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DEPARTMENT OF HOMELAND SECURITY

Coast Guard

46 CFR Parts 30 and 150

[Docket No. USCG-2022-0327]

RIN 1625-AC73

2022 Liquid Chemical Categorization Updates

AGENCY: Coast Guard, DHS.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Coast Guard is proposing to align the Liquid Chemical Categorization tables with the 2020 Edition of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the International Maritime Organization's Marine Environment Protection Committee's Circular 25. The updated tables would provide a list of the liquid hazardous materials and liquefied and compressed gases approved for international and domestic maritime transportation, and indicate how each substance is categorized by its pollution potential, safe carriage requirements, chemical flammability, combustibility, and compatibility with other substances. This proposed rule would impose no additional costs to chemical shippers or vessel owners.

DATES: Comments and related material must be received by the Coast Guard on or before **[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may submit comments identified by docket number USCG-2022-0327 using the Federal eRulemaking Portal at https://www.regulations.gov. See the "Public Participation and Request for Comments" portion of the **SUPPLEMENTARY INFORMATION** section for further instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: For information about this document call or email Dr. Raghunath Halder, U.S. Coast Guard Hazardous Materials Division (CG-ENG-5); telephone 202-372-1422, email Raghunath.Halder@uscg.mil, or Lieutenant Commander Daniel Velez, CG-ENG-5; telephone 202-372-1419, email Daniel.Velez@uscg.mil.

SUPPLEMENTARY INFORMATION:

Table of Contents for Preamble

I. Public Participation and Request for Comments

The Coast Guard views public participation as essential to effective rulemaking,

and will consider all comments and material received during the comment period. Your comment can help shape the outcome of this rulemaking. If you submit a comment, please include the docket number for this rulemaking, indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation.

Submitting comments. We encourage you to submit comments through the Federal Decision Making Portal at https://www.regulations.gov. To do so, go to https://www.regulations.gov, type USCG-2022-0327 in the search box and click "Search." Next, look for this document in the **Search Results** column, and click on it. Then click on the **Comment** option. If you cannot submit your material by using https://www.regulations.gov, call or email the person in the **FOR FURTHER INFORMATION CONTACT** section of this proposed rule for alternate instructions.

Viewing material in docket. To view documents mentioned in this proposed rule as being available in the docket, find the docket as described in the previous paragraph, and then select "Supporting & Related Material" in the Document Type column. Public comments will also be placed in our online docket and can be viewed by following instructions on the https://www.regulations.gov Frequently Asked Questions webpage. This webpage also explains how to subscribe for email alerts that will notify you when comments are posted or if a final rule is published. We review all comments received, but we will only post comments that address the topic of the proposed rule. We may choose not to post off-topic, inappropriate, or duplicate comments that we receive.

Personal information. We accept anonymous comments. Comments we post to https://www.regulations.gov will include any personal information you have provided.

For more about privacy and submissions to the docket in response to this document, see DHS's eRulemaking System of Records notice (85 FR 14226, March 11, 2020).

We do not plan to hold a public meeting but we will consider doing so if we determine from public comments that a meeting would be helpful. We would issue a separate **Federal Register** notice to announce the date, time, and location of such a meeting.

II. Abbreviations

CAS RN	CAS Registry Number
CFR	Code of Federal Regulations
CG-ENG-5	U.S. Coast Guard Hazardous Materials Division
DHS	Department of Homeland Security
FR	*Federal Register*
IBC Code	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
LCC	Liquid Chemical Categorization
IMO	International Maritime Organization
MEPC	International Maritime Organization's Marine Environment Protection Committee
MEPC.2/Circ.25	MEPC Resolution number 2, Circular 25, dated December 1, 2019
NPRM	Notice of proposed rulemaking
OMB	Office of Management and Budget
§	Section
U.S.C.	United States Code

III. Basis and Purpose

The Coast Guard is tasked by Congress with promulgating regulations to improve the shipping practices in the United States. In order to improve the safety in the shipping and handling of hazardous liquid chemicals, since 1983 the Coast Guard has published tables and lists of chemicals that are safe to ship together, and others that are incompatible for co-storage or shipping.

The legal basis of this rulemaking is title 46 of the United States Code (U.S.C.), Section 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 (Administration and enforcement, regulations to implement the International Convention for the Prevention of Pollution from Ships, 1973, or "MARPOL"), 46 U.S.C. 2103 (Superintendence of the merchant marine, general merchant marine regulatory authority), and 46 U.S.C. 3306 (Regulations, 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 the Department of Homeland Security (DHS) Delegation 00170.1, Revision No. 01.2, paragraphs (II)(92)(a) and 92(b).

The purpose of this rulemaking is to provide additions and updates to those regulatory tables that list liquid hazardous materials, liquefied gases, and compressed gases that have been approved for maritime transportation in bulk, and to indicate how each cargo is categorized by its pollution risk and safe carriage requirements.

IV. Background

Each December, the International Maritime Organization's (IMO) Marine Environment Protection Committee (MEPC) releases an annual circular that lists cargoes for which it has completed a multi-year review. A cargo is listed in the circular if a tripartite agreement approves it for international bulk maritime transportation and the MEPC validates the approval. The International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) is periodically revised by parties to the IBC Code to include the cargoes listed in the MEPC annual circulars as of the last edition of the Code.

The Coast Guard, as the administrator of regulations that control liquid chemical shipping practices, has endeavored to update these regulations in order to keep the CFR aligned with international standards. The last time the Coast Guard updated these regulations was in an April 17, 2020 final rule entitled 2013 Liquid Chemical Categorization Updates (85 FR 21660).[1] This proposed rulemaking is the next in a planned series of rulemakings that will periodically update the Code of Federal Regulations (CFR) to align with the latest updates of the IBC Code. The Coast Guard is proposing to align the Liquid Chemical Categorization tables with the 2020 Edition of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk and the International Maritime Organization's Marine Environment Protection Committee's Circular 25, dated December 1, 2019 and entered into force January 1, 2021.

V. Discussion of Proposed Rule

Coast Guard regulations in 46 CFR subchapters D (Tank vessels, parts 30 through 40) and O (Certain bulk dangerous cargoes, parts 150 through 155) contain requirements for ensuring the safe maritime carriage (transportation) of certain bulk liquid cargoes. Tables in subchapters D and O list the cargoes that have been approved for maritime carriage. The tables also categorize each cargo's pollution-hazard risk and safe carriage requirements. The categories are developed in the course of the Coast Guard's and the IMO's assessment and review processes, which are described in the following paragraphs. This information is of value to vessel owners and operators, and to shippers

[1] The Coast Guard corrected minor typographical errors in a correcting amendments document effective May 18, 2020 and entitled 2013 Liquid Chemical Categorization Updates; Correction (85 FR 27308). The Coast Guard corrected additional minor errors in a correcting amendments document effective August 5, 2021 and entitled 2013 Liquid Chemical Categorization Updates (86 FR 42738.

of the cargoes involved.

The proposed rule would update these tables to include new chemicals that have been developed by industry and assessed by the IMO between January 1, 2014 and January 1, 2021. In addition, the proposed rule would bring 46 CFR subchapters D and O into closer conformity with the IBC Code.

Agencies responsible for administering international treaties must agree on the new cargo's assessment before the cargo can be approved for transportation. This is done by a "tripartite agreement" entered into by the administrations of the exporting country, the importing country, and the country in which the ship that will carry the cargo is registered. The tripartite agreement categorizes the cargo's pollution-hazard risk, flammability, and combustibility in accordance with the IBC Code. A copy of the tripartite agreement is forwarded to the MEPC and to the administration of every country that is signatory to the IBC Code.

The Coast Guard is unique among IBC Code-signatory administrations because, in addition to the categorizations contained in the tripartite agreement, it also assigns each cargo to a "compatibility group." This grouping guides IBC signatories and shippers in determining which cargoes cannot safely be shipped with other cargoes in adjacent tanks, without special precautions. The compatibility groupings are informed by chemical analyses and test data submitted by manufacturers.

Upon receipt of a tripartite agreement, the MEPC conducts its own multi-year review and assessment of the information contained in the tripartite agreement, and, following that review, either validates or modifies the agreement's information. Our tables also reflect any modifications resulting from this IMO assessment.

Each December, the MEPC releases a circular listing each new cargo for which it has completed its review of the cargo's tripartite agreement. The circular lists the countries that have approved international maritime transportation of each new cargo, and provides information about each cargo's pollution-hazard risk and flammability and combustibility. Thus, if a tripartite agreement has approved a cargo for international bulk maritime transportation and the MEPC validates or modifies that information, eventually it will be listed in the MEPC circular. Periodically, the IBC Code is revised to incorporate the cargoes listed in the MEPC's annual circulars since the last edition of the IBC Code.

This proposed rule is designed to bring the following tables in 46 CFR into conformity with the 2020 Edition of the IBC Code and IMO Resolutions MSC.460(101) and MEPC.318(74) issued on June 14 and May 17, 2019, respectively:

- Table 30.25-1, List of Flammable and Combustible Bulk Liquid Cargoes;
- Table 1 to part 150, Alphabetical List of Cargoes, in subchapter O;
- Table 2 to part 150, Grouping of Cargoes, in subchapter O; and
- Appendix I to part 150, Exceptions to the Chart, in subchapter O.

Table 30.25-1 lists flammable or combustible cargoes that, when transported in bulk, must be certificated under subchapter D regulations. We propose to add chemicals contained in Table 1 to part 150 that are flammable or combustible.

Table 1 to part 150 is a comprehensive table that includes all the cargoes that are subject to the regulations in subchapter D. It lists these cargoes alphabetically and lists the chemical compatibility group number assigned to each cargo. We propose to include cargoes that have been approved for shipping by the IBC Code and MEPC Resolution

number 2, Circular 25, dated December 1, 2019 (MEPC.2/Circ.25).

Table 2 to part 150 contains the proper shipping names of all the cargoes listed in Table 1, sorted by chemical compatibility group numbers instead of listed alphabetically. We propose to align Table 2 with Table 1 to part 150 and include cargoes that have been approved for shipping by the IBC Code and MEPC.2/Circ.25.

Appendix I to part 150 contains cargoes listed in Tables 1 and 2 to part 150 that have positive chemical compatibility exceptions. To illustrate, consider the following: cargoes in group X and cargoes in group Y are generally incompatible for co-shipping. However, there is one cargo in group X and one cargo in group Y that, for whatever reason, can be shipped together safely. This is an example of a positive chemical compatibility exception, and it would be listed in Appendix I so that stakeholders can maximize the efficiency of their shipping practices. We propose to update Appendix I to include cargoes from Tables 1 and 2 that have such positive exceptions.

To further illustrate how the chemical categorization tables work together: Appendix II to part 150 contains cargoes listed in Tables 1 and 2 that have negative chemical compatibility exceptions. Even if cargoes from hypothetical group X and group Y are generally compatible for co-shipping, there may be a particular chemical in group X that, when stored with a particular chemical from group Y, can react dangerously. This is an example of a negative chemical compatibility exception, and would be listed in Appendix II so that stakeholders can be sure to ship such cargoes safely. We propose no new changes to Appendix II to part 150.

In addition to the introduction of new chemicals into these tables, the Coast Guard proposes adding a new column to Table 1 of part 150 that will contain a CAS Registry

Number. CAS, a division of the non-profit American Chemical Society, designed the CAS Registry to prevent the frustration, delays, and safety concerns that can come with a convoluted system of identifying chemicals. A CAS Registry Number (RN) is a unique and unambiguous identifier for a specific substance that allows clear communication and links together all available data and research about that substance. Government agencies rely on CAS RNs for substance identification in regulatory applications because they are unique, easily validated, and internationally recognized. The addition of CAS RNs would make it easier to use the information, leading to safer shipping practices.

The proposed rule will also revise the authority citation to 46 CFR part 150 so that it will no longer cite to 44 U.S.C. 3507. This was done because that statute dictates the manner in which the Coast Guard can issue collections of information, rather than delegating authority to edit the CFR.

The Coast Guard considered proposing the removal of the CHRIS codes from the liquid chemical categorization tables. While we decided not to propose such a removal in this proposed rule, the Coast Guard would be interested in any public comments on the utility of CHRIS codes.

VI. Regulatory Analyses

We developed this proposed rule after considering numerous statutes and Executive orders related to rulemaking. A summary of our analyses based on these statutes and Executive orders follows.

A. Regulatory Planning and Review

Executive Orders 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 costs and benefits, reducing costs, harmonizing rules, and promoting flexibility.

The Office of Management and Budget (OMB) has not designated this proposed rule a significant regulatory action under section 3(f) of Executive Order 12866. A regulatory analysis follows.

Summary of Impacts of the Notice of Proposed Rulemaking (NPRM)

In this NPRM, the Coast Guard proposes incorporating information from MEPC.2/Circ.25 into the tables of subchapters D and O to conform the tables to these international standards. In subchapter D, we propose revising table 30.25-1; in subchapter O, we propose revising tables 1 and 2 and Appendix I to part 150. A summary of the impacts from the NPRM follows.

Category	Summary
Applicability	Revise Table 30.25-1 in subchapter D, and Tables 1 and 2 and Appendix I to part 150 in subchapter O to align with the IBC Code and MEPC.2/Circ.25.
Affected Population	All U.S.- and foreign-flagged tank vessels when in U.S. waters
Costs to Industry	No estimated costs to private industry.
Costs to the Federal Government	No estimated costs to the Federal Government.
Qualitative Benefits	Creates consistency with current international standards by incorporating the changes to the IBC Code. Reduces confusion by clarifying regulatory requirements and makes the updated chemical information easier to use.

Affected Population

This proposed rule updates the Liquid Chemical Categorization (LCC) tables that list the names, pollution risk categorization, safe carriage requirements, chemical flammability, combustibility, and chemical compatibility of each hazardous liquid chemical that has been categorized and approved for maritime transportation in bulk by the IMO and the Coast Guard. In this proposed rule, the Coast Guard is making no new decisions about whether any specific liquid bulk dangerous cargo should be approved for maritime transportation, about how any specific cargo should be categorized, or about carriage requirements that should apply to any specific cargo. The rule would provide updated information about cargoes that are currently approved for maritime transportation in bulk, and the cargo's pollution categorization and minimum transportation safety requirements. The rule would also add a column to Table 1 of part 150 containing the applicable CAS RNs. This proposed rule would apply to the carriage of the cargoes from the tank vessel population described in 46 CFR 30.01–5, 150.110 (with exceptions outlined in 46 U.S.C. 3702), 153.1, and 154.5. All U.S.- and foreign-flagged tank vessels are included, unless exempted by 46 CFR 30.01–5 or 46 CFR 153.1. This proposed rule would also apply to U.S.- and foreign-flagged self-propelled bulk cargo-carrying vessels when in U.S. waters. Foreign tank vessels are exempt from this proposed regulation when on innocent passage through U.S. waters.

Costs

This proposed rule would update the tables to reflect decisions already made under international law regarding which liquid chemical substances are approved for bulk maritime transportation, and how those substances should be categorized with respect to

their pollution risk. The Coast Guard already applies these standards when assessing ad hoc domestic carriage requests for bulk liquid chemicals. Vessel owners and shippers would have to comply with these standards to receive Coast Guard approval for carriage. Industry is aware of this procedure, and we believe that shippers already comply with these standards. Therefore, the Coast Guard does not expect that this proposed rule would change established shipping requirements or current practices among chemical shippers. No additional labor or equipment will be required because of this rule. As a result, we expect that there will be no incremental private sector costs to chemical shippers or vessel owners. Further, we do not anticipate that the proposed rule would impose any costs on the Coast Guard. This proposed rule incorporates the Coast Guard's compatibility categorizations, as well as chemical cargoes and categorizations listed in IMO's 2021 IBC Code amendments and MEPC.2/Circ.25.

Benefits

The proposed rule would provide qualitative benefits by conforming regulatory language to practices currently allowed by the Coast Guard, either through individual letters of approval from the Hazardous Materials Division (CG-ENG-5) or the IBC Code. In updating the LCC tables, the Coast Guard would align the domestic shipping requirements for liquid bulk dangerous cargoes with current international standards. Coast Guard expects this proposed rule to serve the public through greater clarity regarding the regulatory requirements in the LCC tables and through easier use of chemical safety information. This proposed rule would codify existing practices which would decrease confusion as to what are the regulatory requirements in the LCC tables.

B. Small Entities

Under the Regulatory Flexibility Act, 5 U.S.C. 601-612, we have considered whether this proposed 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.

There are no small shippers engaged in the transport of the LCC chemicals. In addition, the proposed rule does not impose economic costs on the regulated public. The Coast Guard does not expect that small entities would incur any incremental costs; therefore, the Coast Guard finds that there is not a substantial number of small entities nor a significant economic impact.

The Coast Guard certifies under 5 U.S.C. 605(b) that this proposed rule would not have a significant economic impact on a substantial number of small entities. If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this proposed rule would have a significant economic impact on it, please submit a comment to the docket at the address listed in the **ADDRESSES** section of this preamble. In your comment, explain why you think it qualifies and how and to what degree this proposed rule would economically affect it.

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 proposed rule so that they can better evaluate its effects on them and participate in the rulemaking. If the proposed rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for

compliance, please call or email the person in the **FOR FURTHER INFORMATION CONTACT** section of this proposed rule. The Coast Guard will not retaliate against small entities that question or complain about this proposed rule or any policy or action of the Coast Guard.

Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1-888-REG-FAIR (1-888-734-3247).

D. Collection of Information

This proposed rule would call for no new or revised collection of information under the Paperwork Reduction Act of 1995, 44 U.S.C. 3501-3520. This proposed rule simply would update and revise tables that list cargoes 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 Executive Order 13132 (Federalism) if it has a substantial direct effect on 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 proposed rule under Executive Order 13132 and have determined that it is consistent with the fundamental federalism

principles and preemption requirements described in Executive Order 13132. 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 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 the field foreclosed from regulation by the States. *See United States v. Locke,* 529 U.S. 89, 120 S.Ct. 1135 (2000). This proposed rule would amend existing regulations for inspected tank vessels carrying certain bulk dangerous cargoes. These cargoes fall within the categories in 46 U.S.C. section 3703 and 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 Executive Order 13132.

While it is well settled that States may not regulate in categories in which Congress intended the Coast Guard to be the sole source of a vessel's obligations, the Coast Guard recognizes the key role that State and local governments may have in making regulatory determinations. Additionally, for rules with federalism implications and preemptive effect, Executive Order 13132 specifically directs agencies to consult with State and local governments during the rulemaking process. If you believe this proposed rule would have implications for federalism under Executive Order 13132,

please call or email the person listed in the **FOR FURTHER INFORMATION CONTACT** section of this preamble.

F. Unfunded Mandates

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 million (adjusted for inflation) or more in any one year. Although this proposed rule would not result in such an expenditure, we do discuss the effects of this proposed rule elsewhere in this preamble.

G. Taking of Private Property

This proposed rule would not cause a taking of private property or otherwise have taking implications under Executive Order 12630 (Governmental Actions and Interference with Constitutionally Protected Property Rights).

H. Civil Justice Reform

This proposed rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, (Civil Justice Reform), to minimize litigation, eliminate ambiguity, and reduce burden.

I. Protection of Children

We have analyzed this proposed rule under Executive Order 13045 (Protection of Children from Environmental Health Risks and Safety Risks). This proposed rule is not an economically significant rule and would not create an environmental risk to health or risk to safety that might disproportionately affect children.

J. Indian Tribal Governments

This proposed rule does not have tribal implications under Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), because it would 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 proposed rule under Executive Order 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 order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

L. Technical Standards

The National Technology Transfer and Advancement Act, codified as a note to 15 U.S.C. 272, directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through 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 proposed rule does not use technical standards. It is based on international standards that were developed using consensus standards development processes.

M. Environment

We have analyzed this proposed rule under Department of Homeland Security Management Directive 023-01, Rev. 1, associated implementing instructions, and Environmental Planning COMDTINST 5090.1 (series), which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (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 Record of Environmental Consideration supporting this determination is available in the docket. For instructions on locating the docket, see the **ADDRESSES** section of this preamble.

This proposed rule would be categorically excluded under paragraphs L54 and L58 of Appendix A, Table 1 of DHS Instruction Manual 023–01–001–01, Rev. 1.[2] Paragraph L54 pertains to promulgation of regulations that are editorial or procedural; paragraph L58 pertains to regulations concerning equipment approval and carriage requirements. This proposed rule involves updates to the LCC tables in order to align them with the 2021 IBC Code amendments and MEPC.2/Circ.25. These tables provide a list of liquid hazardous material and liquefied and compressed gases that are approved for international and domestic maritime transportation, and indicate how each substance is categorized by its pollution potential, safe carriage requirements, chemical flammability, combustibility, and compatibility with other substances. All of these changes are consistent with the Coast Guard's maritime safety and stewardship missions. We seek any comments or information that may lead to the discovery of a significant

[2] *https://www.dhs.gov/sites/default/files/publications/DHS_Instruction%20Manual%20023-01-001-01%20Rev%2001_508%20Admin%20Rev.pdf.*

environmental impact from this proposed 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.

For the reasons discussed in the preamble, the Coast Guard is proposing to amend 46 CFR parts 30 and 150 as follows:

PART 30—GENERAL PROVISIONS

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

Authority: 46 U.S.C. 2103, 3306, 3703; DHS Delegation 00170.1, Revision No. 01.2, paragraph (II)(92)(a), 92(b).

2. In § 30.25-1, amend Table 30.25-1 as follows:

a. After the entry for "Alcohol (C9-C11) poly(2.5-9) ethoxylate", add an entry for "Alcohol (C10-C18) poly (7) ethoxylates";

b. After the entry for "Alkylbenzene sulfonic (alternately sulphonic) acid (4% or less)", add, in alphanumeric order, the entries, "Alkylbenzenes mixtures (containing naphthalene)" and "Alkyl/cyclo (C4-C5) alcohols";

c. After the entry for "*Alkyl phenol sulfide* (alternately *sulphide*) *(C8-C40), see* Alkyl (C8-C40) phenol sulfide (alternately sulphide)", add, in alphanumeric order, the

entries, “Alkylphenols (C10-C18, C12 rich)” and “Alkyl (C10-C15, C12 rich) phenol poly (4-12) ethoxylate”;

d. After the entry for “Cottonseed oil, fatty acid”, add an entry for “Cresol/Phenol/Xylenol mixture”;

e. After the entry for “Cyclohexane”, add an entry for “Cyclohexane-1, 2-dicarboxylic acid, diisononyl ester”;

f. After the entry for “Dodecene (all isomers)”, add an entry for “1-Dodecene”;

g. After the entry for “Dodecyl hydroxypropyl sulfide (alternately sulphide)”, add an entry for “n-Dodecyl mercaptan”;

h. After the entry for “Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture”, add, in alphanumeric order, the entries, “Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture” and “Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture”;

i. After the entry for “Gasoline (Natural gas condensate”, add an entry for “Glucitol/Glycerol blend propoxylated (containing less than 10% amines)”;

j. Remove the entry for “**Glucitol/glycerol blend propoxylated (containing 10% or more amines)**” and, in its place, add an entry for “**Glucitol/Glycerol blend propoxylated (containing 10% or more amines)**”;

k. After the entry for “*Hexaethylene glycol, see* Polyethylene glycol”, add an entry for “Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)”;

l. After the entry for “ Long-chain alkylphenate/Phenol sulfide (alternately sulphide) mixture”, add, in alphanumeric order, the entries, “Long-chain alkylphenol (C14-C18)” and “Long-chain alkylphenol (C18-C30)”;

m. After the entry for “Naphthenic acid “, add an entry for “Naphthalene crude (molten)”;

n. After the entry for “*Octyl phthalate, see* Dioctyl phthalate”, add, in alphanumeric order, the entries for “Offshore contaminated bulk liquid P”; and “Offshore contaminated bulk liquid S”;

o. Add an entry for “Oil, misc.:”, and, in alphanumeric order, add the subentries, “Used cooking oil” and “Used cooking oil (triglycerides, C16-C18 and C18 unsaturated)”;

p. After the entry for “Polyolefin amide alkeneamine polyol”, add an entry for “Polyolefin amine (C17+)”;

q. After the entry for “Raisin seed oil”, add an entry for “Rapeseed acid oil”;

r. After the entry for “**Rapeseed oil fatty acid methyl esters**”, remove the entry for “Rape seed oil fatty acid methyl esters*”;

s. After the entry for “*Undecylbenzene, see* Alkyl (C9+) benzenes”, add an entry for “Vegetable acid oils, n.o.s.” and a subentry for “Vegetable oil mixtures, containing less than 15% free fatty acid”; and

t. Under the entry for “Waxes”, add, in alphanumeric order, a subentry for “Hydrocarbon”.

The additions read as follows:

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

* * * * *

Table 30.25-1 – List of Flammable and Combustible Bulk Liquid Cargoes

[See NOTES at the end of this table for an explanation of symbols and terms used in this table. See Table 2, 46 CFR part 153, for additional cargoes that may be carried by a tank barge.]

Cargo Name	IMO Annex II pollution category
* * * * * * *	
Alcohol (C10-C18) poly (7) ethoxylates	Y
* * * * * * *	
Alkylbenzenes mixtures (containing naphthalene)	X
Alkyl/cyclo (C4-C5) alcohols	Y
* * * * * * *	
Alkylphenols (C10-C18, C12 rich);	Y
Alkyl (C10-C15, C12 rich) phenol poly (4-12)ethoxylate	Y
* * * * * * *	
Cresol/Phenol/Xylenol mixture	Y
* * * * * * *	
Cyclohexane-1,2-dicarboxylic acid, diisononyl ester	Y
* * * * * * *	
1-Dodecene	Y
* * * * * * *	
n-Dodecyl mercaptan	X
* * * * * * *	
Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture	Y
Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture	Z
* * * * * * *	
Glucitol/Glycerol blend propoxylated (containing less than 10% amines)	Y
Glucitol/Glycerol blend propoxylated (containing 10% or more amines)	**Z**
* * * * * * *	
Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)	Y
* * * * * * *	
Long-chain alkylphenol (C14-C18)	Y
Long-chain alkylphenol (C18-C30)	Y
* * * * * * *	
Naphthalene crude (molten)	Y
* * * * * * *	
Offshore contaminated bulk liquid P	X
Offshore contaminated bulk liquid S	X
* * * * * * *	
Oil, misc.: Used cooking oil	X

Used cooking oil (triglycerides, C16-C18 and C18 unsaturated)	Y
* * * * * * *	
Polyolefin amine (C17+)	Y
* * * * * * *	
Rapeseed acid oil	#
* * * * * * *	
Vegetable acid oils, n.o.s. Vegetable oil mixtures, containing less than 15% free fatty acid (m)	Y
* * * * * * *	
Waxes: * * * * * * * Hydrocarbon	Y
* * * * * * *	

PART 150—COMPATIBILITY OF CARGOES

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

Authority: 46 U.S.C. 3306, 3703; DHS Delegation No. 00170.1; Revision No. 01.2, paragraph (II), 92(b).

4. Revise Table 1 to part 150 to read as follows:

Table 1 to Part 150—Alphabetical List of Cargoes

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Acetaldehyde	19		75-07-0	AAD	
Acetic acid	4	2	64-19-7	AAC	
Acetic anhydride	11	2	108-24-7	ACA	
Acetochlor	10		34256-82-1	ACG	
Acetone	18	2	67-64-1	ACT	
Acetone cyanohydrin	0	1, 2	75-86-5	ACY	
Acetonitrile	37		75-05-8	ATN	
Acetonitrile (low purity grade)	37	3	75-05-8	AIL	
Acetophenone	18		98-86-2	ACP	
Acid oil mixture from soyabean, corn (maize) and sunflower oil refining, see Oil, misc.: Acid mixture from soyabean, corn (maize), and sunflower oil refining		3			AOM
Acrolein	19	2	107-02-8	ARL	
Acrylamide solution (50% or less)	10	3	79-06-1	AAM	AAO
Acrylic acid	4	2	79-10-7	ACR	
Acrylic acid/ethenesulfonic (alternately ethenesulphonic) acid copolymer with phosphonate groups, sodium salt solution	30	3		APG	
Acrylonitrile	15	2	107-13-1	ACN	
Acrylonitrile-Styrene copolymer dispersion in Polyether polyol	20		9003-54-7	ALE	
Adiponitrile	37		111-69-3	ADN	
Alachlor technical (90% or more)	33	3	15972-60-8	ALH	ALI
Alcohol (C12-C13, branched and linear) poly(4-8) propoxy sulfates (alternately sulphates), sodium salt 25-30% solution	41	3		ABL	
Alcohol (C9-C11) poly(2.5-9) ethoxylates	20	3	68439-46-3*	AET	ALY/APV/APW
Alcohol (C10-C18) poly (7) ethoxylates	20		85422-93-1	ALE	ALY/APV/APW

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Alcohol (C6-C17) (secondary) poly(3-6) ethoxylates	20	3	84133-50-6*	AEA	AEB
Alcohol (C6-C17) (secondary) poly(7-12) ethoxylates	20	3	84133-50-6*	AEB	AEA
Alcohol (C12-C16) poly(1-6) ethoxylates	20	3	68551-12-2*	AED	AET/ALY/APW
Alcohol (C12-C16) poly(7-19) ethoxylates	20	3	68551-12-2*	APV	AET/ALY/APV
Alcohol (C12-C16) poly(20+) ethoxylates	20	3	68551-12-2*	APW	AET/ALY
Alcohol (C12-C15) poly (. . .) ethoxylate, see Alcohol (C12-C16) poly (. . .) ethoxylate.			68131-39-2*		
Alcohol polyethoxylates	20		68439-50-9*		AEA/AEB/AED/AET/APV/APW
Alcohol polyethoxylates, secondary	20		84133-50-6*		AEA/AEB
Alcoholic beverages, n.o.s.	20	3	64-17-5	ABV	
Alcohols (C12+), primary, linear	20	3	112-53-8*	ASY	ALR/AYK/AYL
Alcohols (C8-C11), primary, linear, and essentially linear	20		111-87-5*	ALR	AYK/AYL
Alcohols (C12-C13), primary, linear, and essentially linear	20	3	112-53-8*	AYK	ALR/ASY/AYL
Alcohols (C14-C18), primary, linear, and essentially linear	20	3	112-72-1*	AYL	ALR/ASY/AYK
Alcohols (C13+)	20		112-70-9*	ALY	ASY/AYK
Including:					
Cetyl alcohol (Hexadecanol)	20		36653-82-4		
Oleyl alcohol (Octadecenol)	20		112-92-5		
Pentadecanol	20		629-76-5		
Tallow alcohol	20		99561-04-3		
Tetradecanol	20		112-72-1		
Tridecanol	20		112-70-9		
Alkanes (C10-C26), linear and branched (flash point >60 °C)	31	3	124-18-5*	ABD	
Alkanes (C10-C26), linear and branched (flash point ≤ 60 °C)	31	3	124-18-5*	ABE	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Alkanes (C6-C9)	31		110-54-3*	ALK	
Including:					
Heptanes	31		142-82-5		
Hexanes	31		110-54-3		
Nonanes	31		111-84-2		
Octanes	31		111-65-9		
iso- & cyclo-Alkanes (C10-C11)	31		34464-38-5*	AKI	
iso- & cyclo-Alkanes (C12+)	31		31807-55-3*	AKJ	
n-Alkanes (C9-C11)	31	3	111-84-2*		
n-Alkanes (C10+) (all isomers)	31		124-18-5*	ALV	ALJ
Including:					
Decanes	31		124-18-5		
Dodecanes	31		112-40-3		
Heptadecanes	31		629-78-7		
n-Paraffins (C10-C20)	31		124-18-5*	PFN	ALJ
Tridecanes	31		629-50-5		
Undecanes	31		1120-21-4		
Alkane (C14-C17) sulfonic (alternately *sulphonic*) *acid, sodium salt solutions, see* Sodium alkyl (C14-C17) sulfonates (alternately sulphonates) (60-65% solution)			85711-69-9	AKA	SAA (AKE/SSU)
Alkaryl polyethers (C9-C20)	41			AKP	
Alkenoic acid, polyhydroxy ester borated	0	1, 3		AAY	
Alkenyl (C11+) amide	10			AKM	
Alkenyl (C8+) amine, Alkenyl (C12+) acid ester mixture	34			AAA	
Alkenyl (C16-C20) succinic anhydride	11		32072-96-1*	AAH	
Alkyl acrylate-Vinyl pyridine copolymer in Toluene	32			AAP	
Alkyl amine (C17+)	7		4200-95-7*	AKY	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomers)	34		78-31-9	ADP	
Alkylated (C4-C9) hindered phenols	21	3	98-54-4*	AYO	
Alkyl (C3-C4) benzenes	32		103-65-1*	AKC	
Including:					
Butylbenzenes	32	3	104-51-8		
Cumene	32		98-82-8		
Propylbenzenes	32		103-65-1		
Alkyl (C5-C8) benzenes	32		538-68-1*	AKD	
Including:					
Amylbenzenes	32		538-68-1		
Heptylbenzenes	32		2132-85-6		
Hexylbenzenes	32		1077-16-3		
Octylbenzenes	32		2189-60-8		
Alkyl (C9+) benzenes	32		1081-77-2*	AKB	
Including:					
Decylbenzenes	32		104-72-3		
Dodecylbenzenes	32		29986-57-0		
Nonylbenzenes	32		1081-77-2		
Tetradecylbenzenes	32		1459-10-5		
Tetrapropylbenzenes	32		635-11-0		
Tridecylbenzenes	32		123-02-4		
Undecylbenzenes	32		6742-54-7		
Alkyl benzene distillation bottoms	0	1, 3		ABB	
Alkylbenzene mixtures (containing at least 50% of Toluene)	32	3	108-88-3*	AZT	
Alkylbenzenes mixtures (containing naphthalene)	20			ALB	AZT
Alkylbenzene, Alkylindane, Alkylindene mixture (each C12-C17)	32			AIH	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Alkyl (C11-C17) benzene sulfonic (alternately sulphonic) acid	0	1, 3	50854-94-9*	ABN	ABS/ABQ
Alkylbenzene sulfonic (alternately sulphonic) acid (less than 4%)	0	1, 2	104-15-4*	ABQ	ABS/ABN
Alkylbenzene sulfonic (alternately sulphonic) acid, sodium salt solution	33		657-84-1*	ABT	
Alkyl/cyclo (C4-C5) alcohols	20			AAL	
Alkyl (C12+) dimethylamine	7	3	112-18-5*	ADM	
Alkyl dithiocarbamate (C19-C35)	34	3		ADB	
Alkyl dithiothiadiazole (C6-C24)	33			ADT	
Alkyl ester copolymer (C4-C20)	34			AES	AEQ
Alkyl ester copolymer in mineral oil	34			AEQ	AES
Alkyl (C7-C9) nitrates	34	2	20633-12-9*	AKN	ONE
Alkyl (C7-C11) phenol poly(4-12) ethoxylate	40			APN	NPE
Alkyl (C10-C15, C12 rich) phenol poly (4-12)ethoxylate	40			APX	APN
Alkyl (C4-C9) phenols	21		1638-22-8*	AYI	BLT/BTP/NNP/OPH
Alkylphenols (C10-C18, C12 rich)	21			ALP	AYI/DOL
Alkyl phenol sulfide (alternately *sulphide*) (*C8-C40*), *see* Alkyl (C8-C40) phenol sulfide (alternately *sulphide*)					AKS
Alkyl (C8-C40) phenol sulfide (alternately sulphide)	34			AKS	
Alkyl (C9-C15) phenyl propoxylate	40		9064-15-7*	AXL	
Alkyl (C8-C9) phenylamine in aromatic solvents	9			ALP	
n-Alkyl phthalates, see individual phthalates				AYS	
Alkyl polyglucoside solution, see individual polyglucoside solutions				AGD	AGL/AGM/AGN/AGO/AGP
Alkyl (C8-C10) polyglucoside solution (65% or less)	43	3	29836-26-8*	AGL	AGD/AGM/AGN/AGO/AGP

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Alkyl (C8-C10)/(C12-C14):(40% or less/60% or more) polyglucoside solution (55% or less)	43	3	29836-26-8*	AGN	AGD/AGL AGM/AGO/AGP
Alkyl (C8-C10)/(C12-C14):(50%/50%) polyglucoside solution (55% or less)	43	3	29836-26-8*	AGO	AGD/AGL/AGN/AGP
Alkyl (C8-C10)/(C12-C14):(60% or more/40% or less) polyglucoside solution (55% or less)	43	3	29836-26-8*	AGP	AGD/AGL/AGM/AGN /AGO
Alkyl (C12-C14) polyglucoside solution (55% or less)	43	3	59122-55-3*	AGM	AGD/AGL/AGN/AGO /AGP
Alkyl (C12-C16) propoxyamine ethoxylates	8	3		AXE	LPE
Alkyl (C10-C20), saturated and unsaturated phosphite	34			AKL	
Alkyl succinic anhydride	11		4100-80-5*	AUA	
Alkyl sulfonic (alternately sulphonic) acid ester of phenol	34		91082-17-6	AKH	
Alkyl toluene	32		95-47-6*	AYL	AUS
Alkyl (C18+) toluenes	32	3	94135-42-9*	AUS	AYL
Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid	0	1, 3	3386-32-1*	AUU	
Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, borated	34	3		AUB	
Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, high overbase	33	3		AUC	
Alkyl (C18-C28) toluenesulfonic (alternately toluenesulphonic) acid, Calcium salts, low overbase	33	3		AUL	
Allyl alcohol	15	2	107-18-6	ALA	
Allyl chloride	15		107-05-1	ALC	
Aluminum (alternately, *Aluminium*) chloride/*Hydrochloric acid solution,* see “Aluminum (alternately, Aluminium) chloride/Hydrogen chloride solution”		1		AHS	AHG
Aluminum (alternately Aluminium) chloride/Hydrogen chloride solution	0	1, 3		AHG	AHS

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Aluminum (alternately Aluminium) hydroxide/sodium hydroxide/sodium carbonate solution (40% or less)	5	3		AHN	
Aluminum sulfate (alternately Aluminium sulphate) solution	43	2	10043-01-3	ASX	ALM
Amine C-6, morpholine process residue	9			AOI	
Aminoethyldiethanolamine/Aminoethylethanolamine solution	8			ADY	
2-(2-Aminoethoxy) ethanol	8		929-06-6	AEX	
Aminoethylethanolamine	8		111-41-1	AEE	
N-Aminoethylpiperazine	7		140-31-8	AEP	
2-Amino-2-hydroxymethyl-1,3-propanediol solution	43		77-86-1	AHL	
2-Amino-2-methyl-1-propanol	8		124-68-5	APZ	APQ/APR.
Ammonia, anhydrous	6		7664-41-7	AMA	
Ammonia, aqueous (28% or less Ammonia), see Ammonium hydroxide			1336-21-6		AMH
Ammonium bisulfite (alternately bisulphite) solution (70% or less)	43	2	10192-30-0	ABX	ASU
Ammonium chloride solution (less than 25%)	43	3	12125-02-9	AIS	AMC
Ammonium hydrogen phosphate solution	0	1	7783-28-0	AMI	
Ammonium hydroxide (28% or less Ammonia)	6		1336-21-6	AMH	
Ammonium lignosulfonate (alternately *lignosulphonate*) *solution, see also* Lignin liquor			8061-53-8	ALG	LNL
Ammonium nitrate solution (45% or less)	0	1	6484-52-2	AND	AMN/ANR/ANW
Ammonium nitrate solution (93% or less)	0	1	6484-52-2	ANW	AMN/AND/ANR
Ammonium nitrate/Urea solution (containing Ammonia), see Urea/Ammonium nitrate solution (containing 1% or more Ammonia)					UAS (ANU/UAT/UAU/UAV)
Ammonium nitrate/Urea solution (not containing Ammonia), see Urea/Ammonium nitrate solution (containing less than 1% Ammonia)					UAU (ANU/UAS/UAT/UAV)

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Ammonium phosphate/Urea solution, see Urea/Ammonium phosphate solution					UAP (APP/URE)
Ammonium polyphosphate solution	43		68333-79-9	AMO	
Ammonium sulfate (alternately sulphate) solution	43		7783-20-2	ASW	AME/AMS
Ammonium sulfate (alternately sulphate) solution (20% or less)	43		7783-20-2	AME	AMS/ASW
Ammonium sulfide (alternately sulphide) solution (45% or less)	5	3	12135-76-1	ASS	ASF
Ammonium thiocyanate/Ammonium thiosulfate (alternately thiosulphate) solution	0	1		ACV	ACS
Ammonium thiosulfate (alternately thiosulphate) solution (60% or less)	43	3	7783-18-8	ATV	ATF
Amyl acetate (all isomers)	34	3	628-63-7	AEC	IAT/AML/AAS/AYA
Amyl acid phosphate	34		12789-46-7	AIA	
Amyl alcohol, primary	20	3	71-41-0	APM	AAI/AAL/AAN/APM/IAA
n-Amyl alcohol	20	3	71-41-0	AAN	AAI/AAL/APM/ASE/IAA
sec-Amyl alcohol	20	3	584-02-1	ASE	AAI/AAL/AAN/APM/IAA
tert-Amyl alcohol	20	3	75-85-4	AAL	AAI/APM/ASE/IAA
tert-Amyl ethyl ether	41		919-94-8	AER	
tert-Amyl methyl ether	41		994-05-8	AYE	
Amyl methyl ketone, see Methyl amyl ketone			110-43-0	AMJ	MAK (AMK)
Amylene, see Pentene (all isomers)			109-67-1	AMW	PTX (AMX/AMZ/PTE)
tert-Amylenes, see Pentene (all isomers)			513-35-9	AMZ	PTX (AMW)
Aniline	9		62-53-3	ANL	
Animal and Fish oils, n.o.s.	34			AFN	
Including:					

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Cod liver oil	34		8001-69-2		
Lanolin	34		8006-54-0		
Neatsfoot oil	34		8002-64-0		
Pilchard oil	34				
Sperm oil	34		8002-24-2		
Animal and Fish acid oils and distillates, n.o.s.	34			AFA	
Including:					
Animal acid oil	34				
Fish acid oil	34				
Lard acid oil	34				
Mixed acid oil	34				
Mixed general acid oil	34				
Mixed hard acid oil	34				
Mixed soft acid oil	34				
Anthracene oil (Coal tar fraction), see Coal tar			65996-91-0	AHO	COR
Apple juice	43			APJ	
Argon, liquefied	0	1	7440-37-1	ARG	
Aryl polyolefin (C11-C50)	30			AYF.	
Asphalt	33		8052-42-4	ASP	ACU.
Asphalt blending stocks, roofers flux	33			ARF	
Asphalt blending stocks, straight run residue	33			ASR	
Asphalt emulsion	33			ASQ	
Asphalt, Kerosene, and other components	33			AKO	
Aviation alkylates (C8 paraffins and isoparaffins BPT 95-120 °C)	33	3	111-65-9	AVA	GAK/GAV
Barium long-chain (C11-C50) alkaryl sulfonate (alternately sulphonate)	34			BCA	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Barium long-chain alkyl (C8-C14) phenate sulfide (alternately sulphide)	34			BCH	
Behenyl alcohol	20		661-19-8	BHY	
Benzene	32	2	71-43-2	BNZ	BHA/BHB/PYG.
Benzene and mixtures having 10% Benzene or more	32			BHB	BHA/BNZ/PYG.
Benzene hydrocarbon mixtures (containing Acetylenes) (having 10% Benzene or more)	32			BHA	BHB/BNZ/PYG
Benzene/Toluene/Xylene mixtures (having 10% Benzene or more)	32			BTX	BHB/BNZ/PYG/TOL/ XLX/XLM/XLO/XLP
Benzenesulfonyl (alternately Benzenesulphonyl) chloride	0	1, 2	98-09-9	BSC	
Benzenetricarboxylic acid, trioctyl ester	34		89-04-3	BCE	
Benzyl acetate	34		140-11-4	BZE	
Benzyl alcohol	21		100-51-6	BAL	
Benzyl chloride	36		100-44-7	BCL	
Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flash point >60 °C (>25% but <99% by volume)	33	3		BIF	BIG/BIH/BII/BIJ/BIK
Bio-fuel blends of Diesel/gas oil and Alkanes (C10-C26), linear and branched with a flash point ≤ 60 °C (>25% but <99% by volume)	33	3		BIG	BIF/BIH/BII/BIJ/BIK
Bio-fuel blends of Diesel/gas oil and FAME (>25% but <99% by volume)	34	3		BIH	BIF/BIG/BII/BIJ/BIK
Bio-fuel blends of Diesel/gas oil and vegetable oil (>25% but <99% by volume)	34	3		BII	BIF/BIG/BIH/BIJ/BIK
Bio-fuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume)	20	2, 3		BIJ	BIF/BIG/BIH/BII/BIK
Bis (2-ethylhexyl) terephthalate	34		6422-86-2	DHH	
Boronated Calcium sulfonate (alternately sulphonate)	34			BCU	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Brake fluid base mix: Poly(2-8)alkylene (C2-C3) glycols/Polyalkylene (C2-C10) glycols monoalkyl (C1-C4) ethers and their borate esters	20	3		BFY	
Brominated Epoxy Resin in Acetone	16			BER	
Bromochloromethane	36		74-97-5	BCM	
Butadiene (all isomers)	30		106-99-0	BDI	
Butadiene/Butylene mixtures (containing Acetylenes)	30			BBM	BBX/BDI/BTN/IBL.
Butane (all isomers)	31		106-97-8	BMX	IBT/BUT.
Butane/Propane mixture	31			BUP	LPG
1,4-Butanediol, see Butylene glycol			110-63-4	BDO	BUG
2-Butanone, see Methyl ethyl ketone		2	78-93-3		MEK
Butene oligomer	30			BOL	
Butene, see Butylenes (all isomers)			106-98-9		BUT/IBL
2-Butoxyethanol (58%)/Hyperbranched polyesteramide (42%) (mixture)	20				
Butyl acetate (all isomers)	34	3	123-86-4	BAX	BCN/BTA/BYA/IBA
Butyl acrylate (all isomers)	14	3	141-32-2	BAR	BAI/BTC
Butyl alcohol (all isomers)	20	2, 3	71-36-3	BAY	BAN/BAS/BAT/IAL
Butyl alcohol (*iso-, n-, sec-, tert-*), *see* Butyl alcohol (all isomers)		2	71-36-3		BAN/BAS/BAT/BAY/IAL
Butylamine (all isomers)	7	3	109-73-9	BTY	BAM/BTL/BUA/IAM
Butylbenzene (*all isomers*), *see* Alkyl (C3-C4) benzenes		3	104-51-8	BBE	AKC
Butyl benzyl phthalate	34		85-68-7	BPH	
Butyl butyrate (all isomers)	34	3	109-21-7	BBA	BIB/BUB
Butylene glycol	20	2	107-88-0	BUG	BDO
1,2-Butylene oxide	16		106-88-7	BTO	
Butylenes (all isomers)	30		106-98-9	BTN	IBL
n-Butyl ether	41	3	142-96-1	BTE	
n *-Butyl ether	41		142-96-1	BTE	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
iso-Butyl formate, see Isobutyl formate		3	542-55-2	BFI	BFN/BFO
n-Butyl formate	34		592-84-7	BFN	BFI/BFO.
Butyl heptyl ketone	18		19780-10-0	BHK	
Butyl methacrylate	14		97-88-1	BMH	BMI/BMN.
Butyl methacrylate, Decyl methacrylate, Cetyl-Eicosyl methacrylate mixture, see Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture		3			DER (BMH/BMI/BMN/CEM)
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture	14	3		DER	BMH/BMI/BMN/CEM
Butyl methyl ketone, see Methyl butyl ketone		2	591-78-6		MBJ (MBK/MIK)
Butyl phenol, Formaldehyde resin in Xylene	32				
n-Butyl propionate	34		209-669-5	BPN	
Butyl stearate	34		123-95-5	BST	
Butyl toluene	32		1595-05-7	BUE	
Butyraldehyde (all isomers)	19	3	123-72-8	BAE	BAD/BTR
Butyric acid	4		107-92-6	BRA	IBR.
gamma-Butyrolactone	0	1, 2	96-48-0	BLA	
C9 Resinfeed (DSM)	32	2		CNR	
Calcium alkaryl sulfonate (alternately *sulphonate*) (C11-C50), *see* Calcium long-chain alkaryl sulfonate (alternately sulphonate) (C11-C50)		3		CAE	CAY
Calcium alkyl (C9) phenol sulfide (alternately sulphide), polyolefin phosphorosulfide (alternately phosphorosulphide) mixture	34			CPX.	
Calcium alkyl (C10-C28) salicylate	34	3		CAJ.	
Calcium bromide solution, see Drilling brines			7789-41-5	CBI	DRB
Calcium alkyl salicylate, see Calcium long-chain alkyl salicylate (C13 +), Calcium long-chain alkyl (C18-C28) salicylate, or Calcium alkyl (C10-C28) salicylate	34				CAJ/CAK/CAZ.
Calcium bromide solution, see Drilling brines			7789-41-5	CBI	DRB

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Calcium bromide/Zinc bromide solution, see Drilling brine (containing Zinc salts)					DZB
Calcium carbonate slurry	34		471-34-1	CSR	
Calcium chloride solution, see Drilling brines			10043-52-4	CCS	CLC
Calcium hydroxide slurry	5		1305-62-0	COH	CAH.
Calcium hypochlorite solution (15% or less)	5	3	7778-54-3	CHU	CHY/CHZ
Calcium hypochlorite solution (more than 15%)	5	3	7778-54-3	CHZ	CHU/CHY
Calcium lignosulfonate (alternately *lignosulphonate*) solution, *see* also Lignin liquor			8061-52-7	CLL	LNL
Calcium long-chain alkaryl sulfonate (alternately sulphonate) (C11-C50)	34		722503-69-7	CAY	
Calcium long-chain alkyl (C8-C40) *phenate, see* Calcium long-chain alkyl (C5-C10) phenate or Calcium long-chain alkyl (C11-C40) phenate				CAQ	CAU/CAV (CAN/CAW)
Calcium long-chain alkyl (C5-C10) phenate	34	3		CAU	CAN/CAQ/CAV/CAW
Calcium long-chain alkyl (C5-C20) phenate	34			CAV	CAN/CAQ/CAU/CAW
Calcium long-chain alkyl (C11-C40) phenate	34	3		CAW	CAN/CAQ/CAU/CAV
Calcium long-chain alkyl phenate sulfide (alternately sulphide) (C8-C40)	34			CPI	
Calcium long-chain alkyl phenolic amine (C8-C40)	9			CPQ	
Calcium long-chain alkyl (C18-C28) salicylate	34	3		CAJ	
Calcium long-chain alkyl salicylate (C13+)	34			CAK	CAJ/CAZ
Calcium nitrate solutions (50% or less)	34	3	10124-37-5	CNU	CNT
Calcium nitrate/Magnesium nitrate/Potassium chloride solution	34			CLM	CNT/CNU/MGN/MGO /PCS/PCU/PSD.
Calcium salts of fatty acids	34		85251-71-4	CFF	
Calcium stearate	34		1592-23-0	CSE	
Calcium sulfonate (alternately sulphonate)/Calcium carbonate/Hydrocarbon solvent mixture	33			CSH	
Camelina oil, see Oil, misc.: Camelina		3	68956-68-3	CEL	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Camphor oil (light)	18		8008-51-3	CPO	
Canola oil, see Oil, edible: Rapeseed (low erucic acid containing less than 4% free fatty acids)			120962-03-0		ORO (ORP)
Caprolactam solution, see epsilon-Caprolactam (molten or aqueous solutions)			105-60-2	CLS	
epsilon-Caprolactam (molten or aqueous solutions)	22	3	105-60-2	CLU	CLS
Caramel solutions	43		8028-89-5	CML	
Carbolic oil	21		108-95-2	CBO	
Carbon dioxide (high purity)	0	1	124-38-9	CDH	CDO/CDQ
Carbon dioxide (reclaimed quality)	0	1	124-38-9	CDQ	CDH/CDO
Carbon dioxide, liquefied	0	1	124-38-9	CDO	CDH/CDQ
Carbon disulfide (alternately disulphide)	38		75-15-0	CBB	
Carbon tetrachloride	36	2	56-23-5	CBT	CBU
Cashew nut shell oil (untreated), see Oil, misc.: Cashew nut shell (untreated)			8007-24-7		OCN
Castor oil, see Oil, edible: Castor	34		8001-79-4		OCA (VEO).
Catoxid feedstock	36	2		CXF	
Caustic potash solution	5	2	1310-58-3	CPS	
Caustic soda solution	5	2	1310-73-2	CSS	
Cesium formate solution	43	3	3495-36-1	CSM	
Cetyl alcohol (Hexadecanol), see Alcohols (C13+)			36653-82-4		ALY (ASY/AYL)
Cetyl alcohol, see Alcohols (C13 +)	20		36653-82-4		ALY (ASY/AYL).
Cetyl/Eicosyl methacrylate mixture	14	1		CEM	
Cetyl/Stearyl alcohol, see Alcohols (C13+)					ALY (ASY/AYL)
Chlorinated paraffins (C10-C13)	36		1002-69-3*	CLH	CLG/CLJ/CLQ.
Chlorinated paraffins (C14-C17) (with 50% Chlorine or more, and less than 1% C13 or shorter chains)	36	3		CLJ	CLG/CLH/CLQ
Chlorinated paraffins (C14-C17) (with 52% Chlorine)	36			CLQ	CLG/CLH/CLJ.
Chlorinated paraffins (C18+) with any level of chlorine	36		3386-33-2*	CLG	CLH/CLJ

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Chlorine	0	1	7782-50-5	CLX	
Chloroacetic acid (80% or less)	4	3	79-11-8	CHM	CHL/MCA
Chlorobenzene	36	2	108-90-7	CRB	
Chlorodifluoromethane, see Monochlorodifluoromethane			75-45-6	MCF	
2-Chloro-4-ethylamino-6-isopropylamino-5-triazine solution	0	1	287476-17-9	CET	
1-(4-Chlorophenyl)-4,4-dimethyl pentan-3-one	18	2	66346-01-8	CDP	
2- or 3-Chloropropionic acid	4		29617-66-1 or 107-94-8	CPM	CLA/CLP
Chloroform	36		67-66-3	CRF	
Chlorohydrins (crude)	17	3	107-07-3*	CHD	
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution	9			CDM	
o-Chloronitrobenzene	42		88-73-3	CNO	CNP
Chlorosulfonic (alternately Chlorosulphonic) acid	0	1	7790-94-5	CSA	
m-Chlorotoluene	36	3	108-41-8	CTM	CHI/CRN/CTO
o-Chlorotoluene	36	3	95-49-8	CTO	CHI/CRN/CTM
p-Chlorotoluene	36	3	106-43-4	CRN	CHI/CTM/CTO
Chlorotoluenes (mixed isomers)	36	3	25168-05-2	CHI	CRN/CTM/CTO
Choline chloride solutions	20		67-48-1	CCO	
Citric acid (70% or less)	4	3	77-92-9	CIS	CIT
Clay slurry	43		1332-58-7	CLY	
Coal slurry	43		125612-26-2	COG	COA.
Coal tar	33		8007-45-2	COR	OCT.
Coal tar crude bases	33		65996-84-1	CTB	
Coal tar distillate, see Naphtha: Coal tar solvent			65996-91-0	CDL	NCT (CTU)
Coal tar naphtha solvent, see Naphtha: Coal tar solvent			65996-91-0		NCT (CDL/CTU)
Coal tar pitch (molten)	33	3	65996-93-2	CTP	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Coal tar, high temperature	33		65996-89-6	CHH	
Cobalt naphthenate in solvent naphtha	34		61789-51-3	CNS	
Cocoa butter, see Oil, edible: Cocoa butter			8002-31-1		OCB (VEO)
Coconut oil, see Oil, edible: Coconut		2	8001-31-8		OCC (VEO)
Coconut oil, fatty acid, see Oil, misc.: Coconut fatty acid		2	61788-47-4		CFA
Coconut oil, fatty acid methyl ester, see Oil, misc.: Coconut fatty acid methyl ester		3	61788-59-8		OCM
Copper salt of long-chain (C17 +) alkanoic acid	34			CUS	CFT.
Copper salt of long-chain (C3-C16) fatty acid	34		3112-74-1*	CFT	CUS.
Corn oil, see Oil, edible: Corn			8001-30-7		OCO (VEO)
Corn syrup	43		8029-43-4	CSY	
Cottonseed oil, see Oil, edible: Cottonseed			8001-29-4		OCS (VEO)
Cottonseed oil, fatty acid, see Oil, misc.: Cottonseed oil, fatty acid			68308-51-0	CFY	
Creosote	21	2		CCW	CCT/CWD
Creosote (coal tar)	21	2, 3	8001-58-9	CCT	CCW
Creosote (wood tar)	21	2, 3	8021-39-4	CWD	CCT/CCW
Cresol/Phenol/Xylenol mixture	21			CXX	
Cresols (all isomers)	21	3	1319-77-3	CRS	CFO/CFP/CRL/CRO/CSC/CSO
Cresols with 5% or more Phenol, see Phenol				CFP	PHN (CFO/CRL/CRO/CRS/CSO)
Cresols with less than 5% Phenol, see Cresols (all isomers)				CFO	CRS (CFP/CRL/CRO/CSO)
Cresylate spent caustic, see Cresylic acid, sodium salt solution		2		CSC	CYD
Cresylic acid	21		1319-77-3	CRY	
Cresylic acid, dephenolized	21		1319-77-3	CAD	CRY/CYN

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Cresylic acid tar	21			CRX	
Cresylic acid with 5% or more phenol	21			CYN	CAD/CRY
Cresylic acid, sodium salt solution	5	2	34689-46-8	CYD	CSC
Crotonaldehyde	19	2	123-73-9	CTA	
Crude Isononylaldehyde, see Isononyldehyde (crude)			5435-64-3		INC
Crude Isopropanol	20		67-63-0		IPB (IPA/PAL)
Crude Piperazine, see Piperazine (crude)			110-85-0		PZC (PPZ/PIZ)
Cumene, see Alkyl(C3-C4) benzenes			98-82-8	CUM	AKD (PBY/PBZ)
1,5,9-Cyclododecatriene	30		4904-61-4	CYT	
Cycloheptane	31		291-64-5	CYE	
Cyclohexane	31		110-82-7	CHX	
Cyclohexane-1,2-dicarboxylic acid,diisononyl ester	34		166412-78-8	CDE	
Cyclohexane oxidation products, sodium salts solution	43			CYS	
Cyclohexanol	20		108-93-0	CHN	
Cyclohexanone	18	2	108-94-1	CCH	
Cyclohexanone/Cyclohexanol mixtures	18	2		CYX	
Cyclohexyl acetate	34		622-45-7	CYC	
Cyclopentadiene/Styrene/Benzene mixture	30			CSB	
1,3-Cyclopentadiene dimer (molten)	30	3	7313-32-8	CPD	DPT/DPV
Cyclopentane	31		287-92-3	CYP	
Cyclopentene	30		142-29-0	CPE.	
p-Cymene	32		99-87-6	CMP	
Decahydronaphthalene	33		91-17-8	DHN	
Decaldehyde	19		112-31-2	DAY	IDA/DAL.
iso-Decaldehyde, see Isodecaldehyde.			3085-26-5		
n-Decaldehyde	19		3085-26-5		
Decane (all isomers), see n-Alkanes (C10+) (all isomers)			124-18-5	DCC	ALV (ALJ)
Decanoic acid	4		334-48-5	DCO	NEA.

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Decene	30		872-05-9	DCE	
Decyl acetate	34		112-17-4	DYA	
Decyl acrylate	14		2156-96-9	DAT	IAI/DAR.
Decyl alcohol (all isomers)	20	2, 3	85566-12-7	DAX	ISA/DAN
Decyl/Dodecyl/Tetradecyl alcohol mixture	20	3	112-30-1*	DYO	DAN/DAX/DDN/ISA
Decylbenzene, see Alkyl (C9+) benzenes			104-72-3	DBZ	AKB
Decyloxytetrahydrothiophene dioxide	0	1	18760-44-6	DHT	
Detergent alkylate	32		68442-97-7	DKY	AKB/DBZ/DDB/TDB/TRB/UDB.
Dextrose solution, see Glucose solution			50-99-7	DTS	GLU
Diacetone alcohol	20	2	123-42-2	DAA	
Dialkyl (C10-C14) benzenes, see Alkyl (C9+) benzenes			55191-38-3*	DAB	AKB
Dialkyl(C8-C9) diphenylamines	9		101-67-7*	DAQ	
Dialkyl (C7-C13) phthalates	34		3648-21-3*	DAH	
Including:					
Di-(2-ethylhexyl) phthalate	34		117-81-7		
Diheptyl phthalate	34		3648-21-3		
Dihexyl phthalate	34		84-75-3		
Diisooctyl phthalate	34		131-20-4		
Diisodecyl phthalate	34		89-16-7		
Diisononyl phthalate	34		28553-12-0		
Dinonyl phthalate	34		84-76-4		
Dioctyl phthalate	34		117-84-0		
Ditridecyl phthalate	34		119-06-2		
Diundecyl phthalate	34		3648-20-2		
Dialkyl (C9-C10) phthalates, see Dialkyl (C7-C13) phthalates			84-76-4*	DLK	DLH (DAP/DHL/DHP/DID/DIE/DIF/DIN/DIO/DIT/DOP/DPA/DTP/DUP)

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Dialkyl thiophosphates sodium salts solution	34	3	26377-29-7*	DYH	
2,6-Diaminohexanoic acid phosphonate mixed salts solution	21			DBT	
Dibromomethane	36		74-95-3	DBH	
Dibutyl carbinol, see Nonyl alcohol (all isomers)			623-93-8		NNS (DBC/NNI/NNN)
Dibutyl hydrogen phosphonate	34		107-66-4	DHD	
Dibutyl phthalate	34		84-74-2	DPA	DIT
Dibutyl terephthalate	34	3	1962-75-0	DYE	
Dibutylamine	7		111-92-2	DBA	
Dibutylphenol (all isomers)	21			DBT	
Dibutylphenols	21		26967-68-0	DBT	
Di-tert-butylphenol	21		128-39-2	DBF	DBT/DBV/DBW
2,4-Di-tert-butylphenol	21		96-76-4	DBV	DBF/DBT/DBW
2,6-Di-tert-butylphenol	21	3	128-39-2	DBW	DBF/DBT/DBV
Dichlorobenzene (all isomers)	36	3	25321-22-6	DBX	DBM/DBO/DBP
3,4-Dichloro-1-butene	36		760-23-6	DCD	DCB.
Dichlorodifluoromethane	36		75-71-8	DCF	
1,1-Dichloroethane	36		75-34-3	DCH	
Dichloroethyl ether	41	3	111-44-4	DYR	DEE
1,6-Dichlorohexane	36		2163-00-0	DHX	
2,2′-Dichloroisopropyl ether	41		63283-80-7	DCI	
Dichloromethane	36	2	75-09-2	DCM	
2,4-Dichlorophenol	21		120-83-2	DCP	
2,4-Dichlorophenoxyacetic acid/Diethanolamine salt solution	43		5742-19-8	DDE	
2,4-Dichlorophenoxyacetic acid/Dimethylamine salt solution (70% or less)	0	1, 2, 3	2008-39-1	DDA	DAD/DSX
2,4-Dichlorophenoxyacetic acid/Triisopropanolamine salt solution	43	2	34075-45-1	DTI	
1,1-Dichloropropane	36		78-99-9	DPB	DPC/DPL/DPP/DPX

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
1,2-Dichloropropane	36	2, 3	78-87-5	DPP	DPB/DPC/DPL/DPX
1,3-Dichloropropane	36		142-28-9	DPC	DPB/DPL/DPP/DPX
Dichloropropene (all isomers)	15		26952-23-8	DCW	DPF/DPU.
1,3-Dichloropropene	15		542-75-6		DCW/DPF.
Dichloropropene/Dichloropropane mixtures	15		8003-19-8	DMX	DCW/DPB/DPC/DPL/ DPP/DPU/DPX.
2,2-Dichloropropionic acid	4		75-99-0	DCN	
Dicyclopentadiene, Resin Grade, 81-89%	30	3	77-73-6	DPV	CPD/DPT
Dicyclopentadiene, see 1,3-Cyclopentadiene dimer (molten)			77-73-6	DPT	CPD (DPV)
Diethanolamine	8	2	111-42-2	DEA	
Diethanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Diethanolamine salt solution			5742-19-8	DZZ	DDE
Diethylamine	7		109-89-7	DEN	
Diethylaminoethanol	8		100-37-8	DAE	
2,6-Diethylaniline	9		579-66-8	DMN	DIY.
Diethylbenzene	32		25340-17-4	DEB	
Diethylene glycol	40	2	111-46-6	DEG	
Diethylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			112-34-5	DME	PAG
Diethylene glycol butyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate			124-17-4	DEM	PAF
Diethylene glycol dibenzoate	34		120-55-8	DGZ	
Diethylene glycol dibutyl ether	40		112-73-2	DIG	
Diethylene glycol diethyl ether	40		112-36-7	DGS	
Diethylene glycol ethyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			111-90-0	DGE	PAG
Diethylene glycol ethyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate			112-15-2	DGA	PAF

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Diethylene glycol n-hexyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether			112-59-4	DHE	PAG
Diethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether			111-77-3	DGM	PAG
Diethylene glycol methyl ether acetate, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate			629-38-9	DGR	PAF
Diethylene glycol phenyl ether	40		104-68-7	DGP	
Diethylene glycol phthalate	34		2202-98-4	DGL	
Diethylene glycol propyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether			6881-94-3	DGO	PAG
Diethylenetriamine	7	2	111-40-0	DET	
Diethylenetriaminepentaacetic acid, pentasodium salt solution	43		140-01-2	DYS	
Diethylethanolamine, see Diethylaminoethanol			100-37-8		DAE
Diethyl ether	8		60-29-7	EET	
Diethyl hexanol, see Decyl alcohol (all isomers)			19398-78-8		DAX
Di-(2-ethylhexyl) adipate	34		103-23-1	DEH	
Di-(2-ethylhexyl) phosphoric acid	1		298-07-7	DEP	
Di-(2-ethylhexyl) phthalate, see Dialkyl (C7-C13) phthalate			117-81-7	DIE	DAH
Di-(2-ethylhexyl) terephthalate	34		6422-86-2	DHH	
Diethyl phthalate	34		84-66-2	DPH	
Diethyl sulfate (alternately sulphate)	34		64-67-5	DSU	
Diglycidyl ether of Bisphenol A	16		1675-54-3	BDE	
Diglycidyl ether of Bisphenol F	16		2095-03-6	DGF	
Diheptyl phthalate, see Dialkyl (C7-C13) phthalate			3648-21-3	DHP	DAH
Di-n-hexyl adipate	34		110-33-8	DHA	
Dihexyl phthalate, see Dialkyl (C7-C13) phthalate			84-75-3	DHL	
Diisobutyl carbinol, see Nonyl alcohol (all isomers)			108-82-7	DBC	NNS
Diisobutyl ketone	18		108-83-8	DIK	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Diisobutyl phthalate	34		84-69-5	DIT	DPA
Diisobutylamine	7		110-96-3	DBU	
Diisobutylene	30		25167-70-8	DBL	
Diisodecyl phthalate, see Dialkyl (C7-C13) phthalates			26761-40-0	DID	DAH
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution	5		73347-80-5	DDH	
Diisononyl adipate	34		33703-08-1	DNY	
Diisononyl phthalate, see Dialkyl (C7-C13) phthalates		2	28553-12-0	DIN	DAH
Diisooctyl phthalate, see Dialkyl (C7-C13) phthalate			27554-26-3	DIO	DAH/(DIE/DOP)
Diisopropanolamine	8		110-97-4	DIP	
Diisopropylamine	7		108-18-9	DIA	DNA.
Diisopropylbenzene (all isomers)	32		25321-09-9	DIX	
Diisopropylnaphthalene	32		24157-81-1	DII	
1,4-Dihydro-9,10-dihydroxy anthracene, disodium salt solution	5		73347-80-5	DDH	
N,N-Dimethylacetamide	10		127-19-5	DAC	DLS
N,N-Dimethylacetamide solution (40% or less)	10	3	127-19-5	DLS	DAL .
Dimethyl adipate	34		627-93-0	DLA	
Dimethylamine	7		124-40-3	DMA	DMC/DMG/DMY.
Dimethylamine salt of 4-Chloro-2-methylphenoxyacetic acid solution, see 4-Chloro-2-methylphenoxyacetic acid, Dimethylamine salt solution			2039-46-5		CDM
Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Dimethylamine salt solution (70% or less)			2008-39-1	DAD	DDA (DSX)
Dimethylamine solution (45% or less)	7	3	124-40-3	DMG	DMA/DMC/DMY
Dimethylamine solution (greater than 45% but not greater than 55%)	7	3	124-40-3	DMY	DMA/DMC/DMG

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Dimethylamine solution (greater than 55% but not greater than 65%)	7	3	124-40-3	DMC	DMA/DMG/DMY
2,6-Dimethylaniline	9		87-62-7	DMM	DDL
Dimethylbenzene, see Xylenes		2	1330-20-7		XLX/XLM/XLO/XLP
Dimethylcyclicsiloxane hydrolyzate	34		541-05-9*	DXZ	
N,N-Dimethylcyclohexylamine	7		98-94-2	DXN	
Dimethyl disulfide (alternately disulphide)	0	1, 2, 3	624-92-0	DSK	
Dimethyldodecylamine, see N,N-Dimethyldodecylamine	7		112-18-5		DDY.
N,N-Dimethyldodecylamine	7		112-18-5	DDY	
Dimethylethanolamine	8		108-01-0	DMB	
Dimethyl ether	41		115-10-6	DIM	
Dimethylformamide	10	2	68-12-2	DMF	
Dimethyl furan	41		625-86-5	DFU	
Dimethyl glutarate	34		1119-40-0	DGT	
Dimethyl hydrogen phosphite	34	2	868-85-9	DPI	
Dimethyl naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution	34	2	27178-87-6	DNS	
Dimethyl octanoic acid	4		29662-90-6	DMO	
Dimethyl phthalate	34		131-11-3	DTL	
Dimethylpolysiloxane, see Polydimethylsiloxane			9016-00-6	DMP	
2,2-Dimethylpropane-1,3-diol (molten or solution)	20	3	126-30-7	DDI	
Dimethyl succinate	34		106-65-0	DSE	
Dinitrotoluene (molten)	42	3	121-14-2	DNM	DNL/DNU/DTT
Dinonyl phthalate, see Dialkyl (C7-C13) phthalates			84-76-4	DIF	DAH
Dioctyl phthalate, see Dialkyl (C7-C13) phthalates			117-84-0	DOP	DAH (DIE/DIO)
1,4-Dioxane	41		123-91-1	DOX	
Dipentene	30		138-86-3	DPN	
Diphenyl	32		92-52-4	DIL	
Diphenylamine (molten)	9		122-39-4	DAG	DAM.

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Diphenylamine, reaction product with 2,2,4-trimethylpentene	9		68921-45-9	DAK	
Diphenylamines, alkylated	9		68921-45-9	DAJ	
Diphenyl/Diphenyl ether mixtures	33		8004-13-5	DDO	
Diphenyl ether	41		101-84-8	DPE	
Diphenyl ether/Biphenyl ether mixture, see Diphenyl/Diphenyl ether mixture			8004-13-5		DDO
Diphenyl ether/Diphenyl phenyl ether mixture	41		8004-13-5	DOB	
Diphenylmethane diisocyanate	12	2	101-68-8	DPM	
Diphenyl oxide, see Diphenyl ether			101-84-8		DPE
Diphenylol propane-Epichlorohydrin resins	0	1	25068-38-6	DPR	
Di-n-propylamine	7		142-84-7	DNA	DIA
Dipropylene glycol	40		25265-71-8	DPG	
Dipropylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether			29911-28-2	DBG	PAG
Dipropylene glycol dibenzoate	34		94-51-9	DGY	
Dipropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether			34590-94-8	DPY	PAG
Distillates, flashed feed stocks	33		8002-05-9	DFF	
Distillates, straight run	33		68814-87-9	DSR	
Di-tert-butyl phenol	21			DBF	DBT/DBV/DBW.
2,4-Di-tert-butyl phenol	21		96-76-4	DBV	DBF/DBT/DBW.
2,6-Di-tert-butyl phenol	21		128-39-2	DBW	DBF/DBT/DBV.
Dithiocarbamate ester (C7-C35)	34			DHO	
Ditridecyl adipate	34		16958-92-2	DTY	
Ditridecyl phthalate, see Dialkyl (C7-C13) phthalate			119-06-2	DTP	DAH
Diundecyl phthalate, see Dialkyl (C7-C13) phthalates			3648-20-2	DUP	DAH
Dodecane (all isomers), see n-Alkanes (C10+) (all isomers)			13475-82-6	DOF	ALV (ALJ/DOC)
tert-Dodecanethiol	20	2	25103-58-6	DDL	LRM

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Dodecene (all isomers)	30	3	25378-22-7	DOZ	DDC/DOD
1-Dodecene, see Dodecene (all isomers)	30			DDC	DOZ
Dodecanol (all isomers), see Dodecyl alcohol (all isomers)		2	112-53-8	DDN	LAL
2-Dodecenylsuccinic acid, dipotassium salt solution	34		57195-28-5	DSP	
Dodecyl alcohol (all isomers)	20	2	112-53-8	DDN	ASK/ASY/LAL
Dodecylamine/Tetradecylamine mixture	7	2	124-22-1*	DTA	
Dodecylbenzene, see Alkyl (C9+) benzenes			123-01-3	DDB	AKB
Dodecylbenzenesulfonic (alternately Dedecylbenzenesulphonic) acid	0	1, 2	27176-87-0	DSA	
Dodecyldimethylamine/Tetradecyldimethylamine mixture	7		112-18-5*	DOT	
Dodecyl diphenyl ether disulfonate (alternately disulphonate) solution	43		25167-32-2	DTA	
Dodecyl hydroxypropyl sulfide (alternately sulphide)	0	1	67124-09-8	DOH	
n-Dodecyl mercaptan	21		112-55-0	DBT	
Dodecyl methacrylate	14		142-90-5	DDM	
Dodecyl/Octadecyl methacrylate mixture	14		142-90-5*	DOM	DDM.
Dodecyl/Pentadecyl methacrylate mixture	14		142-90-5*	DDP	
Dodecyl phenol	21		27193-86-8	DOL	
Dodecyl xylene	32		66697-27-6	DXY	
Drilling brines (containing Calcium, Potassium or Sodium salts)	43			DRL	DRB/DRS.
Drilling brines (containing Zinc salts)	43			DZB	DRB.
Drilling brines, including: Calcium bromide solution, Calcium chloride solution and Sodium chloride solution	43	3			DRS/DRL
Drilling mud (low toxicity) (*if flammable or combustible*)	33			DRO	DRM/DRN/DRP.

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Drilling mud (low toxicity) (*if non-flammable or non-combustible*)	43			DRP	DRM/DRN/DRO.
Epichlorohydrin	17		106-89-8	EPC	
Epoxy resin	16			EPN	
ETBE, see Ethyl tert-butyl ether			637-92-3		EBE
Ethane	31		74-84-0	ETH	
Ethanolamine	8		141-43-5	MEA	
2-Ethoxyethanol, see Ethylene glycol monoalkyl ethers			110-80-5	EEO	EGC (EGE)
2-Ethoxyethyl acetate	34	2	111-15-9	EEA	EGA.
Ethoxylated alkyloxy alkyl amine	8		68155-39-5	ELM	
Ethoxylated alcohols, C11-C15, see alcohol polyethoxylates			9002-92-0		AEA/AEB/AED/AET/ APV/APW/APX
Ethoxylated long-chain (C16+) alkyloxyalkylamine	8			ELA	
Ethoxylated tallow alkyl amine	7		61791-26-2	TAY	TAG/TAR
Ethoxylated tallow alkyl amine, glycol mixture	7			TAG	TAR/TAY
Ethoxylated tallow amine (> 95%)	7	3	61791-26-2	TAR	TAG/TAY
Ethoxy triglycol, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			112-50-5	ETG	PAG (ETR/TGE)
Ethoxy triglycol (crude)	40		112-50-5	ETR	
Ethyl acetate	34	2	141-78-6	ETA	
Ethyl acetoacetate	34		141-97-9	EAA	
Ethyl acrylate	14	2	140-88-5	EAC	
Ethyl alcohol	20	2	64-17-5	EAL	
Ethylamine	7	2	75-04-7	EAM	EAN/EAO.
Ethylamine solution (72% or less)	7	3	75-04-7	EAN	EAM/EAO
Ethyl amyl ketone	18		106-68-3	EAK	ELK.
Ethylbenzene	32		100-41-4	ETB	
Ethyl butanol	20		97-95-0	EBT	
N-Ethylbutylamine	7		13360-63-9	EBA	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Ethyl tert-butyl ether	41	2	637-92-3	EBE	
Ethyl butyrate	34		105-54-4	EBR	
Ethyl chloride	36		75-00-3	ECL	
Ethyl cyclohexane	31		1678-91-7	ECY	
N-Ethylcyclohexylamine	7		5459-93-8	ECC	
2-Ethyl-2-(2,4-dichlorophenoxy) acetate	34		533-23-3	EDY	
2-Ethyl-2-(2,4-dichlorophenoxy) propionate	34		58048-39-8	EDP	
S-Ethyl dipropylthiocarbamate	34	3	759-94-4	ECB	
Ethylene	30		74-85-1	ETL	
Ethyleneamine EA 1302	7	2	593-67-9	EMX	
Ethylene carbonate	34		96-49-1	ECR	
Ethylene chlorohydrin	20		107-07-3	ECH	
Ethylene cyanohydrin	20	2	109-78-4	ETC	
Ethylenediamine	7	2	107-15-3	EDA	EMX.
Ethylenediaminetetraacetic acid/tetrasodium salt solution	43		64-02-8	EDS	
Ethylene dibromide	36		106-93-4	EDB	
Ethylene dichloride	36	2	107-06-2	EDC	
Ethylene glycol	20	2	107-21-1	EGL	EAG.
Ethylene glycol acetate	34		542-59-6	EGO	
Ethylene glycol butyl ether, see Ethylene glycol monoalkyl ethers			111-76-2	EGM	EGC
Ethylene glycol tert-butyl ether, see Ethylene glycol monoalkyl ethers			7580-85-0	EGG	EGC
Ethylene glycol butyl ether acetate	34		112-07-2	EMA	
Ethylene glycol diacetate	34		111-55-7	EGY	
Ethylene glycol dibutyl ether	40		112-48-1	EGB	
Ethylene glycol ethyl ether, see Ethyl glycol monoalkyl ethers			110-80-5	EGE	EGC/EEO

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Ethylene glycol ethyl ether acetate, see 2-Ethoxyethyl acetate		2	111-15-9	EGA	EEA
Ethylene glycol hexyl ether, see Ethylene glycol monoalkyl ethers			112-25-4	EGH	EGC
Ethylene glycol isobutyl ether, see Ethylene glycol monoalkyl ethers			224-658-5		EGC (EGG/EGM)
Ethylene glycol isopropyl ether, see Ethylene glycol monoalkyl ethers			109-59-1	EGI	EGC
Ethylene glycol methyl butyl ether, see Ethylene glycol monoalkyl ethers			13343-98-1	EMB	EGC
Ethylene glycol methyl ether, see Ethylene glycol monoalkyl ethers			109-86-4	EME	EGC
Ethylene glycol methyl ether acetate	34		110-49-6	EGT	
Ethylene glycol monoalkyl ethers	40	2		EGC	
Including:					
Ethylene glycol butyl ether	40		111-76-2		
Ethylene glycol tert-butyl ether	40		7580-85-0		
Ethylene glycol ethyl ether	40		111-15-9		
Ethylene glycol hexyl ether	40		112-25-4		
Ethylene glycol isobutyl ether	40		224-658-5		
Ethylene glycol isopropyl ether	40		109-59-1		
Ethylene glycol methyl ether	40		109-86-4		
Ethylene glycol methyl butyl ether	40		13343-98-1		
Ethylene glycol propyl ether	40		2807-30-9		
Ethylene glycol phenyl ether	40		122-99-6	EPE	
Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture	40		122-99-6 / 104 68 7	EDX	
Ethylene glycol propyl ether, see Ethylene glycol monoalkyl ethers			2807-30-9	EGP	EGC/EGI/EGN

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Ethylene glycol n-propyl ether, see Ethylene glycol monoalkyl ethers			2807-30-9	EGN	EGC (EGI/EGP)
Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture	20			EBX	
Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture	20			ESX	
Ethylene oxide	0	1	75-21-8	EOX	
Ethylene oxide/Propylene oxide mixture	16		75-21-8 / 75-56-9	EPF	EPM.
Ethylene oxide/Propylene oxide mixture with an Ethylene oxide content not more than 30% by mass	16	3	75-21-8 / 75-56-9	EPM	EPF
Ethylene-Propylene copolymer (in liquid mixtures)	31		9010-79-1	EPY	
Ethylene-Vinyl acetate copolymer (emulsion)	43		24937-78-8	ECV	
Ethyl ether, see Diethyl ether			60-29-7		EET
Ethyl-3-ethoxypropionate	34		763-69-9	EEP	
2-Ethylhexaldehyde, see Octyl aldehydes			123-05-7	EHA	OAL (OLX)
2-Ethylhexanoic acid, see Octanoic acid (all isomers)			149-57-5	EHO	OAY (OAA)
2-Ethylhexanol, see Octanol			104-76-7	EHX	OCA (OTA)
2-Ethylhexyl acrylate	14		103-11-7	EAI	
2-Ethylhexylamine	7		104-75-6	EHM	
Ethyl hexyl phthalate	34		117-81-7	EHE	
Ethyl hexyl tallate	34		68334-13-4	EHT	
2-Ethyl-2-(hydroxymethyl) propane-1,3-diol (C8-C10) ester	34		77-99-6	EHD	
Ethyl lactate	34		97-64-3	ELT	
Ethylidene norbornene	30	2	16219-75-3	ENB	
Ethyl methacrylate	14		97-63-2	ETM	
N-Ethylmethylallylamine	7		18328-90-0	EML	
Ethyl propionate	34		105-37-3	EPR	
2-Ethyl-3-propylacrolein	19	2	645-62-5	EPA	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
2-Ethyl-6-methyl-N-(1′-methyl-2-methoxyethyl)aniline	9		51219-00-2	EEM.	
o-Ethyl phenol	21		90-00-6	EPL	
Ethyl toluene	32		25550-14-5	ETE	
Fatty acid methyl esters	34	3	67762-38-3	FME	
Fatty acids (C8-C10)	34	3	124-07-2*	FDS	
Fatty acids (C12+)	34	3	143-07-7*	FDT	FAB/FAD/FAI/FDI
Fatty acids (saturated, C13+)	34		700041-79-8	FAB	FAD
Fatty acids (saturated, C14+), see Fatty acids (saturated, C13+)			700041-79-8	FAD	FAB
Fatty acids (C16+)	34	3	57-10-3*	FDI	
Fatty acids, essentially linear (C6-C18) 2-ethylhexyl ester	34	2, 3		FAE	
Ferric chloride solution	1		7705-08-0	FCS	FCL.
Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution	43	2		FHX	STA.
Ferric nitrate/Nitric acid solution	3	2	7782-61-8	FNN	
Fish oil, see Oil, edible: Fish		2	8016-13-5		OFS (AFN)
Fish protein concentrate (containing 4% or less formic acid)	4			FPC	
Fish silage protein concentrate (containing 4% or less formic acid)	4			FSC	
Fish solubles (*water based fish meal extracts*)	43			FSO	
Fluorosilicic acid (20-30%) in water solution	1	3	16961-83-4	FSK	FSJ/FSL/HFS
Fluorosilicic acid (30% or less)	1		16961-83-4	FSJ	FSK/FSL/HFS.
Formaldehyde (50% or more), Methanol mixtures	19	2	50-00-0	MTM	
Formaldehyde solutions (37%-50%)	19	2	50-00-0	FMS	FMG/FMR.
Formaldehyde solutions (45% or less)	19	2, 3	50-00-0	FMR	FMG/FMS
Formamide	10		75-12-7	FAM	
Formic acid	4	2	64-18-6	FMA	FMB.

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Formic acid (85% or less)	4	2	64-18-6	FMB	FMA
Formic acid (over 85%)	4	2, 3	64-18-6	FMD	
Formic acid mixture (containing up to 18% Propionic acid and up to 25% Sodium formate)	4	2, 3	64-18-6	FMC	FMA/FMB
Fructose solution	43		57-48-7	FTS	FRT.
Fumaric adduct of Rosin, water dispersion	43		65997-04-8	FAR	
Fuming sulfuric (alternately *sulphuric*) *acid, see* Oleum		2	8014-95-7		
Furfural	19		98-01-1	FFA	
Furfuryl alcohol	20	2	98-00-0	FAL	
Gas oil, cracked, see Oil, misc.: Gas, cracked			64741-62-4		GOC
Gasoline blending stock, alkylates	33		64741-64-6	GAK	
Gasoline blending stock, reformates	33		8006-61-9	GRF	
Gasolines:					
Automotive (containing not more than 4.23 grams lead per gal.)	33		86290-81-5	GAT	
Aviation (containing not more than 4.86 grams lead per gal.)	33			GAV	AVA
Casinghead (*natural*)	33		68425-31-0	GCS	
Polymer	33		8006-61-9	GPL	
Straight run	33		68606-11-1	GSR	
Gasolines: Pyrolysis (containing Benzene), see Pyrolysis gasoline (containing Benzene)			68477-58-7	GPY	PYG
Glucitol/Glycerol blend propoxylated (containing less than 10% amines)	40	3		GGA	
Glucitol/Glycerol blend propoxylated (containing 10% or more amines)	40			GGB	
Glucose solution	43		50-99-7	GLS	DTS.
Glutaraldehyde solutions (50% or less)	19		111-30-8	GTA	
Glycerine	20	2	56-81-5	GCR	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Glycerine (83%)/Dioxanedimethanol (17%) mixture	20			GDN	GDM.
Glycerol, see Glycerine		2	56-81-5		GCR
Glycerol ethoxylated	40		31694-55-0	GXA	
Glycerol monooleate	20		25496-72-4	GMO	
Glycerol polyalkoxylate	40		700038-65-9	GPA	
Glycerol propoxylated	40	3	25791-96-2	GXP	
Glycerol, propoxylated and ethoxylated	40	3	9082-00-2	GXE	
Glycerol/Sucrose blend propoxylated and ethoxylated	40	3		GSB	
Glyceryl triacetate	34		102-76-1	GCT	
Glycidyl ester of C10 trialkyl acetic acid	34			GLU	GLT
Glycidyl ester of tertiary carboxylic acid, see Glycidyl ester of C10 trialkyl acetic acid				GLT	GLU
Glycidyl ester of tridecyl acetic acid, see Glycidyl ester of C10 trialkyl acetic acid				GLT	GLU
Glycidyl ester of Versatic acid, see Glycidyl ester of C10 trialkyl acetic acid				GLT	GLU
Glycine, sodium salt solution	7		56-40-6	GSS	
Glycol diacetate, see Ethylene glycol diacetate			111-55-7		EGY
Glycol mixture, crude	20		107-21-1	GMC	
Glycol triacetate, see Glyceryl triacetate			102-76-1		GCT
Glycolic acid solution (70% or less)	4	3	79-14-1	GLC	
Glyoxal solution (40% or less)	19	3	107-22-2	GOS	
Glyoxylic acid solution (50% or less)	4	3	298-12-4	GAC	
Glyphosate solution (not containing surfactant)	7		1071-83-6	GIO	RUP.
Grape Seed Oil, see Oil, edible: Grape seed			8024-22-4		
Groundnut oil, see Oil, edible: Groundnut			8002-03-7		OGN (VEO)
Hazelnut oil, see Oil, edible: Hazelnut			84012-21-5		OHN (VEO)
Heptadecane (all isomers), see n-Alkanes (C10+) (all isomers)			629-78-7		ALV (ALJ)
Heptane (all isomers), see Alkanes (C6-C9)			142-82-5	HMX	ALK(HPI/HPT)

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
n-Heptanoic acid	4		111-14-8	HEN	HEP.
Heptanol (all isomers)	20	3	111-70-6	HTX	HTN
Heptene (all isomers)	30	2, 3	592-76-7	HPX	THE
Heptyl acetate	34		112-06-1	HPE	
Heptylbenzenes, see Alkyl (C5-C8) benzenes			1078-71-3		AKD
Herbicide (C15-H22-NO2-Cl), see Metolachlor			51218-45-2		MCO
Hexadecanol (Cetyl alcohol), see Alcohols (C13+)			36653-82-4		ALY (ASY/AYL)
1-Hexadecylnaphthalene/1,4-bis(Hexadecyl)naphthalene mixture	32		56388-47-7*	HNH	HNI.
1-n-Hexadecylnaphthalene (90%)/1,4-di-n-(Hexadecyl)naphthalene (10%)	32		56388-47-7*	HNI	HNH.
Hexaethylene glycol, see Polyethylene glycol			2615-15-8	HMG	PEG
1,3,5-Hexahydrotriethanol-1,3,5-triazine solution	9			HES	
Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)	9			HET	
Hexamethylene diisocyanate	12		822-06-0	HMS	HDI
Hexamethylene glycol	20		629-11-8	HMG	HXG
Hexamethylenediamine (molten)	7	3	124-09-4	HME	HMD/HMC
Hexamethylenediamine adipate (50% in water)	43		15511-81-6	HAM	HAN
Hexamethylenediamine adipate solution	43		15511-81-6	HAN	HAM
Hexamethylenediamine solution	7		124-09-4	HMC	HMD/HME
Hexamethyleneimine	7		111-49-9	HMI	
Hexamethylenetetramine solutions	7		100-97-0	HTS	HMT
Hexane (all isomers), see Alkanes (C6-C9)		2	110-54-3	HXS	ALK (IHA/HXA)
1,6-Hexanediol, distillation overheads	4	2, 3	629-11-8	HDO	
Hexanoic acid	4		142-62-1	HXO	
Hexanol	20		111-27-3	HXM	HEW/HEZ/HXN.
Hexene (all isomers)	30	2, 3	592-41-6	HEX	HXE/HXT/HXU/HXV/MPN/MTN
Hexyl acetate	34		142-92-7	HAE	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Hexylbenzenes, see Alkyl (C5-C8) benzenes			1077-16-3		AKD
Hexylene glycol, see Hexamethylene glycol			107-41-5	HXG	HMG
Hog grease, see Lard			61789-99-9		LRD
Hydrochloric acid	1		7647-01-0	HCL	
Hydrofluorosilicic acid (25% or less), see Fluorosilicic acid (30% or less)			16961-83-4		FSJ(FSK/FSL/HFS)
bis(Hydrogenated tallow alkyl)methyl amines	7		61788-63-4	HTA	
Hydrogen peroxide solutions (over 8% but not more than 60% by mass)	0	1, 3	7722-84-1	HPN	HPO/HPS
Hydrogen peroxide solutions (over 60% but not more than 70% by mass)	0	1, 3	7722-84-1	HPS	HPN/HPO
Hydrogenated starch hydrolysate	0	1, 3	68425-17-2	HSH	
2-Hydroxyethyl acrylate	14	2	818-61-1	HAI	
N-(Hydroxyethyl)ethylenediamine triacetic acid, trisodium salt solution	43		207386-87-6	HET	
N,N-bis(2-Hydroxyethyl) oleamide	10		93-83-4	HOO	
2-Hydroxy-4-(methylthio)butanoic acid	4		583-91-5	HBA	
Hydroxyl terminated polybutadiene, see Polybutadiene, hydroxyl terminated			69102-90-5		PHT
alpha-Hydro-omega-hydroxytetradeca(oxytetramethylene)	40			HTO	PYS/PYT
Illipe oil, see Oil, edible: Illipe			68956-68-3		ILO (VEO)
Isoamyl alcohol	20	3	123-51-3	IAA	AAI/AAL/AAN/APM/ ASE
Isobutyl alcohol	20	2, 3	78-83-1	IAL	BAN/BAS/BAT/BAY
Isobutyl formate	34	3	542-55-2	BFI	BFN/BFO
Isobutyl methacrylate	14	3	97-86-9	BMI	BMH/BMN
Isodecaldehyde	19		3085-26-5		
Isononylaldehyde (crude)	19		5435-64-3	INC	
Isophorone	18	2	78-59-1	IPH	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Isophoronediamine	7		2855-13-2	IPI	
Isophorone diisocyanate	12		4089-71-9	IPD	
Isoprene (all isomers)	30		78-79-5	IPR	
Isoprene (part refined)	30		78-79-5	IPS	IPR/ISC.
Isoprene concentrate (Shell)	30		78-79-5	ISC	
Isopropanolamine	8	3	78-96-6	MPA	IPF/PAX/PLA
Isopropanolamine solution	8	3	78-96-6	PAI	MPA/PAY/PLA/PRG
Isopropyl acetate	34	3	108-21-4	IAC	PAT
Isopropyl alcohol	20	2, 3	67-63-0	IPA	IPB/PAL
Isopropylamine	7	3	75-31-0	IPP	IPO/IPQ/PRA
Isopropylamine (70% or less) solution	7	3	75-31-0	IPQ	IPO/IPP/PRA
Isopropylbenzene, see Alkyl (C3-C4) benzenes			98-82-8		AKC(CUM/PBY/PBZ)
Isopropylcyclohexane	31	3	696-29-7	IPX	
Isopropyl ether	41	3	108-20-3	IPE	PRL/PRN
Jatropha oil, see Oil, misc.: Jatropha			88-6-7		JTO
Jet fuels:				JPO	JPT/JPF/JPV
JP-4	33		50815-00-4	JPF	
JP-5	33		8008-20-6	JPV	
JP-8	33		8008-20-6	JPE	
Kaolin clay solution	43		1332-58-7	KLC	KLS.
Kaolin slurry	43		1332-58-7	KLS	KLC.
Kerosene	33		8008-20-6	KRS	
Ketone residue	18			KTR	
Kraft black liquor	5		66071-92-9	KBL	KPL.
Kraft pulping liquors (free alkali content 3% or more) (Black, Green, or White)	5		68131-33-9	KPL	KBL
Lactic acid	0	1, 2	79-33-4	LTA	
Lactonitrile solution (80% or less)	37	3	78-97-7	LNI	
Lard	34		61789-99-9	LRD	OLD.

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Latex, ammonia (1% or less)-inhibited	30	3	98-82-8	LTX	
Latex: Carboxylated Styrene-Butadiene copolymer; Styrene-Butadiene rubber	43	3	98-82-8	LCC	LCB/LSB
Latex, liquid synthetic	43		98-82-8	LLS	LCB/LCC/LSB.
Lauric acid	34		143-07-7	LRA	
Lauric acid methyl ester/Myristic acid methyl ester mixture	34		111-82-0	LMM	
Lauryl polyglucose, see Alkyl (C12-C14) polyglucoside solution (55% or less)			59122-55-3		AGM/LAP
Lauryl polyglucose (50% or less), see Alkyl (C12-C14) polyglucoside solution (55% or less)			59122-55-3	LAP	AMG
Lecithin	34		8002-43-5	LEC	
Lignin liquor	43		9005-53-2	LNL	ALG/CLL/LGA/LGM/ LSL/SHC/SHP/SHQ/S LP.
Ligninsulfonic (alternately Ligninsulphonic) acid, magnesium salt solution	43	3	9009-75-0	LGM	LGA/LNL/LSL
Ligninsulfonic (alternately *Ligninsulphonic*) *acid, sodium salt solution, see* Lignin liquor or Sodium lignosulfonate (alternately lignosulphonate) solution			8061-51-6	LGA	LNL or SLG
d-Limonene, see Dipentene			5989-27-5		DPN
Linear alkyl (C12-C16) propoxyamine ethoxylate	8		68213-26-3	LPE	
Linseed oil, see Oil, misc.: Linseed			8001-26-1		OLS
Liquefied Natural Gas, see Methane			74-82-8	LNG	MTH
Liquid chemical wastes	0	1, 3		LCW	
Liquid Streptomyces solubles	43				
Long-chain alkaryl polyether (C11-C20)	41			LCP	
Long-chain alkaryl sulfonic (alternately sulphonic) acid (C16-C60)	0	1		LCS	
Long-chain alkyl amine	7		61789-79-5	LAA	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Long-chain alkylphenate/Phenol sulfide (alternately sulphide) mixture	21			LPS	
Long-chain alkylphenol (C14-C18)	21			LCA	
Long-chain alkylphenol (C18-C30)	21			LCK	
Long-chain alkyl (C13+) salicylic acid	4		69-72-7	LAS	
Long-chain polyetheramine in alkyl (C2-C4)benzenes	7			LCE	
L-Lysine solution (60% or less)	43	3	25988-63-0	LYS	
Magnesium chloride solution	0	1, 2	7786-30-3	MGL	
Magnesium hydroxide slurry	5		1309-42-8	MHS	
Magnesium long-chain alkaryl sulfonate (alternately sulphonate) (C11-C50)	34		115254-47-2*	MAS	MSE
Magnesium long-chain alkyl phenate sulfide (alternately sulphide) (C8-C20)	34			MPS	
Magnesium long-chain alkyl salicylate (C11+)	34			MLS	
Magnesium nitrate solution (66.7%)	43		13446	MGP	MGN/MGO.
Magnesium nonyl phenol sulfide (alternately *sulphide*), *see* Magnesium long-chain alkyl phenate sulfide (alternately sulphide) (C8-C20)					MPS
Magnesium sulfonate (alternately *sulphonate*), *see* Magnesium long-chain alkaryl sulfonate (alternately sulphonate) (C11-C50)			71786-47-5	MSE	MAS
Maleic anhydride	11		108-31-6	MLA	
Maleic anhydride/sodium allylsulphonate copolymer solution	11				PHN (CFO/CRL/CRO/CRS/CSO)
Maltitol solution	0	1, 3	585-88-6	MTI	
Mango kernel oil, see Oil, edible: Mango kernel			90063-86-8		MKO (VEO)
Mercaptobenzothiazol, sodium salt solution	5		149-30-4	SMB	MBT
2-Mercaptobenzothiazol (in liquid mixture)	5		149-30-4	BTM	SMD
Mesityl oxide	18	2	141-79-7	MSO	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Metam sodium solution	7		137-42-8	MSS	SMD.
Methacrylic acid	4		79-41-4	MAD	
Methacrylic acid - Alkoxypoly(alkylene oxide) methacrylate copolymer, sodium salt aqueous solution (45% or less)	20	3	79-41-4	MAQ	
Methacrylic resin in ethylene dichloride	14			MRD	
Methacrylonitrile	15	2	126-98-7	MET	
Methane	31		74-82-8	MTH	LNG.
3-Methoxy-1-butanol	20		2517-43-3	MTX	
3-Methoxybutyl acetate	34		4435-53-4	MOA	
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide, *see* Metolachlor	34		51218-45		MCO.
1-Methoxy-2-propyl acetate	34		108-65-6	MXP	
Methoxy triglycol, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			112-35-6	MTG	PAG (TGY)
Methyl acetate	34		79-20-9	MTT	
Methyl acetoacetate	34		105-45-3	MAE	
Methyl acetylene/Propadiene mixture	30		74-99-7	MAP	
Methyl acrylate	14		96-33-3	MAM	
Methyl alcohol	20	2	67-56-1	MAL	
Methylamine solutions (42% or less)	7	3	74-89-5	MSZ	
Methyl amyl acetate	34		7789-99-3	MAC	
Methyl amyl alcohol	20		108-11-2	MAA	MIC
Methyl amyl ketone	18		110-43-0	MAK	
N-Methylaniline	9	3	100-61-8	MAN	
alpha-Methylbenzyl alcohol with Acetophenone (15% or less)	20	3	98-85-1	MBA	
Methyl bromide	36		74-83-9	MTB	
Methyl butanol, see the Amyl alcohols			71-41-0		AAI/AAL/AAN/APM/ ASE/IAA

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Methyl butenes, see Pentene (all isomers)			109-67-1		PTX (AMW/AMZ/PTE)
Methyl butenol	20		137-32-6	MBL	
Methyl tert-butyl ether	41	2	1634-04-4	MBE	
Methyl butyl ketone	18	2	591-78-6	MBB	MBK/MIK.
Methyl 3-(3,5 di-tert-butyl-4-hydroxyphenyl) propionate crude melt	20		6386-38-5	MYP	
Methylbutynol	20		137-32-6	MBY	MHB.
3-Methyl butyraldehyde	19		590-86-3	MBR	
Methyl butyrate	34		623-42-7	MBU	
Methyl chloride	36		74-87-3	MTC	
Methylcyclohexane	31		591-47-9	MCY	
Methylcyclohexanemethanol (crude)	20		34885-03-5	MYH	
Methylcyclopentadiene dimer	30		26472-00-4	MCK	
Methylcyclopentadienyl manganese tricarbonyl	0	1, 3	12108-13-3	MCT	MCW
Methylcyclopentadienyl manganese tricarbonyl (60-70%) in mineral oil	0	1	12108-13-3	MCW	MCT.
Methyl diethanolamine	8		105-59-9	MDE	MAB
Methyl ethyl ketone	18	2	78-93-3	MEK	
2-Methyl-6-ethyl aniline	9		24549-06-2	MEN	
Methyl formate	34		107-31-3	MFM	
N-Methylglucamine solution (70% or less)	43	3	6284-40-8	MGC	
2-Methylglutaronitrile	37		4553-62-2	MLN	MGN
2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less)	37	3		MGE	MLN
Methyl heptyl ketone	18		821-55-6	MHK	
2-Methyl-2-hydroxy-3-butyne	20		115-19-5	MHB	MBY
Methyl isoamyl ketone, see Methyl amyl ketone			110-12-0	MAJ	MAK
Methyl isobutyl carbinol, see Methyl amyl alcohol			108-11-2	MIC	MAA
Methyl isobutyl ketone	18		108-10-1	MIK	MBB/MBK

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Methyl methacrylate	14		80-62-6	MMM	
Methylene bridged isobutylenated phenols	21		68610-06-0	MBP	
Methylene chloride, see Dichloromethane			75-09-2		DCM
3-Methyl-3-methoxybutanol	20		56539-66-3	MXB	
2-Methyl-5-ethyl pyridine	9		104-90-5	MEP	
3-Methyl-3-methoxybutyl acetate	34		103429-90-9	MMB	
Methyl naphthalene (molten)	32	3	90-12-0	MNA	
Methylolurea	19		1000-82-4	MUS	
2-Methyl pentane, see Hexane (all isomers)			107-83-5		HXS (ALK/HXA/IHA/NHX)
2-Methyl-1,5-pentanediamine	7		15520-10-2	MPM	
2-Methyl-1-pentene, see Hexene (all isomers)			763-29-1	MPN	HEX (HXE/HXT/HXU/HXV/MTN)
4-Methyl-1-pentene, see Hexene (all isomers)			691-37-2	MTN	HEX (HXE/HXT/HXU/HXV/MPN)
Methyl tert-pentyl ether, see tert-Amyl methyl ether			994-05-8		AYE
2-Methyl-1,3-propanediol	20		78-26-2	MDL	
Methyl propyl ketone	18		107-87-9	MKE	
2-Methyl-5-ethylpyridine	9		104-90-5	MEP	
Methylpyridine, see the Methylpyridines				MPQ	MPE/MPF/MPR
2-Methylpyridine	9	3	109-06-8	MPR	MPE/MPF/MPQ
3-Methylpyridine	9	3	109-99-6	MPE	MPF/MPQ/MPR
4-Methylpyridine	9	3	108-89-4	MPF	MPE/MPQ/MPR
N-Methyl-2-pyrrolidone	9	2	872-50-4	MPY	
Methyl salicylate	34		119-36-8	MES	
alpha-Methylstyrene	30		98-83-9	MSR	
3-(Methylthio)propionaldehyde	19		3268-49-3	MTP	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Metolachlor	34		51218-45-2	MCO	
Microsilica slurry	43		69012-64-2	MOS	
Milk	43		8049-98-7	MLK	
Mineral spirits	33		64475-85-0	MNS	
Mixed C4 Cargoes	30			MIX	
Molasses	20		68476-78-8	MOL	MON.
Molasses residue (from fermentation)	0	1	94114-07-5	MON	MOL.
Molybdenum polysulfide (alternately polysulphide) long-chain alkyl dithiocarbamide complex	0	1, 3	1317-33-5	MOP	
Monochlorodifluoromethane	36		75-45-6	MCF	
Monoethanolamine, see Ethanolamine			141-43-5	MEA	
Monoethylamine, see Ethylamine			75-04-7		EAM (EAN/EAO)
Monoisopropanolamine, see Isopropanolamine			78-96-6		MPA (PLA/PLX)
Morpholine	7	2	110-91-8	MPL	
Motor fuel anti-knock compound (containing lead alkyls)	0	1		MFA	
MTBE, see Methyl tert-butyl ether			1634-04-4		MBE
Myrcene	30		123-35-3	MRE	
Naphtha:					
Aromatic	33		64742-94-5	NAR	
Coal tar solvent	33		8030-30-6	NCT	
Heavy	33		64742-94-5	NAG	
Paraffinic	33		8012-95-1	NPF	
Petroleum	33		64742-94-5	PTN	
Solvent	33		64742-94-5	NSV	
Stoddard solvent	33		8052-41-3	NSS	
Varnish Makers' and Painters'	33		8032-32-4	NVM	
Naphthalene (molten)	32	3	91-20-3	NTM	
Naphthalene crude (molten)	32		91-20-3	NCM	NAC/NCD
Naphthalene still residue	32	2	91-20-3	NSR	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution	34		85-47-2	NSB	NSA
Naphthalene sulfonic (alternately sulphonic) acid-Formaldehyde copolymer, sodium salt solution	0	1	85-47-2	NFS	
Naphthenic acid	4		1338-24-5	NTI	
Naphthenic acid, sodium salt solution	43		61790-13-4	NTS	
Neodecanoic acid	4		26896-20-8	NEA	DCO/NAT.
Nitrating acid (mixture of Sulfuric (alternately Sulphuric) and Nitric acids)	0	1	7697-37-2	NIA	
Nitric acid (70% and over)	3	2, 3	7697-37-2	NCE	NAC/NCD
Nitric acid (less than 70%)	3	2	7697-37-2	NCD	NAC/NCE.
Nitric Acid, fuming, see Nitric acid (70% and over)		1, 2, 3	7697-37-2		NCE
Nitric Acid, red fuming, see Nitric acid (70% and over)		1, 2, 3	52583-42-3		NCE
Nitrilotriacetic acid, trisodium salt solution	34	3	139-13-9	NCA	
Nitrobenzene	42		98-95-3	NTB	
o-Nitrochlorobenzene, see o-Chloronitrobenzene			88-73-3		CNO (CNP)
Nitroethane	42		79-24-3	NTE	
Nitroethane (80%)/Nitropropane (20%)	42	2, 3		NNL	NNM/NNO/NPM/NPN/NPP/NTE
Nitroethane/1-Nitropropane (each 15% or more) mixture	42	2		NNO	NNL/NNM/NPM/NPN/NPP/NTE.
Nitrogen	0	1	7727-37-9	NXX	
Nitrophenol (mixed isomers)	42		88-75-5	NPX	NIP/NPH
o-Nitrophenol (molten)	0	1, 2	88-75-5	NTP	NIP/NPH/NPX
Nitropropane (60%)/Nitroethane (40%) mixture	42			NNM	NNL/NNO/NPM/NPN/NPP/NTE
1-or 2-Nitropropane	42		108-03-2	NPM	NPN/NPP
o- or p-Nitrotoluenes	42	3	99-99-0	NIT	NIE/NTR/NTT
Nonane (all isomers), see Alkanes (C6-C9)			111-84-2	NAX	ALK (NAN)

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Nonanoic acid (all isomers)	4		112-05-0	NNA	NAI/NIN.
Nonanoic/Tridecanoic acid mixture	4			NAT	NAI/NIN/NNA.
Non-edible industrial grade palm oil, see Oil, misc.: Palm, non-edible industrial grade			8002-75-3		OPB
Nonene (all isomers)	30	2	124-11-8	NOO	NNE/NON/OAM/OFX/OFY
Nonyl acetate	34		143-13-5	NAE	
Nonyl alcohol (all isomers)	20	2	143-08-8	NNS	ALR/DBC/NNI/NNN
Nonylbenzene, see Alkyl (C9+) benzenes			1081-77-2		AKB
Non-noxious Liquid Substance, (12) n.o.s. Cat OS	0	1		NOL	
Nonyl methacrylate monomer	14		2696-43-7	NMA	
Nonyl phenol	21		25154-52-3	NNP	
Nonyl phenol poly(4+)ethoxylate, see Alkyl (C7-C11) phenol poly(4-12) ethoxylate			9016-45-9	NPE	APN
Nonyl phenol sulfide (alternately *sulphide*) *(90% or less) solution, see* Alkyl (C8-C40) phenol sulfide (alternately sulphide)			34992-00-2		AKS (NPS)
Nonylphenol (48-62%)/Phenol (42-48%)/Dinonylphenol (1-10%) mixture	21			NYL	
Noxious Liquid Substance, NF, (1) n.o.s. (“trade name” contains “principal components”) Cat X	0	1			
Noxious Liquid Substance, F, (2) n.o.s. (“trade name” contains “principal components”) Cat X	0	1			
Noxious Liquid Substance, NF, (3) n.o.s. (“trade name” contains “principal components”) Cat X	0	1			
Noxious Liquid Substance, F, (4) n.o.s. (“trade name” contains “principal components”) Cat X	0	1			
Noxious Liquid Substance, NF, (5) n.o.s. (“trade name” contains “principal components”) Cat Y	0	1			
Noxious Liquid Substance, F, (6) n.o.s. (“trade name” contains “principal components”) Cat Y	0	1			

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Noxious Liquid Substance, NF, (7) n.o.s. (“trade name” contains “principal components”) Cat Y	0	1			
Noxious Liquid Substance, F, (8) n.o.s. (“trade name” contains “principal components”) Cat Y	0	1			
Noxious Liquid Substance, NF, (9) n.o.s. (“trade name” contains “principal components”) Cat Z	0	1			
Noxious Liquid Substance, F, (10) n.o.s. (“trade name” contains “principal components”) Cat Z	0	1			
Noxious Liquid Substance, (11) n.o.s. (“trade name” contains “principal components”) Cat Z	0	1			
Non-noxious Liquid Substance, (12) n.o.s. (“trade name” contains “principal components”) Cat OS	0	1		NOL	
Nutmeg butter oil, see Oil, edible: Nutmeg butter					ONB (VEO)
1-Octadecene, see the olefin or alpha-olefin entries			112-88-9		OAM/OFZ
1-Octadecanol, see Stearyl alcohol			112-92-5		SYL (ALY/ASY)
Octadecenoamide solution	10		3322-62-1	ODD	
Octadecenol (oleyl alcohol), see Alcohols (C13+)			143-28-2		ALY (AYL/ASY/OYL)
Octamethylcyclotetrasiloxane	34	3	556-67-2	OSA	
Octane (all isomers), see Alkanes (C6-C9)			111-65-9	OAX	ALK (IOO/OAN)
Octanoic acid (all isomers)	4		124-07-2	OAY	OAA/EHO
Octanol (all isomers)	20	2	111-87-5	OCX	EHX/OPA/OTA.
Octene (all isomers)	30	2	111-66-0	OTX	OAM/OFC/OFY/OFW/OTE.
n-Octyl acetate	34		112-14-1	OAF	OAE.
Octyl alcohol, see Octanol (all isomers)		2	111-87-5		OCX (EHX/IOA/OTA)
Octyl aldehydes	19		124-13-0	OAL	EHA/IOC//OLX.
Octylbenzenes, see Alkyl (C5-C8) benzenes			2189-60-8		AKD
Octyl decyl adipate	34		110-29-2	ODA	
n-Octyl mercaptan	0		111-88-6	OME	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Octyl nitrates (all isomers), see Alkyl (C7-C9) nitrates		2	629-39-0	ONE	AKN
Octyl phenol	21		27193-28-8	OPH	
Octyl phthalate, see Dioctyl phthalate			117-84-0		DAH (DIE/DIO/DLK/DOP)
Offshore contaminated bulk liquid P	0			OBP	
Offshore contaminated bulk liquid S	0			OBS	
Oil, edible:					
Beechnut	34		481-39-0	OBN	VEO
Castor	34		8001-79-4	OCA	VEO
Cocoa butter	34		8002-31-1	OCB	VEO
Coconut	34	2	8001-31-8	OCC	VEO
Cod liver	34		8001-69-2	OCL	AFN
Corn	34		8001-30-7	OCO	VEO
Cottonseed	34		8001-29-4	OCS	VEO
Fish	34	2	8016-13-5	OFS	AFN
Grape seed	34		8024-22-4		
Groundnut	34		8002-03-7	OGN	VEO
Hazelnut	34		185630-72-2	OHN	VEO
Illipe	34		91770-65-9	ILO	VEO
Lard	34		61789-99-9	OLD	AFN
Maize, see Oil, edible: Corn			8001-30-7		OCO (VEO)
Mango kernel	34	3	90063-86-8	MKO	
Nutmeg butter	34		8008-45-5	ONB	VEO
Olive	34		8001-25-0	OOL	VEO
Palm	34	2, 3	8002-75-3	OPM	VEO
Palm kernel	34		8023-79-8	OPO	VEO
Palm kernel olein	34		93334-39-5	PKO	VEO
Palm kernel stearin	34		91079-14-0	PKS	VEO
Palm mid fraction	34		91079-14-0	PFM	VEO

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Palm olein	34		93334-39-5	PON	VEO
Palm stearin	34		91079-14-0	PMS	VEO
Peanut	34		8002-03-7	OPN	VEO
Poppy	34		8002-11-7	OPY	VEO
Poppy seed	34		8002-11-7	OPS	VEO
Raisin seed	34		8024-22-4	ORA	VEO
Rapeseed	34		8002-13-9	ORP	VEO
Rapeseed (low erucic acid containing less than 4% free fatty acids)	34	3	8002-13-9	ORO	ORP/VEO
Rice bran	34		68553-81-1	ORB	VEO
Safflower	34		8001-23-8	OSF	VEO
Salad	34		9083-41-4	OSL	VEO
Sesame	34		8008-74-0	OSS	VEO
Shea butter	34		194043-92-0	OSH	VEO
Soyabean	34	2	8001-22-7	OSB	VEO
Sunflower, see Oil, edible: Sunflower seed			8001-21-6		OSN (VEO)
Sunflower seed	34		8001-21-6	OSN	VEO
Tucum	34		356065-49-1	OTC	VEO
Vegetable	34		9083-41-4	OVG	VEO
Walnut	34		8024-09-7	OWN	VEO
Oil, fuel:					
No. 1	33		8008-20-6	OON	
No. 1-D	33			OOD	
No. 2	33		68476-30-2	OTW	
No. 2-D	33			OTD	
No. 4	33		68553-00-4	OFR	
No. 5	33		70892-11-4	OFV	
No. 6	33		68553-00-4	OSX	
Oil, misc.:					

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Acid mixture from soyabean, corn (maize) and sunflower oil refining	34			AOM	
Aliphatic	33		8052-41-3	OML	
Animal	34		68991-19-5	OMA	AFN
Aromatic	33		6472-95-6	OMR	
Camelina	34		68956-68-3	OCI	
Cashew nut shell (untreated)	34		8007-24-7	OCN	
Clarified	33		64741-62-4	OCF	
Coal	33		8008-2-06	OMC	
Coconut fatty acid	34	2	61788-47-4	CFA	
Coconut, fatty acid methyl ester	34		61788-59-8	OCM	
Cotton seed oil, fatty acid	34		8001-29-4	CFY	
Crude	33		8002-05-9	OFA	
Diesel	33		68334-30-5	ODS	
Disulfide (alternately Disulphide)	0	1	624-92-0	ODI	
Gas, cracked	33		8006-61-9	GOC	
Gas, high pour	33		8006-61-9	OGP	
Gas, low pour	33		8006-61-9	OGL	
Gas, low sulfur (alternately sulphur)	33		8006-61-9	OGS	
Heartcut distillate	33		68131-77-1	OHD	
Jatropha	34	3	88-6-7	JTO	
Lanolin	34		8006-54-0	OLL	AFN
Linseed	33		8001-26-1	OLS	
Lubricating	33	2	93572-43-1	OLB	
Mineral	33		8042-47-5	OMN	
Mineral seal	33		64742-46-7	OMS	
Motor	33			OMT	
Neatsfoot	33		8002-64-0	ONF	AFN
Oiticica	34		8016-35-1	OOI	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Palm acid	34		8002-75-3	PLM	
Palm fatty acid distillate	34		68440-15-3	PFD	
Palm oil, fatty acid methyl ester	34		91051-34-2	OPE	
Palm kernel acid	34		101403-98	OPK	
Palm kernel fatty acid distillate	34		68440-15-3	PNG	
Palm, non-edible industrial grade	34		8002-75-3	OPB	
Penetrating	33		64742-95-6	OPT	
Perilla	34		68132-21-8	OPR	
Pilchard	34		8016-13-5	OPL	AFN
Pine	33		8002-09-3	OPI	PNL
Rapeseed fatty acid methyl esters	34	3	73891-99-3	ORP	
Residual	33		68476-33-5	ORL	
Resin, distilled	30	3	8016-37-3	ORR	
Road	33		8052-42-4	ORD	
Rosin	33		8002-16-2	ORN	
Seal	34		64742-46-7	OSE	
Soapstock	34		68952-95-4	OIS	
Soyabean (epoxidized)	34		8013-07-8		OSC/EVO
Soyabean fatty acid methyl ester	34		68919-53-9		OST
Spindle	33		64742-54-7	OSD	
Tall	34		8002-26-4	OTL	OTI/OTJ
Tall, crude	34	2	8002-26-4	OTI	OTJ/OTL
Tall, distilled	34	2	8002-26-4	OTJ	OTI/OTL
Tall, fatty acid	34	2	61790-12-3	OTT	
Tall fatty acid (resin acids less than 20%)	34	2	61790-12-3	OTK	OTT
Tall pitch	34		08016-81-7	OTP	
Transformer	33		64742-53-6	OTF	
Tung	34		8001-20-5	OTG	
Turbine	33			OTB	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Used cooking oil	34			OUC	VEO
Used cooking oil (triglycerides, C16-C18, and C18 unsaturated)	34			OUT	VEO
Vacuum gas oil	33		64741-57-7	OVC	
Oleamide solution, see Octadecenoamide solution			301-02-0		ODD
Olefin-Alkyl ester copolymer (molecular weight 2000+)	30			OCP	
Olefin mixture (C7-C9) C8 rich, stabilized	30	3	25339-56-4	OFC	OFW/OFY/OFX
Olefin mixtures (C5-C7)	30	3	25264-93-1	OFY	OAM/OFC/OFW/OFX/OFZ
Olefin mixtures (C5-C15)	30	3	25264-93-1	OFY	OAM/OFC/OFW/OFX/OFZ
Olefins (C13+, all isomers)	30		85535-87-1	OFZ	OAM/OFW
alpha-Olefins (C6-C18) mixtures	30		592-41-6	OAM	OFC/OFW/OFX/OFY/OFZ.
Oleic acid	4		112-80-1	OLA	
Oleum	0	1, 2	8014-95-7	OLM	SAC/SFX.
Oleyl alcohol, see Alcohols (C13+)			143-28-2	OYL	ALY (ASY)
Oleylamine	7		112-90-3	OLY	
Olive oil, see Oil, edible: Olive			8001-25-0		OOL (VEO)
Orange juice (concentrated)	0	1, 3	68514-75-0	OJC	OJN
Orange juice (not concentrated)	0	1, 3	68514-75-0	OJN	OJC
Organomolybdenum amide	10		445409-27-8	OGA	
ORIMULSION, see Asphalt emulsion					ASQ
Oxyalkylated alkyl phenol formaldehyde	33		9003-35-4	OPF	
Oxygenated aliphatic hydrocarbon mixture	0	1, 3		OAH	
Palm acid oil, see Oil, misc.: Palm acid		3	68440-15-3		PLM
Palm fatty acid distillate, see Oil, misc.: Palm fatty acid distillate		3			PFD
Palm kernel acid oil, see Oil, misc.: Palm kernel acid			101403-98		PNO

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Palm kernel acid oil, methyl ester, see Oil, misc.: Palm kernel acid, methyl ester					PNF
Palm kernel oil, see Oil, edible: Palm kernel			8023-79-8		OPO (VEO)
Palm kernel oil fatty acid distillate, see Oil, misc.: Palm kernel fatty acid distillate					PNG
Palm kernel olein, see Oil, edible: Palm kernel olein		3	93334-39-5		PKO (VEO)
Palm kernel stearin, see Oil, edible: Palm kernel stearin		3			PKS (VEO)
Palm mid fraction, see Oil, edible: Palm mid fraction		3	91079-14-0		PFM (VEO)
Palm oil, see Oil, edible: Palm		2, 3	8002-75-3	OPM	VEO/OPE
Palm oil fatty acid methyl ester, see Oil, misc.: Palm fatty acid methyl ester		3			OPE
Palm olein, see Oil, edible: Palm olein		3	93334-39-5		PON (VEO)
Palm stearin, see Oil, edible: Palm stearin			91079-14-0		PMS (VEO)
Parachlorobenzotrifluoride	32		98-56-6	PBF	
Paraffin wax, see Waxes: Paraffin		3	8002-74-2		WPF
n-Paraffins (C10-C20), see n-Alkanes (C10+) all isomers				PFN	ALJ
Paraldehyde	19		123-63-7	PDH	
Paraldehyde-Ammonia reaction product	9			PRB	
Peanut, see Oil, edible: Peanut			8002-03-7		OPN (VEO)
Pentachloroethane	36		76-01-7	PCE	
Pentacosa (oxypropane-2,3-diyl)s	20		923-61-5	POY	
Pentadecanol, see Alcohols (C13+)	.		629-76-5	PDC	ALY
1,3-Pentadiene	30		1574-41-0	PDE	PDN.
1,3-Pentadiene (greater than 50%), Cyclopentene and isomers, mixtures	30	3	1574-41-0	PMM	
Pentaethylene glycol, see Polyethylene glycols			4792-15-8		PEG
Pentaethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			23778-52-1		PAG

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Pentaethylenehexamine	7		4067-16-7	PEN	
Pentaethylenehexamine/Tetraethylenepentamine mixture	7			PEP	
Pentane (all isomers)	31		109-66-0	PTY	IPT/PTA.
Pentanoic acid	4		109-52-4	POC.	
n-Pentanoic acid (64%)/2-Methyl butyric acid (36%) mixture	4			POJ	POC
Pentasodium salt of Diethylenetriaminepentaacetic acid solution, see Diethylenetriaminepentaacetic acid, pentasodium salt solution			140-01-2		DYS
Pentene (all isomers)	30		109-67-1	PTX	PTE.
Pentyl aldehyde	19		110-62-3	PYL	
n-Pentyl propionate	34		624-54-4	PPE	
Perchloroethylene	36	2	127-18-4	PER	TTE.
Petrolatum	33		8009-03-8	PTL	
Phenol	21	2	108-95-2	PHN	PNS.
Phenol solutions (2% or less)	43		108-95-2	PNS	PHN.
1-Phenyl-1-xylyl ethane	32		6196-96-8	PXE	
Phosphate esters	34		68130-47-2	PZE	
Phosphate esters, alkyl (C12-C14) amine	7			PEA	
[[(Phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]]tetrakisphosphonic acid, ammonium salt solution (60% or less)	3			PES	
Phosphoric acid	1	2	7664-38-2	PAC	
Phosphorus, yellow or white	0	1	7723-14-0	PPW	PPB/PPR.
Phosphosulfurized (alternately Phosphosulphurized) bicycle terpene	0	1		PBT	
Phthalate based polyester polyol	0	1, 2	32472-85-8	PBE	
Phthalic anhydride (molten)	11		85-44-9	PAN	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
PIB, see Poly(4+)isobutylene (molecular weight > 224).			9003-27-4		
alpha-Pinene	30		7785-26-4	PIO	PIB/PIN.
beta-Pinene	30		127-91	PIP	PIN/PIO.
Pine oil, see Oil, misc.: Pine			8002-09-3	PNL	OPI
Piperazine (70% or less)	7	3	110-85-0	PIZ	PPB/PPZ
Piperazine (crude)	7		110-85-0	PZC	PPZ/PIZ
Piperazine, 68% solution	7		110-85-0		
Polyacrylic acid solution (40% or less)	43		9003-01-4	PYA	
Polyalkenyl succinic anhydride amine	7		108-30-5	PSN	
Polyalkyl acrylate	14		9003-21-8	PAY	
Polyalkyl (C18-C22) acrylate in Xylene	14			PIX	
Polyalkylalkenaminesuccinimide, molybdenum oxysulfide (alternately oxysulphide)	0	3		PSO	
Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures	40		9038-95-3	PPX	
Polyalkylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether				PGB	PAG
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether	40	2		PAG	
Including:					
Diethylene glycol butyl ether	40		112-34-5		
Diethylene glycol ethyl ether	40		111-90-0		
Diethylene glycol n-hexyl ether	40		112-59-4		
Diethylene glycol methyl ether	40		111-77-3		
Diethylene glycol propyl ether	40		6881-94-3		
Dipropylene glycol butyl ether	40		112-34-5		
Dipropylene glycol methyl ether	40		34590-94-8		
Polyalkylene glycol butyl ether	40		111-76-2		
Polyethylene glycol monoalkyl ether	40		111-80-5		
Polypropylene glycol methyl ether	40		34590-94-8		

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Tetraethylene glycol methyl ether	40		23783-42-8		
Triethylene glycol butyl ether	40		143-22-6		
Triethylene glycol ethyl ether	40		112-50-5		
Triethylene glycol methyl ether	40		112-35-6		
Tripropylene glycol methyl ether	40		25498-49-1		
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate	34			PAF	
Including:					
Diethylene glycol butyl ether acetate	34		124-17-4		
Diethylene glycol ethyl ether acetate	34		112-15-2		
Diethylene glycol methyl ether acetate	34		110-49-6		
Polyalkylene oxide polyol	20			PAO	
Polyalkylene glycols/Polyalkylene glycol monoalkyl ethers mixtures	40			PPX	
Polyalkylene oxide polyol	20			PAO	
Polyalkyl (C10-C20) methacrylate	14		221-657-1	PMT	PYY.
Polyalkyl methacrylate in mineral oil	14			PYY	PMT.
Polyalkyl(C10-C18) methacrylate/Ethylene-propylene copolymer mixture	14			PEM	
Polyalpha olefins	31		115-07-1	PYO	
Polyaluminum (alternately Polyaluminium) chloride solution	1		1327-41-9	PLS	
Polybutadiene, hydroxyl terminated	20		69102-90-5	PHT	
Polybutene	33		9003-29-6	PLB	
Polybutenyl succinimide	10		84605-20-9	PBS	
Polycarboxylic ester (C9+), see Ditridecyl adipate			16958-92-2		DTY
Poly(2+)cyclic aromatics	32		91-20-3	PCA	
Polydimethylsiloxane, see Dimethylpolysiloxane			9016-00-6		DMP
Polyether, borated	41			PED	
Polyether (molecular weight 1350+)	41			PYR	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Polyether polyols	41		25214-63-5	PEO	
Polyethylene glycol	40		25322-68-3	PEG	
Polyethylene glycol dimethyl ether	40		24991-55-7	PEF	
Poly(ethylene glycol) methylbutenyl ether (molecular weight >1000)	40			PBN	
Polyethylene glycol monoalkyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			111-77-3	PEE	PAG
Polyethylene polyamines	7	2	109-89-7	PEB	PEY.
Polyethylene polyamines (more than 50% C5-C20 Paraffin oil)	7	2, 3		PEY	PEB
Polyferric sulfate (alternately sulphate) solution	34		51434-22-1	PSS	
Polyglycerine/Sodium salts solution (containing less than 3% Sodium hydroxide)	20	2		PGT	PGS.
Polyglycerol	20		25618-55-7	PGL	
Poly(iminoethylene)-graft-N-poly(ethyleneoxy) solution (90% or less)	7	3		PIG	PIM
Polyisobutenamine in aliphatic (C10-C14) solvent	7	2		PIB	PIA
(Polyisobutene) amino products in aliphatic hydrocarbons	7	3			
Polyisobutenyl anhydride adduct	11			PBA	
Polyisobutenyl succinimide	10		84605-20-9	PIS	
Poly(4+)isobutylene (molecular weight > 224)	30	3	9003-27-4	PIL	
Polyisobutylene (molecular weight ≤ 224)	30	3	9003-27-4	PIL	
Polyisobutylene succinic anhydride	11		67762-77-0	PYS	
Polymerized esters	34			PYM	
Polymethylene polyphenyl isocyanate	12	2	9016-87-9	PPI	
Polymethylsiloxane	34		9006-65-9	PMX	
Polyolefin (molecular weight 300+)	33			PMW	PLF
Polyolefin amide alkeneamine (C17+)	33			POH	POD

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Polyolefin amide alkeneamine (C28+), see Polyolefin amide alkenamine (C17+)				POD	POH
Polyolefin amide alkeneamine borate (C28-C250)	33		134758-95-5	PAB	
Polyolefin amide alkeneamine in mineral oil	33			PLK	
Polyolefin amide alkeneamine/Molybdenum oxysulfide (alternately oxysulphide) mixture	7			PMO	
Polyolefin amide alkeneamine polyol	20			PAP	
Polyolefin amine (C17+)	7		98761-78-5	POG	
Polyolefinamine (C28-C250)	33			POM	
Polyolefinamine in alkyl(C2-C4) benzenes	32			POF	POR.
Polyolefinamine in aromatic solvent	32	3		POR	POF
Polyolefin aminoester salts (molecular weight 2000+)	34			PAE	
Polyolefin anhydride	11		9006-26-2	PAR	
Polyolefin ester (C28-C250)	34			POS	
Polyolefin in mineral oil	30			PLF	PMW.
Polyolefin phenolic amine (C28-C250)	9			PPH	
Polyolefin phosphorosulfide (alternately phosphorosulphide), barium derivative (C28-C250)	34			PPS	
Poly (oxyalkylene) alkenyl ether (molecular weight > 1000)	41	3	9005-00-9	PXY	
Polyoxybutylene alcohol	41		9002-92-0	PXA	
Poly(20)oxyethylene sorbitan monooleate	34		9005-65-6	PSM	
Polyoxypropylenediamine (molecular weight 2000)	7			PYD	
Poly(5+) propylene	30		9003-07-0	PLQ	PLP
Polypropylene glycol	40	2	25322-69-4	PGC	
Polypropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			107-98-2	PGM	PAG
Polysiloxane	34		63148-53-8	PSX	
Polysiloxane/White spirit, low (15-20%) aromatic	34			PWS	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Poly(tetramethylene ether) glycols (molecular weight 950-1050), see alpha-hydro-omega-Hydroxytetradeca(oxytetramethylene)			25190-06-1	PYU	HTO
Polytetramethylene ether glycol	40		25190-06-1	PYT	HTO/PYU/PYS
Poppy seed, see Oil, edible: Poppy seed			8002-11-7		OPS (VEO)
Poppy, see Oil, edible: Poppy					OPY (VEO)
Potassium chloride solution	43		7447-40-7	PCU	PCD/PSD.
Potassium chloride solution (10% or more)	43		7447-40-7	PCS	PCD/PCU.
Potassium chloride solution (less than 26%)	43		7447-40-7	PSD	CLM/DRL/PCS/PCU.
Potassium formate solutions	34		590-29-4	PFR	
Potassium hydroxide solution, see Caustic potash solution		2	1310-58-3		CPS/PTH
Potassium oleate	34		143-18-0	POE	
Potassium polysulfide (alternately polysulphide)/Potassium thiosulfide (alternately thiosulphide) solution (41% or less)	0	1		PYP	PSF/PTF
Potassium salt of polyolefin acid	34			PSP	
Potassium thiosulfate (alternately thiosulphate) (50% or less)	43		10294-66-3	PTF	
Propane	31		74-98-6	PRP	LPG.
iso-Propanolamine, see Isopropanolamine			78-96-6		MPA (PAX/PLA)
n-Propanolamine	8		107-10-8	PLA	MPA/PAX.
2-Propene-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer solution	0	1, 3		PLN	
Propionaldehyde	19		123-38-6	PAD	
beta-Propiolactone	18	3	57-57-8	PLT	
Propionic acid	4		79-09-4	PNA	
Propionic anhydride	11		123-62-6	PAH	
Propionitrile	37		107-12-0	PCN	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
n-Propoxypropanol, see Propylene glycol monoalkyl ether			1569-01-3	PXP	PGE
n-Propyl acetate	34		109-60-4	PAT	IAC.
n-Propyl alcohol	20	2	71-23-8	PAL	IPA.
n-Propyl chloride	36		540-54-5	PRC	
Propyl ether	41		557-17-5		IPE/PRE
n-Propylamine	7		107-10-8	PRA	IPO/IPP/IPQ
iso-Propylamine solution, see Isopropylamine (70% or less) solution			75-31-0		IPQ (IPO/IPP/PRA)
Propylbenzenes (all isomers), see Alkyl (C3-C4) benzenes			103-65-1	PBY	AKC (CUM/PBZ)
iso-Propyl cyclohexane, see Isopropylcyclohexane			696-29-7		IPX
Propylene	30		115-07-1	PPL	
Propylene-Butylene copolymer	30		29160-13-2	PBP	
Propylene carbonate	34		108-32-7	PLC	
Propylene dimer	30		26824-72-2	PDR	
Propylene glycol	20	2	57-55-6	PPG	
Propylene glycol n-butyl ether, see Propylene glycol monoalkyl ether			5131-66-8	PGD	PGE
Propylene glycol ethyl ether, see Propylene glycol monoalkyl ether			1569-02-4	PGY	PGE
Propylene glycol methyl ether, see Propylene glycol monoalkyl ether		2	107-98-2	PME	PGE
Propylene glycol methyl ether acetate	34	2	108-65-6	PGN	
Propylene glycol monoalkyl ether	40			PGE	
Including:					
n-Propoxypropanol	40		30136-13-1		
Propylene glycol n-butyl ether	40		5131-66-8		
Propylene glycol ethyl ether	40		1569-02-4		
Propylene glycol methyl ether	40		107-98-2		

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Propylene glycol propyl ether	40		1569-01-3		
Propylene glycol phenyl ether	40		770-35-4	PGP	
Propylene glycol propyl ether, see Propylene glycol monoalkyl ether			1569-01-3		PGE
Propylene oxide	16		75-56-9	POX	
Propylene tetramer	30		6842-15-5	PTT	
Propylene trimer	30		13987-01-4	PTR	
Propylene/Propane/MAPP gas mixture	30	2		PPM	
Pseudocumene, see Trimethylbenzene (all isomers)			95-63-6		TMB/TMD/TME/TRE
Pyridine	9		110-86-1	PRD	
Pyridine bases, see Paraldehyde-Ammonia reaction product					PRB
Pyrolysis gasoline (containing Benzene)	32	3	68477-58-7	PYG	GPY
Rapeseed oil (low erucic acid containing less than 4% free fatty acids), see Oil, edible: Rapeseed (low erucic acid containing less than 4% free fatty acids)		3	8002-13-9		ORO (VEO)
Rapeseed oil fatty acid methyl esters, see Oil, misc.: Rapeseed fatty acid methyl esters		3	73891-99-3		RSO
Rapeseed oil, see Oil, edible: Rapeseed			8002-13-9		ORO (VEO)
Refrigerant gases	0	1		RFG	
Resin oil, distilled, see Oil, misc.: Resin, distilled		3			ORR (ORS)
Rice bran oil, see Oil, edible: Rice bran			68553-81-1		ORB
Rosin soap (disproportionated) solution	43		61790-50-9	RSP	
Rosin, see Oil, misc.: Rosin			8050-09-7		ORN
Rum, see Alcoholic beverages, n.o.s.			64-17-5		ABV
Safflower oil, see Oil, edible: Safflower			8001-23-8		OSF (VEO)
Sewage sludge	43			SWS	
Shea butter, see Oil, edible: Shea butter		3	194043-92-0		OSH (VEO)
Silica slurry	43		69012-64-2	SLC	
Siloxanes	34		9011-19-2	SLX	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Sludge, treated	43			SWA	
Sodium acetate solutions	34		127-09-3	SAN	
Sodium acetate, Glycol, Water mixture (containing 1% or less Sodium hydroxide) (if non-flammable or non-combustible)	5	2		SAY	SAO/SAP/SAQ/SAY
Sodium acetate, Glycol, Water mixture (containing Sodium hydroxide)	5			SAQ	SAO/SAP/SAW/SAY
Sodium acetate, Glycol, Water mixture (not containing Sodium hydroxide)	34	2		SAW	SAO/SAP/SAQ/SAY
Sodium alkyl (C14-C17) sulfonates (alternately sulphonates) (60-65% solution)	34			SSU	AKA/AKE
Sodium aluminate solution	5		11138-49-1	SAV	SAU.
Sodium aluminate solution (45% or less)	5		11138-49-1	SAU	SAV.
Sodium aluminosilicate slurry	34		1344-00-9	SLR	
Sodium benzoate	34		532-32-1	SBN	SBM
Sodium bicarbonate solution (less than 10%)	34	3	144-55-8	SBC	
Sodium borohydride (15% or less)/Sodium hydroxide solution	5			SBX	CSS/SBH/SBI/SHD.
Sodium bromide solution (less than 50%)	43	3	7647-15-6	SBL	SBR
Sodium carbonate solution	5		497-19-8	SCE	
Sodium chlorate solution (50% or less)	0	1, 2	7775-09	SDD	SDC.
Sodium cyanide solution	5		143-33-9	SCO	SCN/SCS.
Sodium dichromate solution (70% or less)	0	1, 2	7789-12-0	SDL	SCR.
Sodium dimethyl naphthalene sulfonate solution, see Dimethyl naphthalene sulfonic (alternately sulphonic) acid, sodium salt solution			532-02-5		DNS
Sodium hydrogen sulfide (alternately sulphide) (6% or less)/Sodium carbonate (3% or less) solution	0	1, 2, 3		SSS	SCE/SHW
Sodium hydrogen sulfite (alternately sulphite) solution (45% or less)	43		7631-90-5	SHY	SHX

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Sodium hydrosulfide (alternately hydrosulphide)/Ammonium sulfide (alternately sulphide) solution	5	2		SSA	ASF/ASS
Sodium hydrosulfide (alternately hydrosulphide) solution (45% or less)	5	2	16721-80-5	SHR	
Sodium hydroxide solution, see Caustic soda solution		2	1310-73-2		CSS (SHD)
Sodium hypochlorite solution (15% or less)	5		7681-52-9	SHP	SHC/SHQ.
Sodium hypochlorite solution (20% or less)	5		7681-52-9	SHQ	SHC/SHP.
Sodium lignosulfonate (alternately lignosulphonate) solution	43		8061-51-6	SLG	LNL
Sodium long-chain alkyl salicylate (C13+)	34		84539-60-6	SLS	
Sodium-2-mercaptobenzothiazol solution, see Mercaptobenzothiazol, sodium salt solution			2492-26-4		SMB
Sodium methoxide (25% in methanol)	0	1	124-41-4	SMO	
Sodium methylate 21-30% in methanol	0	1, 2, 3	124-41-4	SMT	SMS
Sodium naphthalene sulfonate (alternately *sulphonate*) *solution, see* Naphthalene sulfonic (alternately sulphonic) acid (40% or less), sodium salt solution (40% or less)			532-02-5	SNS	NSA (NSB)
Sodium naphthenate solution, see Naphthenic acid, sodium salt solution			61790-13-4		NTS
Sodium nitrite solution	5		7632-00-0	SNI	SNT.
Sodium N-methyl dithio carbamate solution, see Metam sodium solution			137-42-8	MSS	SMD
Sodium petroleum sulfonate (alternately sulphonate)	34		68608-26-4	SPS	
Sodium poly(4+)acrylate solution	43	2	9003-04-7	SOP	SOO
Sodium polyacrylate solution	43	2	9003-04-7	SOO	SOP
Sodium salt of Ferric hydroxyethylethylenediaminetriacetic acid solution, see Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution			139-89-9	STA	FHX

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Sodium silicate solution	43	2	1344-09-8	SSN	SSC.
Sodium sulfate (alternately sulphate) solution	34	3	7757-82-5	SST	SSO
Sodium sulfide (alternately sulphide) solution (15% or less)	43		1313-82-2	SDR	SDS
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H_2S 15 ppm or less)	0	1, 2		SSH	SDS/SHR/SSI/SSJ
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H_2S greater than 15 ppm but less than 200 ppm)	0	1, 2		SSI	SDS/SHR/SSH/SSJ
Sodium sulfide (alternately sulphide)/Hydrosulfide (alternately Hydrosulphide) solution (H_2S greater than 200 ppm)	0	1, 2		SSJ	SDS/SHR/SSH/SSI
Sodium sulfite (alternately sulphite) solution (25% or less)	43		7757-83-7	SUP	SSF/SUS
Sodium tartrates/Sodium succinates solution	43			STM	
Sodium thiocyanate solution (56% or less)	0	1, 2	540-72-7	STS	SCY.
Sorbitol solution	20		50-70-4	SBU	SBT.
Soyabean fatty acid methyl ester, see Oil, misc.: Soyabean fatty acid methyl ester			67784-80-9		OST
Soyabean oil (epoxidized)	34		8013-07-8		OSC/EVO
Soyabean oil, see Oil, edible: Soyabean		2	8001-22-7		OSB (VEO)
Stearic acid, see Fatty acids (saturated, C13+)			57-11-4	SRA	FAD (FAB/FAE/FDI/FDT)
Stearyl alcohol	20		112-92-5	SYL	ALY/ASY.
Stoddard solvent, see Naphtha: Stoddard solvent			8032-32-4		NSS
Styrene monomer	30		100-42-5	STY	
Sulfohydrocarbon (alternately Sulphohydrocarbon) (C3-C88)	33			SFO	
Sulfohydrocarbon (alternately Sulphohydrocarbon), long-chain (C18+) alkylamine mixture	7			SFX	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Sulfolane (alternately Sulpholane)	39		126-33-0	SFL	
Sulfonated (alternately Sulphonated) polyacrylate solutions	43	2		SPA	
Sulfur (alternately Sulphur) (molten)	0	1, 2	7704-34-9	SXX	
Sulfur (alternately Sulphur) dioxide	0	1	7446-09-5	SFD	
Sulfuric (alternately Sulphuric) acid	2	2	7664-93-9	SFA	SAC
Sulfuric (alternately Sulphuric) acid, spent	2	2	7664-93-9	SAC	SFA
Sulfurized (alternately Sulphurized) fat (C14-C20)	33			SFT	
Sulfurized (alternately Sulphurized) polyolefinamide	10			SPY	
Sulfurized (alternately Sulphurized) polyolefinamide alkene (C28-C250) amine	33			SPO	
Sunflower seed oil, see Oil, edible: Sunflowerseed	34		8001-21-6		OSN (VEO)
Sym-trichlorobenzene, see 1,2,4-Trichlorobenzene.			108-70-3		
Tall oil, see Oil, misc.: Tall			8002-26-4		OTL (OTI/OTJ)
Tall oil, crude, see Oil, misc.: Tall, crude		2, 3	8002-26-4		OTI (OTJ/OTL)
Tall oil, distilled, see Oil, misc.: Tall, distilled		3	8002-26-4		OTJ (OTI/OTL)
Tall oil, fatty acid, see Oil, misc.: Tall fatty acid		2	61790-12-3		OTT
Tall oil fatty acid (resin acids less than 20%), see Oil, misc.: Tall oil fatty acid (resin less than 20%)		2			OTK (OTT)
Tall oil fatty acid, barium salt	0	1, 2		TOB	
Tall oil pitch, see Oil, misc.: Tall pitch		3	08016-81-7		OTP (OTI/OTJ/OTL)
Tall oil soap (crude)	34			TOR	TOS
Tall oil soap (disproportionated) solution	43			TOS	
Tallow	34	2	61789-97-7	TLO	
Tallow alcohol, see Alcohols (C13+)		2	67762-27-0	TFA	ALY (ASY)
Tallow alkyl nitrile	37			TAN	
Tallow fatty acid	34	2	61790-37-2	TFD	
Tallow fatty alcohol, see Alcohols (C13+)		2	67762-27-0	TFA	ALY
TAME, see tert-Amyl methyl ether			994-05-8		AYE
Tertiary butylphenols	21		128-39-2	BLT	BTP

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Tetrachloroethane	36		79-34-5	TEC	
1,1,2,2-Tetrachloroethane, see Tetrachloroethane	36		79-34-5	TEC	TEE
Tetradecanol, see Alcohols (C13+)			112-72-1	TTN	ALY
Tetradecene, see olefins or alpha-olefin entries			1120-36-1		OAM/OFY/OFW/OFZ/TDD
Tetradecylbenzene, see Alkyl (C9+) benzenes			1459-10-5	TDB	AKB
Tetraethyl silicate monomer/oligomer (20% in ethanol)	0	1, 3		TSM	
Tetraethylene glycol	40		112-60-7	TTG	
Tetraethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			23783-42-8		PAG
Tetraethylenepentamine	7	2	112-57-2	TTP	
Tetrahydrofuran	41		109-99-9	THF	
Tetrahydronaphthalene	32		119-64-2	THN	
Tetramethylbenzene (all isomers)	32		527-53-7	TTC	TTB.
1,2,3,5-Tetramethylbenzene, see Tetramethylbenzene (all isomers)			527-53-7	TTB	TTC
Tetrapropylbenzene, see Alkyl(C9+)benzenes					AKB
Tetrasodium salt of ethylenediaminetetraacetic acid solution, see Ethylenediaminetetraacetic acid, tetrasodium salt solution			13235-36-4		EDS
Titanium dioxide slurry	43		13463-67-7	TDS	
Titanium tetrachloride	2		7550-45-0	TTT	
Toluene	32	2	108-88-3	TOL	
Toluene diisocyanate	12	2	584-84-9		TDI
Toluenediamine	9		95-80-7	TDA	
o-Toluidine	9	2	95-53-4	TLI	TOD/TOI
Triarylphosphate, see Triisopropylated phenyl phosphates			115-86-6	TRA	TPL
Tributyl phosphate	34		126-73-8	TBP	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
1,2,3-Trichlorobenzene (molten)	36	3	120-82-1	TBZ	TCB
1,2,4-Trichlorobenzene	36		120-82-1	TCB	TBZ.
1,2,3-Trichlorobenzol, see 1,2,3-Trichlorobenzene (molten)			87-61-6	TBZ	TCB
1,1,1-Trichloroethane	36	2	71-55-6	TCE	TCM.
1,1,2-Trichloroethane	36		79-00-5	TCM	TCE.
Trichloroethylene	36	2	79-01-6	TCL	
1,1,2-Trichloro-1,2,2-trifluoroethane	36		76-13-1	TTF	
Tricresyl phosphate (containing 1% or more ortho-isomer)	34	3	78-30-8 (o isomer)	TCO	TCP/TCQ
Tricresyl phosphate (containing less than 1% ortho-isomer)	34	3	1330-78-5	TCP	TCO/TCQ
1,2,3-Trichloropropane	36	2	96-18-4	TCN	
Tridecane (all isomers), see n-Alkanes (C10+) (all isomers)			629-50-5	TRD	ALV (ALJ)
Tridecanoic acid	34		638-53-9	TDO	
Tridecanol, see Alcohols (C13+)			112-70-9	TDN	ALY (ASK/ASY/AYK/LAL)
Tridecene, see Olefins (C13+ all isomers)			2437-56-1	TRD	OAM/OFY/OFW/OFZ/ TDC
Tridecyl acetate	34		1072-33-9	TAE	
Tridecylbenzene, see Alkyl (C9+) benzenes			123-02-4	TRB	AKB
Triethanolamine	8	2	102-71-6	TEA	
Triethylamine	7		121-44-8	TEN	
Triethylbenzene	32		102-25-0 (1,3,5)	TEB	
Triethylene glycol	40		112-27-6	TEG	
Triethylene glycol butyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			143-22-6	TBE	PAG
Triethylene glycol butyl ether mixture	40		143-22-6	TBD	
Triethylene glycol di-(2-ethylbutyrate)	34		95-08-9	TGD	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Triethylene glycol dibenzoate	34		120-56-9	TGB	
Triethylene glycol ether mixture	40		112-35-6	TYM	
Triethylene glycol ethyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			112-50-5	TGE	PAG
Triethylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether			112-35-6	TGY	PAG
Triethylenetetramine	7	2	112-24-3	TET	
Triethyl phosphate	34		78-40-0	TPS	
Triethyl phosphite	34	2	122-52-1	TPI	
Triisobutylene	30		7756-94-7	TIB	
Triisooctyl trimellitate	34		27251-75-8	TIS	
Triisopropanolamine	8		122-20-3	TIP	
Triisopropanolamine salt of 2,4-Dichlorophenoxyacetic acid solution, see 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt solution					DTI
Triisopropylated phenyl phosphates	34		26967-76-0	TPL	
Trimethylacetic acid	4		75-98-9	TAA	
Trimethylamine solution (30% or less)	7		75-50-3	TMT	TMA.
Trimethylbenzene (all isomers)	32		95-63-6 (1,2,4)	TRE	TMB/TMD/TME.
Trimethyl nonanol, see Dodecyl alcohol			112-53-8		DDN (ASK/ASY/LAL)
Trimethylol propane polyethoxylated	20		50586-59-9	TPR	
Trimethyl phosphite	34	2	121-45-9	TPP	
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-)	12		28679-16-5	THI	
Trimethylhexamethylenediamine (2,2,4- and 2,4,4-)	7		25513-64-8	THA	
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	34		6846-50-0	TMQ	
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate	34		18491-15-1	TMP	
2,2,4-Trimethyl-3-pentanol-1-isobutyrate	34			TMR	
1,3,5-Trioxane	41	2	110-88-3	TRO	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Triphenylborane (10% or less)/Caustic soda solution	5		960-71-4	TPB	
Tripropylene, see Propylene trimer			13987-01-4		PTR
Tripropylene glycol	40		24800-44-0	TGC	
Tripropylene glycol methyl ether, see Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether			25498-49-1	TGM	PAG
Trisodium nitrilotriacetate solution, see Nitrilotriacetic acid, trisodium salt solution			5064-31-3	TSO	NCA (TSN)
Trisodium phosphate solution	5		10101-89-0	TSP	
Trisodium salt of N-(Hydroxyethyl)ethylenediaminetriacetic acid solution, see N-(Hydroxyethyl)ethylenediaminetriacetic acid, trisodium salt solution			207386-87-6		HET
Trixylyl phosphate	34		25155-23-1		TRP
Trixylenyl phosphate, see Trixylyl phosphate			25155-23-1		TRP
Tung oil, see Oil, misc.: Tung			8001-20-5		OTG
Turpentine	30		9005-90-7	TPT	
Turpentine substitute, see White spirit (low (15-20%) aromatic)			8052-41-13		WSL (WSP)
Undecane (all isomers), see Alkanes (C10+) (all isomers)			1120-21-4	UDN	ALV (ALJ)
Undecanoic acid	4		112-37-8	UDA	
Undecanol, see Undecyl alcohol			112-42-5		UND (ALR)
Undecene	30		1120-21-4	UDD	UDC.
1-Undecene	30		821-95-4	UDC	UDD.
Undecyl alcohol	20		112-42-5	UND	ALR.
Undecylbenzene, see Alkyl (C9+) benzenes			67774-74-7	UDB	AKB
Urea solution	43		57-13-6	USL	URE
Urea, Ammonium mono- and di-hydrogen phosphate/Potassium chloride solution	0	1		UPX	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Urea/Ammonium nitrate solution (containing less than 1% free Ammonia)	43	2		UAU	ANU/UAS/UAT/UAV
Urea/Ammonium nitrate solution (containing 1% or more free Ammonia)	6			UAT	ANU/UAS
Urea/Ammonium phosphate solution	43			UAP .	
Vacuum gas oil, see oil misc.: Vacuum gas oil	33		64741-57-7	OVC	
Valeraldehyde (all isomers)	19		110-62-3	VAK	IVA/VAL
Vanillin black liquor (free alkali content 3% or more)	5		68514-06-7	VBL	
Vegetable acid oils, n.o.s.	34			VAD	
Including:					
Corn acid oil	34		68308-50-9		
Cottonseed acid oil	34		68308-51-0		
Dark mixed acid oil	34				
Groundnut acid oil	34				
Mixed acid oil	34				
Mixed general acid oil	34				
Mixed hard acid oil	34				
Mixed soft acid oil	34				
Rapeseed acid oil	34		112-86-7		
Safflower acid oil	34				
Soya acid oil	34		68308-53-2		
Sunflower seed acid oil	34		84625-38-7		
Vegetable oil mixtures, containing less than 15% free fatty acid (m)	34			VEO	
Vegetable fatty acid distillates, n.o.s.	34	3		VFD	
Including:					
Palm kernel fatty acid distillate	34		67701-05-7		
Palm oil fatty acid distillate	34		68440-15-3		
Tall fatty acid distillate	34		61790-12-3		
Tall oil fatty acid distillate	34		61790-12-3		

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

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Peanut oil	34		8002-03-7		
Peel oil (oranges and lemons)	34		8008-56-8		
Perilla oil	34		68132-21-8		
Pine oil	34		8002-09-3		
Poppy seed oil	34		8002-11-7		
Poppy oil	34				
Raisin seed oil	34		8024-22-4		
Rapeseed oil	34		8002-13-9		
Rapeseed (low erucic acid containing less than 4% free fatty acids)	34	3			
Resin oil, distilled	30	3			
Rice bran oil	34		68553-81-1		
Rosin oil	34		8002-16-2		
Safflower oil	34		8001-23-8		
Salad oil	34		68956-68-3		
Sesame oil	34		8008-74-0		
Shea butter	34		194043-92-0		
Soyabean oil	34	2	8001-22-7		
Sunflower seed oil	34		8001-21-6		
Tall	34		8002-26-4		
Tall, crude	34		8002-26-4		
Tall, distilled	34		8002-26-4		
Tall, pitch	34		8016-81-7		
Tucum oil	34		98143-57-8		
Tung oil	34		8001-20-5		
Walnut oil	34		8024-09-7		
Vegetable protein solution (hydrolyzed)	43		100209-45-8	VPS	
Vinyl acetate	13	2	108-05-4	VAM	
Vinyl chloride	35		75-01-4	VCM	

Chemical name	Group No.	Footnote	CAS No.	CHRIS Code	Related CHRIS Codes
Vinyl ethyl ether	13		109-92-2	VEE	
Vinylidene chloride	35		75-35-4	VCI	
Vinyl neodecanoate	13	2	51000-52-3	VND	
Vinyltoluene	13		25013-15-4	VNT	
Water	43		7732-18-5	WTR	
Waxes				WAX	
Including:					
Candelilla	34		8006-44-8	WCD	
Carnauba	34		8015-86-9	WCA	
Hydrocarbon	31			WHC	WPF
Paraffin	31		8002-74-2	WPF	
Petroleum	33			WPT	
White spirit, see White spirit (low (15-20%) aromatic)			8052-41-13	WSP	WSL
White spirit (low (15-20%) aromatic)	33		8052-41-3	WSL	WSP.
Wine, see Alcoholic beverages			64-17-5	ABV	
Wood lignin with Sodium acetate/oxalate	0	1, 3		WOL	
Xylenes	32	2	106-42-3	XLX	XLM/XLO/XLP
Xylenes/Ethylbenzene (10% or more) mixture	32			XEB	
Xylenols	21		105-67-9	XYL	
Zinc alkaryl dithiophosphate (C7-C16)	34			ZAD	
Zinc alkenyl carboxamide	10			ZAA	WSL
Zinc alkyl dithiophosphate (C3-C14)	34		688649-42-3	ZAP	
Zinc bromide/Calcium bromide solution, see Drilling brine (containing Zinc salts)			7699-45-8		DZB

Notes:

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

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

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

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

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

5. Amend Table 2 to part 150 as follows:

a. Under Group 0, after the entry for "n-Octyl Mercaptan", add, in alphanumeric order, the entries, "Offshore contaminated bulk liquid P" and "Offshore contaminated bulk liquid S";

b. Under Group 4, after the entry for "Dimethyl octanoic acid", add, in alphanumeric order, the entries, "Fish protein concentrate (containing 4% or less formic acid)" and "Fish silage protein concentrate (containing 4% or less formic acid)";

c. Under Group 7, remove the entry for "Poly olefin amine"

d. Under Group 9, after the entry for "2-Ethyl-6-methyl-N-(1′-methyl-2-methoxyethyl)aniline", add, in alphanumeric order, the entries, "1,3,5-Hexahydrotriethanol-1,3,5-triazine solution" and "Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)";

e. Under Group 20:

i. After the entry for "Alcohol (C6-C17) (secondary) poly (3-6) ethoxylates" add an entry for "Alcohol (C10-C18) poly (7) ethoxylates";

ii. After the entry for "Alcohols (C13+)", add an entry for "Alkyl/cyclo (C4-C5) alcohols";

iii. After the entry for "Dodecyl alcohol (all isomers)", add an entry for "n-Dodecyl mercaptan"; and

iv. After the entry for "Ethylene glycol.[1]", add, in alphanumeric order, the entries, "Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture" and "Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture";

f. Under Group 21:

i. After the entry "Alkylated (C4-C9) hindered phenols", add an entry for "Alkylphenols (C10-C18, C12 rich)";

ii. After the entry for “Cresols (all isomers)” add an entry for “Cresol/Phenol/Xylenol mixture”; and

iii. After the entry for “Long-chain alkylphenate/Phenol sulfide (alternately sulphide) mixture”, add, in alphanumeric order, the entries, “Long-chain alkylphenol (C14-C18)” and “Long-chain alkylphenol (C18-C30)”;

g. Under Group 30, after the entry for “Dodecene (all isomers)”, add an entry for “1-Dodecene”;

h. Under Group 31, after the entry for “Heptadecane (all isomers)”, add an entry for “Hydrocarbon wax”;

i. Under Group 32:

i. After the entry for “Alkyl (C5-C8) benzenes”, add an entry for “Alkylbenzenes mixtures (containing naphthalene)”; and

ii. After the entry for “Hexylbenzenes”, add an entry for “Naphthalene crude (molten)”;

j. Under Group 34:

i. After the entry for “Cod liver oil”, add, in alphanumeric order, the entries, “Cyclohexane-1,2-dicarboxylic acid,diisononyl ester” and “2,6-Diaminohexanoic acid phosphonate mixed salts solution”;

ii. Under the entry, “Oil, misc.:”, add, in alphanumeric order, the subentries, “Used cooking oil” and “Used cooking oil (triglycerides, C16-C18 and C18 unsaturated)”;

iii. After the entry for “Phosphate esters”, add an entry for “[[(Phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]]tetrakisphosphonic acid, ammonium salt solution (60% or less)”; and

iv. Under the entry for “Vegetable acid oils, n.o.s.”, add, in alphanumeric order, a subentry for “Vegetable oil mixtures, containing less than 15% free fatty acid (m)”;

k. Under Group 40:

i. After the entry for ”Alkyl (C9-C15) phenyl propoxylate”, add an entry for “Alkyl (C10-C15, C12 rich) phenol poly (4-12)ethoxylate”;

ii. Remove the entry for “Diethylene glycol n-hexyl ethe” and add, in its place, an entry for “Diethylene glycol n-hexyl ether”;

iii. Remove the entry for “Glucitol/glycerol blend propoxylated (containing less than 10% amines)” and add, in its place, an entry for “Glucitol/Glycerol blend propoxylated (containing less than 10% amines)”; and

iv. After the entry for: “Glucitol/Glycerol blend propoxylated (containing less than 10% amines)”, add an entry for “Glucitol/Glycerol blend propoxylated (containing 10% or more amines)”;

l. Under Group 41, after the entry for “Alkaryl polyethers (C9-C20)”, add an entry for “tert-Amyl ethyl ether”; and

m. Under Group 43:

i. After the entry for “Corn syrup”, add an entry for “Cyclohexane oxidation products, sodium salts solution”, and;

ii. Remove the entry for “N-Methylglucamine solution (70% or less)”.

The additions read as follows:

Table 2 to Part 150 – Grouping of Cargoes

Group	**Cargo**
0.Unassigned Cargoes	* * * * * * *
	Offshore contaminated bulk liquid P
	Offshore contaminated bulk liquid S
* * * * * * *	
4. Organic Acids	* * * * * * *
	Fish protein concentrate (containing 4% or less formic acid)

	Fish silage protein concentrate (containing 4% or less formic acid)
* * * * * * *	
9. Aromatic Amines	* * * * * * *
	1,3,5-Hexahydrotriethanol-1,3,5-triazine solution
	Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)
* * * * * * *	
20. Alcohols, Glycols	* * * * * * *
	Alcohol (C10-C18) poly (7) ethoxylates
* * * * * * *	
	Alkyl/cyclo (C4-C5) alcohols
* * * * * * *	
	n-Dodecyl mercaptan
* * * * * * *	
	Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture
	Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture
* * * * * * *	
21. Phenols, Cresols	* * * * * * *
	Alkylphenols (C10-C18, C12 rich)
* * * * * * *	
	Cresol/Phenol/Xylenol mixture
* * * * * * *	
	Long-chain alkylphenol (C14-C18)
	Long-chain alkylphenol (C18-C30)
* * * * * * *	
30. Olefins	* * * * * * *
	1-Dodecene
31. Paraffins	* * * * * * *
	Hydrocarbon wax
* * * * * * *	
32. Aromatic Hydrocarbons	* * * * * * *
	Alkylbenzenes mixtures (containing naphthalene)
* * * * * * *	
	Naphthalene crude (molten)
* * * * * * *	
34. Esters	* * * * * * *
	Cyclohexane-1,2-dicarboxylic acid,diisononyl ester
	2,6-Diaminohexanoic acid phosphonate mixed salts solution
	* * * * * * *
	Oils, misc:
	* * * * * * *

	Used cooking oil
	Used cooking oil (triglycerides, C16-C18 and C18 unsaturated)
	* * * * * * *
	[[(Phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]]tetrakisphosphonic acid, ammonium salt solution (60% or less)
	* * * * * * *
	Vegetable acid oils, n.o.s.:
	* * * * * * *
	Vegetable oil mixtures, containing less than 15% free fatty acid (m)
	* * * * * * *
40. Glycol Ethers	* * * * * *
	Alkyl (C10-C15, C12 rich) phenol poly (4-12)ethoxylate
	* * * * * * *
	Diethylene glycol n-hexyl ether
	* * * * * * *
	Glucitol/Glycerol blend propoxylated (containing less than 10% amines)
	Glucitol/Glycerol blend propoxylated (containing 10% or more amines)
	* * * * * * *
41. Ethers	* * * * * * *
	tert-Amyl ethyl ether
	* * * * * * *
43. Miscellaneous Water Solutions	* * * * * * *
	Cyclohexane oxidation products, sodium salts solution
	* * * * * * *

* * * * * * *

6: Amend Appendix I to part 150 as follows:

a. In the table in paragraph (a):

i. In the “Member of reactive group” column, after the entry for “Caustic soda 50% or less (5)”, add an entry for “2,4, D Dimethyl amine salt (DMA 806) (0)”, and, to the “Compatible with” column, add the entries, in alphanumeric order, “Acetone (18)”, “Ethyl Acrylate (14)”, “Methyl Alcohol (20)”, and “Toluene (32)”;

ii. In the “Member of reactive group” column, remove the entry for “Dimethyl disulfide (alternately disulfide) (0)” and replace it with an entry for “Dimethyl disulfide (alternately disulphide) (0)”;

iii. In the “Member of reactive group” column, after the entry for “tert-Dodecanethiol (20)”, add the entry for “tert-Dodecanethiol (Sulfole 120) (0)”, and, in the “Compatible with” column, add the entries, in alphanumeric order, “Acetone (18)”, “Ethyl Acrylate (14)”, “Methyl Alcohol (20)”, “Polymeric methylene diphenyl diisocyanate (Papi 27) (12)”, and “Toluene (32)”;

iv. In the “Member of reactive group” column, after the new entry for “tert-Dodecanethiol (Sulfole 120) (0)”, add an entry for “tert-Dodecanethiol (0)”, and, in the “Compatible with” column, add the entries, in alphanumeric order, “All Chemicals in Group 33” and “Acetone (18)”;

v. In the “Member of reactive group” column, after the new entry for “tert-Dodecanethiol (0)”, add an entry for “n-Dodecyl mercaptan (0)”, and, in the “Compatible with” column, add an entry, in alphanumeric order, for “All chemicals in Group 33”;

vi. In the “Member of reactive group” column, after the entry for “Ethylenediamine (7)”, add an entry for “Hexamethylenediamine (7)”, and, in the “Compatible with” column, add, in alphanumeric order, an entry for “Ethyl Alcohol (Ethanol) (20)”;

vii. In the “Member of reactive group” column, after the new entry for “Hexamethylenediamine (7)”, add an entry for “Hexamethylenediamine (molten) (HMD 98%, molten) (7)”, and in the “Compatible with” column add the entries, in alphanumeric order, “N-Butyl Alcohol (20)”, “Isobutyl Alcohol (20)”, and “Isopropyl Alcohol (20)”;

viii. In the “Member of reactive group” column, after the new entry for “Hexamethylenediamine (molten) (HMD 98%, molten) (7)”, add an entry for

“Hexamethylenediamine solution (7)”, and, in the “Compatible with” column, add an entry for “CepSinol ™ 1216 (Alcohols (C12+), primary, linear) (20)”;

ix. In the “Member of reactive group” column, after the new entry for “Hexamethylenediamine solution (7)”, add an entry for “Hexamethylenediamine solution (HMD 90%) (7)”, and, in the “Compatible with” column, add, in alphanumeric order, the entries, “N-Butyl Alcohol (20)”, “Isobutyl Alcohol (20)”, and “Isopropyl Alcohol (20)”;

x. In the “Member of reactive group” column, after the entry for “Oleum (0)”, add an entry for “Phenol (90% hydrated) (21)”, and, in the “Compatible with” column, add an entry for “Toluene diisocyante (12)”;

xi. In the “Member of reactive group” column, after the entry for “Sodium dichromate solution (70% or less) (0)”, add an entry for “Sodium Hydrosulfide (alternatively Hydrosulphide) Solution (5)”, and, in the “Compatible with” column, add an entry for “Ethyl Alcohol (Ethanol) (20)”;

xii. In the “Member of reactive group” column, after the entry for “Sodium Methylate 21-30% in methanol (0)”, add an entry for “Sodium Methylate, 30% solution in Methanol (0)”, and, in the “Compatible with” column, add, in alphanumeric order, the following entries:

A. n-Butyl Alcohol (20);

B. Decene (30);

C. Decyl Alcohol (20);

D. Dialkyl (C9-C10) phthalates (34);

E. Dichloromethane (36);

F. Ethanolamine (8) (including Monoethanolamine);

G. Hexene (all isomers) (30);

H. Methyl Isobutyl Ketone (18);

I. Olefin mixtures (C5-C15) (30);

J. Olefins (C13+ all isomers) (30);

K. Phenol (21);

L. n-Propyl Alcohol (20);

M. Propylheptanol (20);

N. C9-Resinfeed (32);

O. Sodium Borohydride (15% or less)/Sodium hydroxide solution (5);

P. Solvent Naphtha (33);

Q. Styrene Monomer (30);

R. Toluene (32); and

S. Xylenes (Incl. m-Xylene) (32); and

xiii. In the "Member of reactive group" column, after the entry for "Sulfuric (alternatively Sulphuric) acid, 98% or less(2)", add the entry for "Sulfuric (alternatively Sulphuric) Acid (95-98%) (2)", and, in the the "Compatible with" column, add the entries, "Methyl Ester Fatty Acid (34)" and "Soybean Oil (34)".

b. Amend paragraph (b) by adding, in alphabetical order, an entry for "Tolune diisocyanate (TDI) (12)".

The additions read as follows:

Appendix I to Part 150 – Exceptions to the Chart

(a) * * *

Member of reactive group	**Compatible with**
* * * * * * *	
2,4, D Dimethyl amine salt (DMA 806) (0)	Acetone (18) Ethyl Acrylate (14) Methyl Alcohol (20) Toluene (32)
* * * * * * *	
tert-Dodecanethiol (Sulfole 120) (0)	Acetone (18) Ethyl Acrylate (14) Methyl Alcohol (20)

	Polymeric methylene diphenyl diisocyanate (Papi 27) (12) Toluene (32)
tert-Dodecanethiol (0)	All Chemicals in Group 33
tert-Dodecanethiol (0)	Acetone (18)
* * * * * * *	
Hexamethylenediamine (7)	Ethyl Alcohol (Ethanol) (20)
Hexamethylenediamine (molten) (HMD 98%, molten) (7)	n-Butyl Alcohol (20)
	Isobutyl Alcohol (20)
	Isopropyl Alcohol (20)
Hexamethylenediamine solution (7)	CepSinol ™ 1216 (Alcohols (C12+), primary, linear) (20)
Hexamethylenediamine solution (HMD 90%) (7)	n-Butyl Alcohol (20)
	Isobutyl Alcohol (20)
	Isopropyl Alcohol (20)
* * * * * * *	
Phenol (90% hydrated) (21)	Toluene diisocyante (12)
* * * * * * *	
Sodium hydrosulfide(alternatively Hydrosulphide) Solution (5)	Ethyl Alcohol (Ethanol) (20)
* * * * * * *	
Sodium Methylate, 30% solution in Methanol (0)	n-Butyl Alcohol (20) Decene (30) Decyl Alcohol (20) Dialkyl (C9-C10) phthalates (34) Dichloromethane (36) Ethanolamine (8) (including Monoethanolamine) Hexene (all isomers) (30) Methyl Isobutyl Ketone (18) Olefin mixtures (C5-C15) (30) Olefins (C13+ all isomers) (30) Phenol (21) n-Propyl Alcohol (20 Propylheptanol (20) C9-Resinfeed (32) Sodium Borohydride (15% or less)/Sodium hydroxide solution (5) Solvent Naphtha (33) Styrene Monomer (30) Toluene (32) Xylenes (Incl. m-Xylene) (32)
* * * * * * *	
Sulfuric (alternatively Sulphuric) Acid (95-98%) (Group 2)	Methyl Ester Fatty Acid (34) Soybean Oil (34)
* * * * * * *	

(b) * * *

* * * * * *

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

* * * * * *

Dated: August 25, 2022.

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