
	Methoxy triglycol
	Nonyl phenol poly(4+)ethoxylates
	Pentaethylene glycol methyl ether
	Polyalkylene glycol butyl ether
	Polyalkylene glycols, Polyalkylene glycol monoalkyl ethers mixtures
	Polyether glycol (MW 600-700) (TETRAETHANE 650)
	Polyether glycol (MW 950-1050) (TETRAETHANE 1000)
	Polyether glycol (MW 1350-1450) (TETRAETHANE 1400)
	Polyether glycol (MW 1900-2100) (TETRAETHANE 2000)
	Polyether glycol (MW 2825-2975) (TETRAETHANE 2900)

Group	Cargo
	Polyethylene glycols Polyethylene glycol dimethyl ether Poly(ethylene glycol) methylbutenyl ether (MW>1000) Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether Poly(2-8)alkylene glycol monoalkyl(C1–C6) ether acetate Polyethylene glycol monoalkyl ether Polypropylene glycol methyl ether Polypropylene glycols Poly(tetramethylene ether) glycols (MW 950–1050) Polytetramethylene ether glycol n-Propoxypropanol Propylene glycol monoalkyl ether Propylene glycol ethyl ether Propylene glycol methyl ether Propylene glycol n-butyl ether Propylene glycol phenyl ether Propylene glycol propyl ether Tetraethylene glycol Tetraethylene glycol methyl ether Triethylene glycol Triethylene glycol butyl ether Triethylene glycol butyl ether mixture Triethylene glycol ether mixture Triethylene glycol ethyl ether Triethylene glycol methyl ether Tripropylene glycol Tripropylene glycol methyl ether
41. Ethers	Alcohol (C12-C13, branched and linear) poly (4-8) propoxy sulfates, sodium salt 25-30% solution Alkaryl polyether (C9–C20) tert-Amyl methyl ether Brominated Epoxy Resin in Acetone Butyl ether n-Butyl ether-Dichloroethyl ether 2,2'-Dichloroisopropyl ether Diethyl ether Diethylene glycol propyl ether Diglycidyl ether of Bisphenol A Diglycidyl ether of Bisphenol F Dimethyl furan 1,4-Dioxane Diphenyl ether Diphenyl ether, Diphenyl phenyl ether mixture Ethyl tert-butyl ether Ethyl ether Isopropyl ether

Group	Cargo
	Long chain alkaryl polyether (C11–C20) Methyl-tert-butyl ether <sup>2</sup> Methyl tert-pentyl ether Polyether (molecular weight 2000+) Polyether, borated Polyether polyols Poly(oxyalkylene)alkenyl ether (MW > 1000) Polyoxybutylene alcohol Propyl ether Tetrahydrofuran 1,3, 5-Trioxane
42. Nitrocompounds	o-Chloronitrobenzene Dinitrotoluene Nitrobenzene Nitroethane Nitroethane (80%)/Nitropropane (20%) Nitroethane, 1-Nitropropane mixture Nitropropane Nitropropane, Nitroethane mixtures Nitrophenol (mixed isomers) o- or p-Nitrotoluenes
43. Miscellaneous Water Solutions	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 (C8-C10) polyglucoside solution (65% or less) Alkyl (C12-C14) polyglucoside solution (55% or less) Alkyl polyglucoside solutions Aluminum hydroxide, sodium hydroxide, sodium carbonate solution (40% or less) Aluminum sulfate solution <sup>2</sup> 2-Amino-2-hydroxymethyl-1,3-propanediol solution Ammonium bisulfite solution <sup>2</sup> Ammonium chloride solution (less than 25%) drilling brines Ammonium chloride solution (less than 25%) Ammonium lignosulfonate solution Ammonium nitrate, Urea solution (not containing Ammonia) Ammonium polyphosphate solution Ammonium sulfate solution Ammonium thiosulfate solution (60% or less) Barium sulfate slurry Calcium bromide solution Calcium chloride solution

Group	Cargo
	Calcium formate solution
	Calcium lignosulfonate solution
	Calcium lignosulfonate solution (free alkali content 1% or less)
	Caramel solutions
	Clay slurry
	Coal slurry
	Corn syrup
	Dextrose solution
	2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution
	2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution <sup>2</sup>
	Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid solution
	Diethylenetriamine pentaacetic acid, pentasodium salt solution
	Dodecyl diphenyl ether disulfonate solution
	Drilling brine (containing Calcium, Potassium, or Sodium salts)
	Drilling brine (containing Zinc salts)
	Drilling brines, including: Calcium bromide solution, Calcium chloride solution and Sodium chloride solution
	Drilling mud (low toxicity) ( <i>if non-flammable or non-combustible</i> )
	Ethylenediaminetetracetic acid, tetrasodium salt solution
	Ethylene-Vinyl acetate copolymer emulsion
	Ferric hydroxyethylethylenediamine triacetic acid, trisodium salt solution <sup>2</sup>
	Ferrous chloride solution (less than 40%, containing less than 10% Manganese and Aluminum chlorides)
	Fish solubles ( <i>water based fish meal extracts</i> )
	Fructose solution
	Fumaric adduct of Rosin, water dispersion
	Hexamethylenediamine adipate solution
	N-(Hydroxyethyl)ethylene diamine triacetic acid, trisodium salt solution
	Kaolin clay slurry
	Latex: Carboxylated Styrene-Butadiene copolymer; Styrene-butadiene rubber
	Latex, liquid synthetic
	Lignin liquor
	Ligninsulfonic acid, magnesium salt solution
	Liquid Streptomyces solubles
	L-Lysine solution (60% or less)
	Magnesium nitrate solution (66.7%)
	N-Methylglucamine solution
	N-Methylglucamine solution (70% or less)
	Naphthenic acid, sodium salt solution
	Polyacrylic acid solution (40% or less)
	Potassium chloride solution
	Potassium chloride solution (less than 26%)

Group	Cargo
	Potassium thiosulfate solution Potassium thiosulfate solution (50% or less) Rosin soap (disproportionated) solution Sewage sludge, treated Sodium alkyl sulfonate solution Sodium bromide solution (less than 50%) Sodium hydrogen sulfite solution Sodium lignosulfonate solution Sodium polyacrylate solution <sup>2</sup> Sodium salt of Ferric hydroxyethylethylenediamine triacetic acid solution Sodium silicate solution <sup>2</sup> Sodium sulfide solution Sodium sulfite solution Sodium sulfite solution (25% or less) Sodium tartrates, Sodium succinates solution Sulfonated polyacrylate solutions <sup>2</sup> Tall oil soap (disproportionated) solution Tetrasodium salt of EDTA solution Titanium dioxide slurry Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution Urea, Ammonium nitrate solution (not containing Ammonia) Urea, Ammonium phosphate solution Urea solution Vegetable protein solution (hydrolysed) Water

NOTES

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

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

6. Revise Appendix I to part 150 to read as follows:

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

<b>Member of reactive group</b>	<b>Compatible with</b>
Acetone (18)	Diethylenetriamine (7)
Acetone cyanohydrin (0)	Acetic acid (4)
Acrylonitrile (15)	Triethanolamine (8)
n-Butyl alcohol (20)	Caustic Potash (50% or less)
1,3-Butylene glycol (20)	Morpholine (7)
1,4-Butylene glycol (20)	Ethylamine (7) Triethanolamine (8)
gamma-Butyrolactone (0)	N-Methyl-2-pyrrolidone (9)
Caustic potash, 50% or less (5)	Isobutyl alcohol (20) Ethyl alcohol (20) n-Butyl alcohol (20)
	Ethylene glycol (20)
	Isopropyl alcohol (20)
	Methyl alcohol (20)
	iso-Octyl alcohol (20)
	Propylene glycol (20)
Caustic soda, 50% or less (5)	Acrylonitrile/Styrene copolymer dispersion in Polyether polyol (20) iso-Butyl alcohol (20)
	Butyl alcohol (20) tert-Butyl alcohol, Methanol mixtures Decyl alcohol (20)
	Cetyl alcohol (20)
	Alcohol (C12–C16) poly(1-6)ethoxylates) (20)
	iso-Decyl alcohol (20)
	Diacetone alcohol (20)
	Diethylene glycol (40)
	Dodecyl alcohol (20)
	Ethyl alcohol (20)
	Ethyl alcohol (40%, whiskey) (20)
	Ethylene glycol (20)

<b>Member of reactive group</b>	<b>Compatible with</b>
	Ethylene glycol, Diethylene glycol mixture (20)
	Ethyl hexanol (Octyl alcohol) (20)
	Methyl alcohol (20)
	Nonyl alcohol (20)
	iso-Decyl alcohol (20)
	iso-Nonyl alcohol (20)
	Propyl alcohol (20)
	iso-Propyl alcohol (20)
	Propylene glycol (20)
	Sodium chlorate solution (0)
	iso-Tridecanol (20)
1,1-Dichloroethane (36)	Dimethyl disulfide (0)
Dimethyl disulfide (0)	Acetic acid (4)
	Acetic anhydride (11)
	Acetone (18)
	Acrylates (14)
	Acrylic acid (4)
	Alcohols, Glycols (20)
	Aromatic hydrocarbons (32)
	Benzene (32)
	Cyclohexanone (18)
	Diisononyl phthalate (34)
	Esters (34)
	Ethyl acetate (34)
	Ethyl acrylate (14)
	Ethyl dichloride (36) [1,1-Dichloroethane]
	Ethylene cyanohydrin (20)
	Ethylene glycol ethyl ether acetate (34) [2-Ethoxyethyl acetate]

<b>Member of reactive group</b>	<b>Compatible with</b>
	Formic acid (4)
	Halogenated hydrocarbons (36)
	Ketones (18)
	Mesityl oxide, Methyl ethyl ketone (18)
	Octene, Olefins (30)
	Organic acids (4)
	Organic anhydrides (11)
	Paraffins (31)
	Phenol (21)
	Phenols, Cresols (21)
	Trichloroethylene (36)
Diphenylmethane diisocyanate (12)	Perchloroethylene (36)
	Dichloromethane (36)
	2,2-Dimethylpropane-1,3-diol (20)
	Polypropylene glycol (40)
	Trichloroethylene (36)
tert-Dodecanethiol (0)	Acetone (18)
	Acrylonitrile (15)
	2-Butoxyethanol (20)
	n-Butyl acrylate (14)
	Caustic soda solution (50%) (5)
	Chloroform (36)
	iso-Decyl alcohol (20)
	Dichloromethane (36)
	Diglycidyl ether of Bisphenol A (41)
	Diisodecyl phthalate (34)
	Diglycidyl ether of Bisphenol A (41)
	Dichloromethane (36)

<b>Member of reactive group</b>	<b>Compatible with</b>
	Diisodecyl phthalate (DIDP) (34)
	Dipropylene glycol (40)
	Epichlorohydrin (17)
	Ethyl acrylate (14)
	Methanol (20)
	Methyl ethyl ketone (18)
	Naphtha, Solvent (33)
	iso-Nonyl alcohol (20)
	Perchloroethylene (36)
	iso-Propyl alcohol (20)
	iso-Propylamine solution (70%) (7)
	Propylene glycol methyl ether (40)
	Propylene glycol methyl ether acetate (34)
	Tall oil, crude (34)
	Toluene (32)
	Toluene diisocyanate (TDI) (12)
	White mineral oil (Carnation oil) (33)
Dodecyl and Tetradecylamine mixture (7)	Tall oil, fatty acid (34)
Ethylenediamine (7)	Butyl alcohol (20)
	tert-Butyl alcohol (20)
	Butylene glycol (20)
	Creosote (21)
	Diethylene glycol (40)
	Ethyl alcohol (20)
	Ethylene glycol (20)
	Ethyl hexanol (20)
	Fatty alcohols (C12–C14)

<b>Member of reactive group</b>	<b>Compatible with</b>
	Glycerine (20)
	Isononyl alcohol (20)
	Isophorone (18)
	Methyl butyl ketone (18)
	Methyl iso-butyl ketone (18)
	Methyl ethyl ketone (18)
	Propyl alcohol (20)
	Propylene glycol (20)
Lactic acid (0)	Acetic acid (4)
	Benzene (32)
	Ethanol (20)
	Polypropylene glycol (40)
	Vinyl acetate (13)
Oleum (0)	Hexane (31)
	Dichloromethane (36)
	Perchloroethylene (36)
1,2-Propylene glycol (20)	Diethylenetriamine (7)
	Polyethylene polyamines (7)
	Triethylenetetramine (7)
Sodium cresylate as Cresylate spent caustic (5)	Methyl alcohol (20)
Sodium dichromate, 70% (0)	Methyl alcohol (20)
Sodium dichromate, 69% (0)	1-Hexene (30)
Sodium hydrogen sulfide solution (5)	iso-Propyl alcohol (20)
Sodium hydrosulfide solution (5)	Methyl alcohol (20)

<b>Member of reactive group</b>	<b>Compatible with</b>
	Iso-Propyl alcohol (20)
Sulfuric acid (2)	Coconut oil (34)
	Coconut oil acid (34)
	Palm oil (34)
	Tallow (34)
Sulfuric acid, 98% or less (2)	Choice white grease tallow (34)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Fatty acids, essentially linear, C6–C18, 2-ethylhexyl ester (4) is not compatible with Group 3, Nitric acid.

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

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

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

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

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

1,6-Hexanediol distillation overheads (4) is not compatible with Group 3, Nitric acid, and Group 9, Aromatic amines.

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

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

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

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

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

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

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

Nitroethane, 1-Nitropropane (each 15% or more) mixture (42) is not compatible with Group 7, Aliphatic amines, Group 8, Alkanol amines, and Group 9, Aromatic amines.

Nitropropane (20%), nitroethane (80%) mixture (42) is not compatible with Group 7 (Aliphatic amines), Group 8 (Alkanol amines), and Group 9 (Aromatic amines).

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

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

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

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

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

Polyglycerine, Sodium salts solution (20) is not compatible with Groups 1, 4, 11, 16, 17, 19, 21 and 22.

Propylene, Propane, MAPP gas mixture (containing 12% or less MAPP gas) (30) is not compatible with Group 1 (Non-oxidizing mineral acids), Group 36 (Halogenated hydrocarbons), nitrogen dioxide, oxidizing materials, or molten sulfur.

Sodium acetate, Glycol, Water mixture (1% or less Sodium hydroxide) (34) is not compatible with Group 12 (Isocyanates).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### PART 153—SHIPS CARRYING BULK LIQUID, LIQUEFIED GAS, OR COMPRESSED GAS HAZARDOUS MATERIALS

7. The authority citation for part 153 continues to read as follows:

Authority: 46 U.S.C. 3703; Department of Homeland Security Delegation No. 0170.1. Section 153.40 issued under 49 U.S.C. 5103. Sections 153.470 through 153.491, 153.1100 through 153.1132, and 153.1600 through 153.1608 also issued under 33 U.S.C. 1903 (b).

8. Revise Table 2 to part 153 to read as follows:

#### TABLE 2 TO PART 153—CARGOES NOT REGULATED UNDER SUBCHAPTERS D OR O OF THIS CHAPTER WHEN CARRIED IN BULK ON NON-OCEANGOING BARGES

The cargoes listed in this table are not regulated under subchapter D or O of this title when carried in bulk on non-oceangoing barges. Category X, Y, or Z noxious liquid substance (NLS) cargo, as defined in Annex II of MARPOL 73/78, listed in this table, or any mixture containing one or more of these cargoes, must be carried under this subchapter if carried in bulk on an oceangoing ship.

Cargoes	Pollution Category
Acrylic acid / ethenesulfonic acid copolymer with phosphonate groups, sodium salt solution*	Z
Aluminum sulfate solution*	Y
2-Amino-2-hydroxymethyl-1,3-propanediol solution	#
Ammonium hydrogen phosphate solution	Z
Ammonium lignosulfonate solutions, <i>see also</i> Lignin liquor	Z
Ammonium nitrate solution (45% or less)	#
Ammonium phosphate, urea solution, <i>see also</i> Urea, Ammonium phosphate solution	#
Ammonium polyphosphate solution	Z
Ammonium sulfate solution	Z
Ammonium thiosulfate solution (60% or less)	Z
Apple juice	OS
Calcium bromide solution	Z
Calcium carbonate slurry	OS
Calcium chloride solution	Z
Calcium hydroxide slurry	Z
Calcium lignosulfonate solution, <i>see also</i> Lignin liquor	Z
Calcium nitrate solutions (50% or less)*	Z
Calcium nitrate/Magnesium nitrate/Potassium chloride solution	Z
Caramel solutions	#
Chlorinated paraffins (C14–C17) (with 50% Chlorine or more, and less than 1% C13 or shorter chains)*	X
Chlorinated paraffins (C14–C17) (with 52% Chlorine)	#
2-Chloro-4-ethylamino-6-isopropylamino-5-triazine solution	#
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution*	Y
Choline chloride solutions	Z
Clay slurry	OS
Coal slurry	OS

Cargoes	Pollution Category
<i>Dextrose solution, see Glucose solution</i>	.....
Diethylenetriamine pentaacetic acid, pentasodium salt solution	Z
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution	#
Dodecenylsuccinic acid, dipotassium salt solution	#
Drilling brine (containing Calcium, Potassium ,or Sodium salts) ( <i>see also Potassium chloride solution (10% or more)</i> )	#
Drilling brines, including: Calcium bromide solution, Calcium chloride solution and Sodium chloride solution (if non-flammable and non-combustible)	Z
Drilling brines (containing Zinc salts)	X
Drilling mud (low toxicity) (if non-flammable and non-combustible)	#
Ethylene-Vinyl acetate copolymer (emulsion)	Y
Ferric hydroxyethylethylenediamine triacetic acid, trisodium salt solution	#
Fish solubles (water based fish meal extracts)	#
Fructose solution	#
Glucose solution	OS
Glycine, Sodium salt solution	Z
Glyphosate solution (not containing surfactant)*	Y
Hexamethylenediamine adipate solution	#
Hexamethylenediamine adipate (50% in water)	Z
N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution	Y
Kaolin clay solution	#
Kaolin slurry	OS
Kraft pulping liquor (free alkali content, 1% or less) <i>including: Black, Green, or White liquor</i>	#
Lignin liquor (free alkali content, 1% or less)	Z
<i>including:</i>	
Ammonium lignosulfonate solutions	Z
Calcium lignosulfonate solutions	Z
Sodium lignosulfonate solution	Z

Cargoes	Pollution Category
Ligninsulfonic acid, Sodium salt solution	Z
Magnesium chloride solution	Z
Magnesium hydroxide slurry	Z
Magnesium sulfonate solution	#
Maltitol solution*	OS
Microsilica slurry*	OS
Milk	#
Molasses	OS
Molasses residue (from fermentation)	#
Naphthalenesulfonic acid-Formaldehyde copolymer, sodium salt solution	Z
Naphthenic acid, sodium salt solution	#
Nitritotriacetic acid, trisodium salt solution*	Y
Noxious liquid, NF, (1) n.o.s. (“trade name” contains “principle components”) ST 1, Cat X (if non-flammable and non-combustible)	X
Noxious liquid, NF, (3) n.o.s. (“trade name” contains “principle components”) ST 2, Cat X (if non-flammable and non-combustible)	X
Noxious liquid, NF, (5) n.o.s. (“trade name” contains “principle components”) ST 2, Cat Y (if non-flammable and non-combustible)	Y
Noxious liquid, NF, (7) n.o.s. (“trade name” contains “principle components”) ST 3, Cat Y (if non-flammable and non-combustible)	Y
Noxious liquid, NF, (9) n.o.s. (“trade name” contains “principle components”) ST 3, Cat Z (if non-flammable and non-combustible)	Z
Noxious liquid, NF, (11) n.o.s. (“trade name” contains “principle components”) Cat Z (if non-flammable and non-combustible)	Z
Noxious liquid, NF, (12) n.o.s. (“trade name” contains “principle components”) Cat OS (if non-flammable and non-combustible)	OS
Orange juice (concentrated)*	OS
Orange juice (not concentrated)*	OS
<i>Pentasodium salt of Diethylenetriamine pentaacetic acid solution, see Diethylenetriamine pentaacetic acid, pentasodium salt solution</i>	.....
Polyaluminum chloride solution	Z

Cargoes	Pollution Category
<i>Potassium chloride solution (26% or more), see Drilling brines, including: Calcium bromide solution, Calcium chloride solution and Sodium chloride solution</i>	.....
Potassium chloride solution (less than 26%)*	OS
Potassium formate solutions*	Z
Potassium thiosulfate (50% or less)*	Y
Sewage sludge, treated ( <i>treated so as to pose no additional decompositional and fire hazard; stable, non-corrosive, non-toxic, non-flammable</i> )	#
Silica slurry	#
Sludge, treated ( <i>treated so as to pose no additional decompositional and fire hazard; stable, non-corrosive, non-toxic, non-flammable</i> )	#
Sodium acetate, Glycol, Water mixture (containing 1% or less Sodium hydroxide) (if non-flammable or non-combustible)	#
Sodium acetate solutions	Z
Sodium alkyl (C14–C17) sulfonates (60-65% solution)*	Y
Sodium aluminosilicate slurry	Z
Sodium bicarbonate solution (less than 10%)*	OS
Sodium carbonate solution	Z
Sodium hydrogen sulfide (6% or less)/Sodium carbonate (3% or less) solution*	Z
Sodium lignosulfonate solution, <i>see also</i> Lignin liquor	Z
<i>Sodium naphthenate solution (free alkali content, 3% or less), see Naphthenic acid, sodium salt solution</i>	.....
Sodium poly(4+)acrylate solutions	Z
Sodium silicate solution	Y
Sodium sulfate solutions	Z
Sodium sulfite solution (25% or less)*	Y
Sodium thiocyanate solution (56% or less)*	Y
Sorbitol solution	OS
Sulfonated polyacrylate solution	Z
<i>Tetrasodium salt of Ethylenediaminetetraacetic acid solution, see</i>	.....

Cargoes	Pollution Category
Ethylenediaminetetraacetic acid, tetrasodium salt solution	
Titanium dioxide slurry	Z
1,1,1-Trichloroethane	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Y
<i>Trisodium salt of N-(Hydroxyethyl)ethylenediamine triacetic acid solution, see N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution.</i>	.....
Urea, Ammonium mono-and di-hydrogen phosphate, Potassium chloride solution	#
Urea/Ammonium nitrate solution*	Z
Urea/Ammonium phosphate solution	Y
Urea solution	Z
Vanillan black liquor (free alkali content, 1% or less)	#
Vegetable protein solution (hydrolyzed) (if non-flammable and non-combustible)	OS
Water	OS
<i>Zinc bromide, Calcium bromide solution, see Drilling brines (containing Zinc salts)</i>	.....

Explanation of Symbols Used in this Table:

X, Y, Z—NLS Category of Annex II of MARPOL 73/78.

#—No determination of NLS status. For shipping on an oceangoing vessel, see 46 CFR 153.900(c).

OS—Other substances, at present considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning or deballasting operations.

Abbreviations for Noxious Liquid Cargoes Used In This Table:

Cat—Pollution category.

NF—Non-flammable (flash point greater than 60 degrees C (140 degrees F) cc).

n.o.s.—Not otherwise specified.

ST—Ship type.

\*—From the March 2012 Annex to the 2007 IBC Code.

Dated: August 6, 2013

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