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HAZARD EVALUATION OF SUBSTANCES TRANSPORTED BY SHIPS

Report of the fifty-ninth session of the GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships

The report of the fifty-ninth session of the GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships (GESAMP/EHS Working Group), held by correspondence and video conferences from 16 March to 13 May 2022, is attached.

Any comments or questions should be addressed to:

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WORKING GROUP ON THE EVALUATION
OF THE HAZARDS OF HARMFUL
SUBSTANCES CARRIED BY SHIP
59th session
Agenda item 9

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1 INTRODUCTION

1.1 The fifty-ninth session of the GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships (GESAMP/EHS Working Group) was held by correspondence and video conferences 16 March to 13 May 2022 and was chaired by Mr. Richard Luit. The list of experts who attended the meeting is set out in annex 1.

1.2 Having reviewed the agenda and provisional timetable, the Group adopted both, without amendment.

2 OUTCOME OF OTHER BODIES

Outcome of IMO bodies

2.1 The Group noted that the following meetings of relevance had taken place since the fifty-eighth session of the GESAMP/EHS Working Group:

- .1 the forty-eighth session of GESAMP, which took place from 6 to 12 September 2021;
- .2 the twenty-seventh intersessional meeting of the Technical Group on the Evaluation of Safety and Pollution Hazards of Chemicals (ESPH 27), which took place from 11 to 15 October 2021 (PPR 9/3); and
- .3 the ninth session of the PPR Sub-Committee, which took place from 4 to 8 April 2022 (PPR 9/21).

2.2 The Group noted the information presented by the Secretariat on the outcome of the above-mentioned meetings on matters of relevance to the work of the GESAMP/EHS Working Group (see annex 2), in particular that ESPH 27:

- .1 had concluded that, moving forward, it would assess mixtures against the discharge requirements in regulation 13.7.1.4 of MARPOL Annex II on a case-by-case basis, taking into account, inter alia, the advice by GESAMP/EHS 58, with the aim of developing a consistent approach and methodology; and
- .2 had invited CEFIC to keep ESPH informed of developments regarding the potential re-evaluation of "Creosote (coal tar)" by GESAMP/EHS.

3 EVALUATION OF NEW SUBSTANCES

3.1 The Group recalled that when submitting new substances for evaluation by the GESAMP/EHS Working Group, a full set of data, addressing all the relevant information requirements set out in the GESAMP/EHS Product Data Reporting Form, is required. The Group further noted that insufficient data, or a lack of adequate supporting arguments, where estimates had been used, would result in no rating being assigned for the hazard concerned or, as a worst case, no full hazard profile being issued for the chemical under review.

3.2 The Group considered the following new substances*, which had been submitted for evaluation to this session:

- | | | |
|----|--|----------|
| .1 | 1-(2-Hydroxyethyl)-2-nor(tall oil alkyl)-2-imidazoline | EHS 2556 |
| .2 | Dinonylphenol-formaldehyde-nonylphenol copolymer | EHS 2557 |
| .3 | Oxirane, methyl-, polymer with 1,3-diisocyanatomethylbenzene and oxirane | EHS 2558 |
| .4 | 9-Octadecen-1-amine, (Z)- | EHS 2559 |

* The names of the substances shown in the list directly under paragraph 3.3 are in accordance with the submissions prior to GESAMP/EHS 59. The names agreed by GESAMP/EHS following consultation with the submitters are shown from paragraph 3.4 onwards and in annex 3.

.5	Formaldehyde, polymer with 4-(1,1- dimethylethyl)phenol, methyloxirane and oxirane	EHS 2560
.6	Methanesulphonic acid	EHS 2561
.7	Brassica carinata oil	EHS 2562
.8	Spent bleaching earth oil	EHS 2563
.9	Spent bleaching earth oil fatty acid distillate	EHS 2564
.10	Quaternary ammonium compounds, benzyl-C12-18 (even-numbered)-alkyldimethyl, chlorides	EHS 2565

3.3 The Group, in assessing the submitted products, made observations and reached conclusions, as set out in the ensuing paragraphs. The resultant hazard profiles assigned by the Working Group for inclusion in the GESAMP Composite List are set out in annex 3.

EHS 2556 1-(2-Hydroxyethyl)-2-nor(tall oil alkyl)-2-imidazoline

3.4 Having considered the submission and the data provided, the Group confirmed the name of the substance as submitted and assigned a GESAMP Hazard Profile accordingly.

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
5	NI	5	NR	5	2	0	0	(3)	NI	(3)	3	3		1	Fp	3

EHS 2557 Dinonylphenol-formaldehyde-nonylphenol copolymer (62% in paraffin oil)

Submitted as: Dinonylphenol-formaldehyde-nonylphenol copolymer

3.5 Having considered the submission and the data provided, the Group agreed that "Dinonylphenol-formaldehyde-nonylphenol copolymer (62% in paraffin oil)" would be a more appropriate name for entry into the Composite List, considering that the solvent influenced the A1 rating.

3.6 Having noted that following evaporation of the solvent the copolymer would float, and having also noted that the overall viscosity of the mixture was 2140 mPa.s at 40°C, the Group agreed that the substance should be regarded as a "Persistent Floater" (i.e. E2 = Fp).

3.7 The Group also considered whether it would be appropriate to assign an aspiration hazard in column D3 due to the solvent. However, since the overall viscosity of the mixture was higher than the GHS threshold for assigning an aspiration hazard to aliphatic, alicyclic and aromatic hydrocarbons, the Group agreed to leave the D3 rating blank. The resulting GESAMP Hazard Profile is set out below.

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
(5)	NI	(5)	NR	0	0	0	0	(0)	NI	(0)	0	0		3	Fp	2

EHS 2558 Oxirane, methyl-, polymer with 1,3-diisocyanatomethylbenzene and oxirane (80% in naphtha)

Submitted as: Oxirane, methyl-, polymer with 1,3-diisocyanatomethylbenzene and oxirane

3.8 Having considered the submission and the data provided, the Group agreed that "Oxirane, methyl-, polymer with 1,3-diisocyanatomethylbenzene and oxirane (80% in naphtha)" would be a more appropriate name for entry into the Composite List, considering that the solvent influenced the A1 rating.

3.9 The Group also considered whether it would be appropriate to assign an aspiration hazard in column D3 due to the solvent. However, since the overall viscosity of the mixture was higher than the GHS threshold for assigning an aspiration hazard to aliphatic, alicyclic and aromatic hydrocarbons, the Group agreed to leave the D3 rating blank. The resulting GESAMP Hazard Profile is set out below.

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
(5)	(5)	(5)	NR	3	0	0	0	(0)	NI	(0)	0	0		2	Fp	2

EHS 2559 9-Octadecen-1-amine, (Z)-

3.10 Having considered the submission and the data provided, the Group confirmed the name of the substance as submitted and assigned a GESAMP Hazard Profile accordingly.

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
(4)	NI	(4)	R	4	2	1	(0)	(3)	NI	(3)	3	(3)		1	F	3

EHS 2560 Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol, methyloxirane and oxirane (60% in naphtha)
Submitted as: Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol, methyloxirane and oxirane

3.11 Having considered the submission and the data provided, the Group agreed that "Formaldehyde, polymer with 4-(1,1-dimethyl)phenol, methyloxirane and oxirane (60% in naphtha)" would be a more appropriate name for entry into the Composite List considering that the solvent influenced the A1 rating.

3.12 The Group also considered whether it would be appropriate to assign an aspiration hazard in column D3 due to the solvent. However, since the overall viscosity of the mixture was higher than the GHS threshold for assigning an aspiration hazard to aliphatic, alicyclic and aromatic hydrocarbons, the Group agreed to leave the D3 rating blank. The resulting GESAMP Hazard Profile is set out below.

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
(5)	(5)	(5)	NR	1	0	0	0	(0)	NI	(0)	0	0		3	Fp	2

EHS 2561 Methanesulphonic acid

3.13 Having considered the submission and the data provided, the Group confirmed the name of the substance as submitted and assigned a GESAMP Hazard Profile accordingly.

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
0	NI	0	R	0	0	1	1	(3)	NI	(3)	3	3		1	D	3

EHS 2562 Brassica carinata oil containing less than 3% free fatty acids
Submitted as: Brassica carinata oil

3.14 The Group considered the submission and based on the information on the composition of Brassica carinata oil provided by the submitters, the Group agreed that "Brassica carinata oil containing less than 3% free fatty acids" would be a more appropriate name for entry into the Composite List. With rapeseed and carinata being related species of the Brassicaceae family and the compositional documentation indicating similar fatty acid compositions of carinata and high erucic acid rapeseed oils, the Group agreed to assign a GESAMP Hazard Profile, as set out below, by read-across to "Rapeseed oil (high erucic acid; containing less than 4% free fatty acids)" (EHS 2315).

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
(0)	NI	(0)	(R)	(2)	NI	(0)	(0)	(0)	NI	(0)	(1)	(1)		1	Fp	2

EHS 2563 **Spent bleaching earth vegetable oil (up to 20% free fatty acids, less than 1% hexane)**
Submitted as: Spent bleaching earth oil

3.15 The Group considered the information submitted on spent bleaching earth oil and noted that the request for evaluation was restricted to vegetable oils. In the regard, the Group noted that while currently the main origin of oil recovered from spent bleaching earth was palm oil, the origin could be any vegetable oil. The Group also noted that the solvent used for the extraction was hexane and that the maximum free fatty acid content for the submission was 20%.

3.16 Consequently, the Group agreed that the name "Spent bleaching earth vegetable oil (up to 20% free fatty acids, less than 1% hexane)" better distinguished the product under evaluation and would be a more appropriate name for entry into the Composite List. The Group also agreed that the scope of the entry in the Composite List would be restricted to vegetable oils that had already been assessed by GESAMP/EHS (i.e. listed in the Composite List). Any vegetable oils recovered from spent bleaching earth that did not meet this definition could not use this entry and data would need to be submitted accordingly to GESAMP/EHS. Similarly, if solvent(s) other than hexane were used for the recovery of the oils, data on the identity and residual concentration of the solvent(s) would also need to be submitted to GESAMP/EHS.

3.17 The Group assigned a GESAMP Hazard Profile, as set out below, by read-across to "Palm oil containing more than 15% and less than 30% free fatty acids" (EHS 2364).

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
(0)	NI	(0)	(R)	(0)	NI	(0)	(0)	(2)	NI	(2)	(2)	(2)		1	Fp	2

EHS 2564 **Spent bleaching earth vegetable oil fatty acid distillate**
Submitted as: Spent bleaching earth oil fatty acid distillate

3.18 Following the evaluation of "Spent bleaching earth vegetable oil (up to 20% free fatty acids, less than 1% hexane)", the Group considered the submission for spent bleaching earth oil fatty acid distillate. The Group agreed that the name "Spent bleaching earth vegetable oil fatty acid distillate" would be more appropriate for entry into the Composite List and that the entry was restricted to fatty acid distillates derived from recovered vegetable oils that fell within the scope of "Spent bleaching earth vegetable oil (up to 20% free fatty acids, less than 1% hexane)".

3.19 Having considered whether "Vegetable oils fatty acid distillates" (EHS 2369) could cover fatty acid distillates produced from vegetable oils that had been recovered from spent bleaching earth, the Group concluded that oils recovered from waste material generated during the production of vegetable oils, as well as products produced from such recovered oils (e.g. fatty acid distillates), should have their own entries in the Composite List to differentiate them from vegetable oils produced normally (i.e. not recovered from waste material).

3.20 In this context, the Group agreed that the entry for "Spent bleaching earth vegetable oil fatty acid distillate" would be restricted to fatty acid distillates derived from EHS 2563 (see paragraph 3.16).

3.21 The Group assigned a GESAMP Hazard Profile, as set out below, by analogy to "Palm oil mill effluent fatty acid distillate" (EHS 2551).

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
(0)	NI	(0)	(R)	(3)	NI	(0)	(0)	(2)	NI	(2)	(2)	(2)		1	Fp	2

EHS 2565 Quaternary ammonium compounds, benzyl-C12-18 (even-numbered)-alkyldimethyl, chlorides

3.22 Having considered the submission and the data provided, the Group confirmed the name of the substance as submitted and assigned a GESAMP Hazard Profile accordingly.

A1a	A1b	A1	A2	B1	B2	C1	C2	C3a	C3b	C3	D1	D2	D3	E1	E2	E3
(3)	NI	(3)	(R)	(4)	(1)	(1)	(0)	(3)	NI	(3)	(3B)	(3)		1	FD	3

Refinement of column C3 (acute inhalation toxicity) and reassignment of column E1 from "Tainting of sea food" to "Flammability"

3.23 In accordance with GESAMP Hazard Evaluation Procedure for Chemicals carried by Ships, 2019 (GESAMP Reports and Studies No. 102), the Group assigned the refined ratings for acute inhalation toxicity by splitting them into C3a (vapour/mist or mist only) and C3b (vapour only). The Group also assigned flammability ratings in column E1.

3.24 In this context, the Group was informed that the Secretariat had not been able to modify the GISIS module in time to accommodate the split C3 column and the reassignment E1 column in the Composite List at the conclusion of this session. Nonetheless, the Group agreed to record the ratings in the report in order to have them included in the 2023 Composite List that would be annexed to the report of EHS 60 once the schema of the GISIS module database had been modified.

4 RE-EVALUATION OF SUBSTANCES AND CONSIDERATION OF ISSUES RELATED TO EVALUATIONS

4.1 The Group recalled that, as part of its work, it routinely considered requests for the re-assessment of products, based on the submission of new data or new scientific insights into the hazards of substances that may result in a change of a hazard profile.

4.2 The Group also recalled its ongoing review and update of the existing GESAMP/EHS files for completeness and consistency and the need for communication of any amendments relating to such matters, bringing these to the attention of the IMO (i.e. the ESPH Technical Group of the PPR Sub-Committee).

EHS 2532 Sorbitan sesquioleate

4.3 The Group considered a request for a re-evaluation of the C2 rating (acute dermal toxicity) for "Sorbitan sesquioleate". Having reviewed the information provided by the submitters, which included a justification to use extrapolation from oral toxicity, the Group amended the C2 rating as set out below, flagging that this estimated C2 rating does not take into account the potential for irritation or corrosion.

Amended rating C2= (0)

EHS 2372 Glycerol/sorbitol blend, propoxylated and ethoxylated

4.4 The Group considered a request for a re-evaluation of "Glycerol/sorbitol blend, propoxylated and ethoxylated". In this regard, the Group took into account the ratings for similar substances in the Composite list (e.g. EHS 2360, EHS 2276, EHS 2361, EHS 2529), as well as the information submitted by the manufacturer. The amended ratings are set out below.

<i>Amended ratings</i>	B2= (0)	C1= (0)	C2= (0)	C3a= (0)	C3b= NI
	C3= (0)	D1= (0)	D2= (0)	D3= blank	E1= 1
	E2= S	E3= 0			

EHS 524 Creosote (coal tar)

4.5 The Group considered a request for a re-evaluation of the A1 and B1 ratings for "Creosote (coal tar)" EHS 524, having noted the relevant discussions during ESPH 27 on assessment of complex substances (PPR 9/3, paragraphs 2.13 and 2.14) and having recalled the clarifications provided on this matter during EHS 58 (PPR.1/Circ.11, paragraphs 7.1 to 7.8).

4.6 The Group noted that with regard to A1, industry had provided additional information with a view to having the A1 rating revised from (4) to (3) by presenting compositional information showing that the majority of polycyclic aromatic hydrocarbons (PAHs) in "Creosote (coal tar)" had log P_{ow} values corresponding to an A1a rating of 3 and that these PAHs had a higher water solubility relative to other components.

4.7 In this connection, the Group reviewed the available information in the GESAMP file for EHS 524, as well as several publicly available data sources, and noted that there was an abundance of scientific information on bioconcentration factors (BCF) for constituents of "Creosote (coal tar)". Consequently, the Group confirmed that the overall A1 rating for "Creosote (coal tar)" would be driven by the available BCF (A1b) data, which were preferred (when available) to log P_{ow} (GESAMP Reports and Studies No. 102, section 4.1.1.2).

4.8 The Group focused on three polycyclic aromatic hydrocarbons (PAHs), namely phenanthrene, pyrene and fluoranthene. The Group considered the scientific evidence from multiple publications regarding the bioaccumulation of these three PAHs present in the product that showed high bioaccumulation factors (BCF) values, as follows:

- .1 for phenanthrene, literature BCF values ranged between 700 and 71,077 L/kg depending on species and trophic level (fish, crustacean, copepod, oligochaete). The group noted test data on bioaccumulation in fish, which is the preferred trophic level according to R&S102, ranged between 700 and 6 118 L/kg, which is lower compared to the other trophic levels most probably due to higher rate of liver metabolism in fish;

- .2 for pyrene, literature BCF values ranged between 100 and 166,000 L/kg depending on species and trophic level (fish, molluscs, crustacean, oligochaete). The group noted test data on bioaccumulation in fish, which is the preferred trophic level according to R&S102, ranged between 100 and 1,297 L/kg, which is lower compared to the other trophic levels most probably due to higher rate of liver metabolism in fish; and
- .3 for fluoranthene, literature BCF values ranged between 380 and 5,920 L/kg depending on species and trophic level (fish, molluscs). The group noted test data on bioaccumulation in fish, which is the preferred trophic level according to R&S102, ranged between 380 and 2,772 L/kg, which is lower compared to molluscs most probably due to higher rate of liver metabolism in fish.

4.9 In accordance with the GESAMP/EHS rating scheme, the above-mentioned three constituents of "Creosote (coal tar)" would have ratings of A1b (and A1) = 4 (pyrene and fluoranthene) or 5 (phenanthrene). Using the compositional information available to it, the Group noted that these three PAHs are present at levels between 12.9% and 41.2% in "Creosote (coal tar)". Considering a phenanthrene concentration in the majority of the batches of "Creosote (coal tar)" between 2.5 and 25% and the presence of pyrene, and fluoranthene, the Group agreed that A1b = (4) and A1 = (4) was representative for the product using the available compositional information.

4.10 In addition, the Group noted that in several jurisdictions, the PAHs pyrene, fluoranthene, benz[k]fluoranthene, chrysene, benz[ghi]perylene, benz[a]pyrene, Benz[a]anthracene, phenanthrene and anthracene are considered as bioaccumulating or very bioaccumulating.

4.11 Having considered all of the above information, the Group concluded that for "Creosote (coal tar)" EHS 524: A1b = (4) and A1 = (4).

4.12 Additionally, industry had submitted information to support the request for a re-evaluation of the B1 rating (acute aquatic toxicity) from 4 to 3. According to the information provided by the submitters, products carried under "Creosote (coal tar)" EHS 524 cover broad boiling ranges between 210°C and 450°C due to diverging regional product specifications. Accordingly, the submitters were of the view that for this reason, determining one valid water hazard classification applicable to all bulk EHS 524 cargoes was not trivial. The Group was informed that, in contrast to 2006, industry was in a position to provide data for narrower distillation cuts within this broad boiling range. Industry had therefore produced composite samples representing the lower and higher boiling part of EHS 524, with a view to the two distillation cuts being assessed separately. The Group noted that the two distillation cuts were REACH registered in the EU as follows:

- .1 "Creosote oil acenaphthene fraction" (CAS 90640-84-9); and
- .2 "Distillates (coal tar), heavy oils" (CAS 90640-86-1).

4.13 The Group considered the assertion the submitters that studies performed with solvent resulting in E/LC50 values below 1.0 mg/L should be disregarded because complex materials such as "Creosote (coal tar)" should be tested using the Water Accommodated Fractions (WAF) procedure. Based on this, the submitters provided references to studies with crustaceans showing E/LC50 values in the 1-100 mg/L range. Following consideration, the Group agreed that studies using the WAF approach with analytical support were preferred and confirmed that, while studies in which solvents had been used to dissolve creosote (coal tar)

in the test medium may be used as part of a weight of evidence approach, studies performed using a solvent should be treated with caution.

4.14 In this regard, the Group noted that high quality studies were available in the existing file for "Creosote (coal tar)" EHS 524 that used the WAF procedure, achieving test concentrations without the use of solvents. For crustaceans, a 48h EC50 of 0.9 mg/L was reported and for algae, the 72h ErC50 was 0.9 mg/L, thus confirming acute E/LC50 values in the 0.1-10 mg/L range as originally assessed by GESAMP EHS 42. The studies referred to by industry in the newly submitted information showing EC50 values in the range of 1-100 mg/L were of variable quality. Some studies used the WAF procedure and others had been performed using a solvent without analytical determination of exposure levels. Some of the studies had been performed on only the low or high boiling point fraction of creosote (coal tar). The Group was of the view that those fractions had another chemical window and could not be used as representative for the broad scope covered by "Creosote (coal tar)" EHS 524.

4.15 Having considered the weight of evidence and having agreed to apply a reasonable worst-case approach using reliable WAF studies in the existing EHS 524 file showing E/LC50 values in the range of 0.1-1.0 mg/L, the Group concluded that the new information submitted by industry did not change the overall assessment of acute aquatic toxicity and confirmed that B1 = 4.

4.16 Having completed its review of "Creosote (coal tar)" EHS 524, which resulted in the Group confirming that A1b = (4), A1 = (4) and B1 = 4 (i.e. the GHP for EHS 524 was not changed), the Group noted that there were several products in the GESAMP Composite List that were closely related to EHS 524, namely the following:

- .1 EHS 491: coal tar pitch (molten);
- .2 EHS 499: coal tar;
- .3 EHS 500: coal tar naphtha; and
- .4 EHS 2514: creosote (coal tar) C8-C22.

4.17 The Group agreed to review the files for EHS 491, EHS 499, EHS 500 and EHS 2514, at its next session, with the aim of confirming or revising the GHPs, particularly the A1 ratings, taking into account the current state of scientific knowledge on bioaccumulation of the PAH constituents that comprise a significant fraction of these complex products and to ensure that a consistent approach is applied to all creosote (coal tar) related products.

Remaining re-evaluations from EHS 57

4.18 The Group recalled its provisional re-evaluation of "Potassium chloride (less than 26%)" (EHS 2345) and "Sodium bromide solution (less than 50%)" (EHS 2387) during EHS 57 and agreed to conduct a full re-evaluation of these substances at their next physical meeting when the existing data files were accessible to the Group.

5 CLASSIFICATION ISSUES

Estimation of acute dermal toxicity

5.1 The Group recalled that information on acute toxicity resulting from dermal exposure is sometimes lacking, a function, in part, of restriction in animal testing of corrosive substances for ethical reasons. Dermal toxicity in the absence of data for submissions considered at

EHS 58 (EHS 2545, EHS 2554, EHS 2525 and EHS 2524) and at this session (EHS 2532) was based on direct extrapolation from oral toxicity. This extrapolation was guided by the current content of Reports and Studies No.102 where it is indicated (Section 4.3.3.) that "Chemicals that are non-toxic by the oral route are generally also non-toxic by the dermal route, based on acquired experience. Similarly, orally toxic chemicals are also potentially toxic by dermal application. Data of this nature enable experts to estimate the toxic potential in the case of route-specific missing data".

5.2 As noted during EHS 58, the Group again noted that, according to the GHS and the methodology described in GESAMP Reports and Studies No. 102, corrosive or irritating properties are not reflected in the acute dermal toxicity rating in column C2.

5.3 Having recalled the discussions during the evaluation of EHS 2532 and during EHS 58 regarding the appropriateness of basing the estimation of acute dermal toxicity ratings solely on acute oral toxicity information in the absence of acute dermal toxicity test data and when the D1 and/or D2 ratings were greater than zero, the Group agreed that in such cases a note would be included in the report to flag that the C2 rating does not take into account the potential for irritation or corrosion (see paragraph 4.3).

5.4 Different viewpoints were expressed on potential future options that the Group could pursue in this context. Potential options that were mentioned during the discussions at this session included:

- .1 continuing with the practice of estimating the C2 rating based solely on acute oral toxicity information in the absence of dermal toxicity test data; and for substances where the D1 and/or D2 ratings were greater than zero, noting in the report that the C2 rating was based on oral acute toxicity and did not take into account the potential for irritation or corrosion; or
- .2 developing an extrapolation method for acute dermal toxicity in a similar fashion to the GESAMP acute inhalation toxicity extrapolation method; or
- .3 assigning "NI" for C2 in the absence of acute dermal toxicity test data and providing advice to the ESPH Technical Group on how the "NI" rating should be interpreted in combination with the C1, D1 and D2 ratings.

5.5 In this connection, the Group requested the Secretariat to compile background information on the development of PPR.1/Circ.7 and the history of the C3 extrapolation method as captured in previous EHS reports and reports of the BLG Sub-Committee and MEPC, in order to facilitate discussions at EHS 60.

5.6 The Group agreed to consider these matters further at its next and subsequent sessions. In this regard, the Group noted that if any future work on estimation of dermal toxicity significantly altered the current methodology of the Group and/or impacted the ratings of existing entries, it would keep the relevant IMO bodies (i.e. ESPH Technical Group, the PPR Sub-Committee, and MEPC) informed and seek their advice, as appropriate.

Vegetable oils used as feedstock for biofuel production

5.7 The Group recalled that at EHS 58 it had evaluated "Palm oil mill effluent oil" (EHS 2550), and that during this session it had evaluated "Brassica carinata oil containing less than 3% free fatty acids" (EHS 2562) and "Spent bleaching earth vegetable oil (up to 20% free fatty acids, less than 1% hexane)" (EHS 2563), which were all used mainly as feedstock for biofuel production according to the information reviewed by the Group.

5.8 The Group briefly considered whether it would be appropriate to develop generic entries covering groups of similar vegetable oil products, should there be an increase in the requests to evaluate vegetable oil products as a result of the expected growth in demand for biofuels and the associated shipment of feedstock oils for the production of biofuels.

5.9 In this context the Group recalled that in 2003, the Chair of GESAMP/EHS at the time had informed ESPH 9 that GESAMP would, in future, only evaluate additional vegetable oils on the basis of data provided (MEPC 71/11, paragraph 7.1.4). Therefore, to avoid considering options that could be inconsistent with previous decisions of the Group or IMO, the Group:

- .1 agreed to defer further discussions regarding whether grouping vegetable oils in the Composite List was appropriate or not until its next session; and
- .2 requested the Secretariat to compile excerpts from past reports of the GESAMP/EHS Group, MEPC, the BLG Sub-Committee and the ESPH Group, that reported on developments and decisions relating to vegetable oils, in time for EHS 60.

5.10 In this connection, the Group agreed that, should it consider it necessary to initiate work in future that could potentially change the names and/or groupings of vegetable oils in the Composite List, it would inform and seek the advice of the relevant IMO bodies (i.e. ESPH Technical Group, the PPR Sub-Committee, and MEPC), as appropriate, at an early stage.

Assessment of formulated mixtures (preparations)

5.11 The Group recalled that at EHS 58 it made observations and recommendations on how the assessment of formulated mixtures (preparations) could be facilitated (PPR.1/Circ.11, paragraphs 5.7 to 5.11, and annex 5).

5.12 As in EHS 58, the Group noted that, on a general basis, manufacturers of formulated mixtures containing unassessed components, would be advised by the Secretariat to make separate submissions for each unassessed component to GESAMP/EHS, if sufficient and appropriate data are not available for the mixture as a whole, in order for the Group to assign GESAMP Hazard Profile to each unassessed component. With all components in a mixture having a separate GESAMP Hazard Profile, a submission could be made to the ESPH Technical Group that would subsequently assess the mixture for inclusion in list 3 (trade-named mixtures) of the MEPC.2/Circular. The Group also noted that this was in line with the guidance in paragraphs 7.5 and 7.10 of MEPC.1/Circ.512/Rev.1.

List of decisions and recurring/ongoing classification issues

5.13 The Group agreed to keep an internal list of decisions, and a record of recurring or ongoing classification issues that required consideration over several sessions, with the aim of ensuring consistency and facilitating future revisions of Reports and Studies No. 102.

5.14 The Group compiled an initial record and agreed to keep it updated. The Secretariat was requested to circulate the list to the members of the Group prior to each EHS meeting.

6 CONSOLIDATION OF EXISTING DATA FILES

6.1 The Group recalled the ongoing review of the GESAMP/EHS files was a regular agenda item.

6.2 Not having had sufficient time to review these files during the session in light of other higher priority work on its agenda and given the practical limitations due to the online setting of the meeting, the Group agreed to defer consideration of this item to its next session.

7 COMMUNICATION AND PUBLICATION

7.1 The Group noted that there were no matters to consider under this agenda item.

8 ANY OTHER BUSINESS

Draft provisional agenda and date of the next session

8.1 The Group agreed to the draft provisional agenda for its next session, set out in annex 5, and that its next meeting had been tentatively scheduled to take place from 8 to 12 May 2023, at IMO headquarters in London. Subject to the aforementioned dates being confirmed, the deadline for manufacturers to submit information to GESAMP/EHS 60 would be 10 March 2023.

Membership issues

8.2 The Group agreed to reach out to their contacts with a view to recruiting a new toxicologist or ecotoxicologist to the Group in time for the next session.

9 CONSIDERATION AND ADOPTION OF THE REPORT

9.1 The Group adopted its report, noting that it would be circulated as PPR.1/Circ.12.

ANNEX 1

LIST OF MEMBERS ATTENDING THE FIFTY-NINTH SESSION OF THE GESAMP/EHS WORKING GROUP

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ANNEX 2

OUTCOMES OF ESPH 27, PPR 9 AND GESAMP 48

OUTCOMES OF ESPH 27

Evaluation of chemicals

1 ESPH 27 considered a number of products as part of its routine assessment and assignment of carriage requirements, in accordance with the IBC Code. Decisions that are relevant to GESAMP/EHS 59 are summarized below.

Classification issues

Assessment of mixtures against the new discharge requirement in regulation 13.7.1.4 of MARPOL Annex II

2 ESPH 27 considered the advice by GESAMP/EHS 58 and recalled that when the new discharge requirements in regulation 13.7.1.4 of MARPOL Annex II were being developed, it had agreed to a phased approach, with the first phase covering priority substances that ESPH had agreed should be regulated being assigned special requirement 16.2.7 in column "o" of the revised chapter 17 of the IBC Code, and a subsequent phase during which the remaining substances for which a prewash might be required could be considered subject to specific proposals being submitted to the PPR Sub-Committee or the ESPH Group with appropriate justification (PPR 5/3, paragraph 9.17).

3 The ESPH Group also recalled the advice provided by GESAMP/EHS 58 on how mixtures could be assessed against the new discharge requirement in regulation 13.7.1.4 of MARPOL Annex II. ESPH 27 noted, in particular, the view of GESAMP/EHS 58 that the ESPH Technical Group could consider adopting a threshold of 25% total concentration of components assigned special requirement 16.2.7 as an indicative cut-off value for the assessment of mixtures in the absence of detailed information on the behaviour of the product as a whole in seawater.

4 In light of the above, ESPH 27 discussed two options that it could choose between on a case-by-case basis moving forward, namely the following:

- .1 subject to sufficient data being available on a mixture as a whole (i.e. density, vapour pressure, solubility, kinematic viscosity, dynamic viscosity at 20°C and melting point) the ESPH Group could assess whether special requirement 16.2.7 should be assigned to the mixture using the data for the overall mixture; or
- .2 in the absence of sufficient information being available for the overall mixture the ESPH Group would add up the concentration of components assigned special requirement 16.2.7; and if the total concentration of such components added up to 25% or more, the ESPH Group could consider whether or not to assign special requirement 16.2.7 to the mixture.

5 Furthermore, ESPH 27 recalled the advice by GESAMP/EHS 58 that the component-based approach should be adapted on a case-by case basis by taking into account component-based knowledge, information on potential separation of a viscous floating components (e.g. phase diagrams provided by the manufacturers in addition to the information in the PPR Product Data Reporting Form) and evolving experience.

6 Some delegations expressed the view that only components that had already been assigned special requirement 16.2.7 ought to be taken into account when assessing a mixture against the discharge requirement in regulation 13.7.1.4 of MARPOL Annex II, recalling the phased approach that had been agreed to in relation to pure or technically pure products. These delegations reiterated the view that priority should be placed on reviewing the remaining pure or technically pure products in chapter 17 of the IBC Code to which special requirement 16.2.7 could be applied and assigning it as appropriate.

7 Having recalled that future consideration of the remaining products for which a prewash might be required was subject to specific proposals being submitted to the PPR Sub-Committee or the ESPH Technical Group with appropriate justification, ESPH 27 invited interested Member States and international organizations to submit proposals in that regard. The delegation of Germany informed the ESPH Group that a relevant research project had been initiated in Germany and that the results of that project could form the basis of proposals in due course.

8 In light of the above, ESPH 27 concluded that, moving forward, it would assess mixtures against the discharge requirement in regulation 13.7.1.4 of MARPOL Annex II on a case-by-case basis, taking into account the two options described in paragraph 3.85, the advice by GESAMP/EHS 58 and the views expressed at this session, with the aim of developing a consistent approach and methodology.

Estimation of acute dermal toxicity

9 ESPH 27 noted that GESAMP/EHS 58 had considered and assigned acute dermal toxicity test data to four entries based on direct extrapolation from oral toxicity, as guided by GESAMP Reports and Studies No. 102 (section 4.3.3). ESPH 27 also noted that GESAMP/EHS had agreed to discuss, at a future session, the appropriateness of estimating acute dermal toxicity ratings based solely on acute oral toxicity information.

10 In this context, the delegation the delegation of the United Kingdom sought clarification with respect to the next steps for a manufacturer whose submission to GESAMP/EHS 57 had been assigned a C1 (oral toxicity) rating but had an "NI" (no information) rating in column C2 (dermal toxicity) (i.e. "Sorbitan sesquioleate"). In response, the Secretariat informed the Group that it would consult with the GESAMP/EHS experts, with a view to providing feedback to the manufacturer as to what additional test data, if any, would be required in the case of "Sorbitan sesquioleate" (EHS 2532).

Assessment of complex substances - Creosote (coal tar)

11 During discussions at ESPH 27, the observer from CEFIC recalled that when ESPH 26 had agreed to include "Creosote (coal tar) (amended)" in list 1 of MEPC.2/Circ.26, with validity for all countries and with an expiry date of 31 December 2023, it had also agreed that data should be provided to the GESAMP/EHS Working Group at the earliest opportunity and had invited CEFIC to keep the Group informed about the progress regarding the re-evaluation of the product. In this regard, the observer from CEFIC informed the Group that GESAMP/EHS 58 had received and considered comments submitted by CEFIC concerning some differences between GESAMP Reports and Studies No.102 and the 7th edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in relation to the evaluation of mixtures. The Group noted that GESAMP/EHS 58 had provided relevant clarifications (PPR.1/Circ.11, paragraphs 7.1 to 7.8) and also noted that industry was preparing an updated report on "Creosote (coal tar)" (EHS 524), with a view to submitting the information to GESAMP/EHS 59.

12 ESPH 27 expressed its appreciation for the update and invited CEFIC to keep the Group informed of developments regarding the potential re-evaluation of "Creosote (coal tar)" by GESAMP/EHS.

OUTCOME OF PPR 9

13 PPR 9 considered the report of ESPH 27 (document PPR 9/3). With regard to products in lists 2 or 3 of the MEPC.2 circular, which upon re-evaluation by the ESPH Group had been deemed as meeting the criteria for complex mixtures in paragraph 9.2 of MEPC.1/Circ.512/Rev.1 and would therefore be deleted from the MEPC.2 circular in order to be shipped instead as MARPOL Annex I cargoes (e.g. the cargoes reported by Belgium in document ESPH 27/6), one delegation expressed the view that such reclassifications should be communicated in a formal and official manner. To that end, it was proposed that:

- .1 a new annex should be introduced in the MEPC.2 circular, listing products previously assessed as MARPOL Annex II cargoes but subsequently re-assessed and deemed to be MARPOL Annex I cargoes; and
- .2 in the period between the publication of the MEPC.2 circular in December of one year and the publication of the next edition in December of the following year, a running list of reassessed products should be maintained and posted on the IMO website.

14 The Chair of the ESPH Technical Group recalled that ESPH 27, having considered various options for disseminating information on the products which upon re-assessment had been deemed to meet the criteria in paragraph 9.2 of MEPC.1/Circ.512/Rev.1 and were therefore to be shipped as MARPOL Annex I cargoes, had acknowledged that more time was necessary to give due consideration to the potential consequences of any proposals in that regard; had agreed to consider the matter further at future sessions; and had encouraged interested Member States and international organizations to submit relevant proposals to assist the Group in its deliberations. Accordingly, the Sub-Committee noted that ESPH 28 would report the outcome of any relevant deliberations to PPR 10.

OUTCOME OF GESAMP 48

15 The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) held its 48th session from 6 to 10 September 2021, by virtual means. GESAMP was established in 1969 by a number of United Nations' Organizations as a Joint Group to encourage the independent, interdisciplinary consideration of marine pollution and environmental protection issues, with a view to avoiding duplication of efforts within the United Nations system. The main topics considered at this session are described below.

Evaluation of the hazards of harmful substances carried by ships (WG 1)

16 WG 1 met once since GESAMP 47 via a combination of correspondence and virtual plenary sessions due to the COVID-19 restrictions. Data on 13 new substances were evaluated and full GESAMP Hazard Profiles (GHPs) were assigned to all substances. The

Group also considered requests for the re-assessment of three substances for which new ratings were assigned.

Review of applications for "active substances" to be used in ballast water management systems (WG 34)

17 WG 34 convened once since GESAMP 47 to evaluate four Ballast Water Management Systems (BWMS). GESAMP noted that the number of BWMS presented to the Working Group had increased, and that it could be expected that more BWMS will have to be evaluated for freshwater, since several existing BWMS have received only Final Approval for marine and brackish water.

Atmospheric input of chemicals to the ocean (WG 38)

18 The Working Group had held a virtual workshop on the atmospheric transport of microplastics to and from the ocean which took place in cooperation with Working Group 40 in November 2020. Furthermore, a workshop on ocean management and policy implications of air/sea exchange of chemicals was being developed to examine the potential role of atmospheric deposition in driving ocean productivity in the Mozambique Channel and the Southwest Indian Ocean. The Working Group had also finalized the manuscript for its next report, titled "The changing acidity of the global atmosphere and ocean and its impact on air/sea chemical exchange".

Sources, fate and effects of plastics and microplastics in the marine environment (WG 40)

19 GESAMP approved the workplan and TOR for the fourth phase of the Working Group, which aims to develop a risk assessment framework to promote a risk-based approach to assessing the social, economic and ecological impacts of all types and sizes of marine plastic litter and guide the design of cost-effective response options.

Ocean interventions for climate change mitigation (WG 41)

20 GESAMP noted the progress with the second phase of the Working Group, including its support to the Scientific Groups under the London Convention//Protocol and the LC/LP Contracting Parties. GESAMP re-iterated the common interests between the WG and the UNFCCC processes, and requested the Lead Agencies to follow up with the UNFCCC secretariat intersessionally.

Impacts of wastes and other matter in the marine environment from mining operations, including marine mineral mining (WG 42)

21 GESAMP noted that following internal and external peer-review, the final report of the Working Group was currently being reviewed by the Lead Agencies (IMO, UNEP and ISA). GESAMP welcomed the renewed engagement by ISA, and in light of this the Group noted the importance of the current final review and the need to update the report before publication. In addition, the UNEP Extractions Group had provided additional comments, which would be considered prior to publication.

Sea-based sources of marine litter (WG 43)

22 GESAMP noted that since GESAMP 47, the Working Group had met twice by teleconference and had finalized the technical report, which had now undergone internal and external peer-review and was in the final stages of publication. A webinar was scheduled on

23 September 2021 to present the report's main conclusions. GESAMP also noted the interest from the co-sponsors (FAO, IMO, UNEP) to continue the work of WG 43 through a second phase and that the Chair would engage with the co-sponsors to review the TOR and work plan.

Biofouling management (WG 44)

23 GESAMP noted that the WG had held its first meeting (by virtual means) in October 2020 and that it was working towards completion of its first report in September 2021. To facilitate work during the pandemic, several drafting groups had been established. GESAMP also noted that the Chair of the WG had resigned, and that the Lead Organization of the WG (IOC-UNESCO) would identify a new WG Chair, in consultation with the Chair and Vice-Chairs of GESAMP.

Climate change and greenhouse gas related impacts on contaminants in the ocean (WG 45)

24 GESAMP noted that the WG had held two meetings since its establishment earlier in 2021. To facilitate its work, the WG had formed and defined four thematic sub-groups to work towards the compilation and synthesis of information and the identification of knowledge gaps.

Contribution to other UN processes

25 GESAMP noted the postponement of many ocean related UN processes due to the pandemic but reiterated its readiness to support the Sponsoring Organizations as and when required. GESAMP also highlighted the need to strengthen the ocean-related issues in the climate change dialogues, and once again noted the importance of its working groups in this context, WG 38, WG 41 and WG 45.

The United Nations Decade of Ocean Science for Sustainable Development

26 GESAMP noted that the work of GESAMP will be of great relevance to the Decade for many years to come, and agreed to strengthen its efforts with respect to the Decade by establishing a permanent Task Team, once the Terms of Reference would be developed and approved intersessionally.

Scoping activities

27 GESAMP considered the progress of its Correspondence Groups that had been developing scoping papers in the intersessional period, including: 1) Causes and impacts of massive accumulations of the brown macro-algae *Sargassum* in the nearshore environment of the Caribbean and West Africa; 2) Relevance of inputs of disinfection by-products (DBPs) into the marine environment; 3) Sand and gravel mining in the marine environment: new insights on an growing environmental problem; 4) Update the information on sources of the main pollutants impacting the global marine environment ('The 80:20 conundrum'); and 5) Impact of armed conflicts on the marine environment and sustainable development.

Identification of new and emerging issues

28 GESAMP discussed a number of new and emerging issues, including 1) the use of CO₂ scrubbers in reducing carbon output related to shipping of cargo, 2) energy transition, decarbonisation, related to the H₂ economy and the transport of NH₃, and 3) artificial light and noise, and agreed to continue consideration intersessionally, as relevant. GESAMP also welcomed the suggestion by the ISA to convene a webinar on artificial light and noise in relation to deep sea mining, and agreed to continue the consideration of establishing a

mechanism to provide the Sponsoring Organizations with support in relation to emergency response.

GESAMP side-event

29 During the annual session, GESAMP organized a side-event, together with the IAEA as the host of the session, on "Marine contamination incidents: scientific support to emergency response", which was held as an open (virtual) seminar.

ANNEX 3

GESAMP HAZARD PROFILES FOR NEW SUBSTANCES SUBMITTED FOR EVALUATION TO GESAMP/EHS 59

1 This annex sets out the GESAMP Hazard Profiles (GHP) assigned for the products submitted to the current session. The respective substances and their GHPs are summarized in the subsequent table.

ANNEX 3 - GESAMP HAZARD PROFILES FOR NEW SUBSTANCES SUBMITTED FOR EVALUATION TO GESAMP/EHS 59

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Brassica carinata oil containing less than 3% free fatty acids	2562 4320	(0)	NI	(0)	(R)	(2)	NI	(0)	(0)	(0)	(1)	(1)			Fp	2
		CAS No														
Dinonylphenol-formaldehyde-nonylphenol copolymer (62% in paraffin oil)	2557 4315	(5)	NI	(5)	NR	0	0	0	0	(0)	0	0			Fp	2
		CAS No														
Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol, methyloxirane and oxirane (60% in naphtha)	2560 4318	(5)	(5)	(5)	NR	1	0	0	0	(0)	0	0			Fp	2
		CAS No														
1-(2-Hydroxyethyl)-2-nor(tall oil alkyl)-2-imidazoline	2556 4314	5	NI	5	NR	5	2	0	0	(3)	3	3			Fp	3
		CAS No														
Methanesulphonic acid	2561 4319	0	NI	0	R	0	0	1	1	(3)	3	3			D	3
		CAS No														
9-Octadecen-1-amine, (Z)-	2559 4317	(4)	NI	(4)	R	4	2	1	(0)	(3)	3	(3)			F	3
		CAS No														
Oxirane, methyl-, polymer with 1,3-diisocyanatomethylbenzene and oxirane (80% in naphtha)	2558 4316	(5)	(5)	(5)	NR	3	0	0	0	(0)	0	0			Fp	2
		CAS No														
Quaternary ammonium compounds, benzyl-C12-18 (even-numbered)-alkyldimethyl, chlorides	2565 4323	(3)	NI	(3)	(R)	(4)	(1)	(1)	(0)	(3)	(3B)	(3)			FD	3
		CAS No														
Spent bleaching earth vegetable oil (up to 20% free fatty acids, less than 1% hexane)	2563 4321	(0)	NI	(0)	(R)	(0)	NI	(0)	(0)	(2)	(2)	(2)			Fp	2
		CAS No														
Spent bleaching earth vegetable oil fatty acid distillate	2564 4322	(0)	NI	(0)	(R)	(3)	NI	(0)	(0)	(2)	(2)	(2)			Fp	2
		CAS No														

ANNEX 4

UPDATED GESAMP/EHS COMPOSITE LIST

Notes:

- 1 In the Composite List, both EHS and TRN (shipping) names are shown for each product. The alphabetical listing of the products is based on the EHS names.
- 2 Any changes introduced in the table since the last issue of the Composite List are highlighted.
- 3 Entries with an EHS name marked with a single asterisk (*) represent cleaning additive components that have only a partial hazard profile assigned. These profiles **cannot be used** for mixture calculations in relation to bulk shipments.
- 4 Entries with an EHS name marked with a double asterisk (**) represent mixture components for which only a partial hazard profile has been assigned. These profiles **may be used** for mixture calculations in relation to bulk shipments.
- 5 Entries with an EHS name marked with a hash mark (#) reflect that for the **C3 rating**, the product, as a vapour rather than an aerosol or mist, could be considered to have a lower inhalation hazard for the purposes of risk management.
- 6 Entries with an EHS name marked with an exclamation mark (!) refer to a mixture that contains components with substantially different physical properties and therefore different physical behaviours when released in the marine environment. The **E2 rating** assigned reflects the most severe impact from an environmental standpoint. For example, a mixture assigned a rating of Fp may also have a major component(s) with sinker characteristics (S) or dissolver characteristics (D).

ANNEX 4 - GESAMP/EHS COMPOSITE LIST

GESAMP Hazard Profiles

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Acetic acid	13	0	0	0	R	1	NI	1	1	1	3C	3			D	3
Acetic acid	64								CAS No		64-19-7					
Acetic anhydride	12	0	0	0	R	1	NI	1	0	2	3	3	A		D	3
Acetic anhydride	65								CAS No		108-24-7					
Acetochlor (ISO)	2047	3	2	2	NR	4	NI	1	0	(1)	0	0			S	2
Acetochlor	66								CAS No		34256-82-1					
Acetone	15	0	0	0	R	0	0	0	0	0	1	2		NT	DE	2
Acetone	67								CAS No		67-64-1					
Acetone cyanohydrin	14	0	0	0	R	4	NI	3	4	3	(3)	(3)			D	3
Acetone cyanohydrin	68								CAS No		75-86-5					
Acetonitrile	16	0	0	0	R	1	NI	1	1	2	1	2			D	2
Acetonitrile	69								CAS No		75-05-8					
Acetonitrile (Low purity grade)	2333	0	NI	0	R	3	NI	1	1	2	1	2			D	2
Acetonitrile (Low purity grade)	2876								CAS No							
Acid mixtures (nitrating acid)	289	Inorg	NI	0	Inorg	(2)	NI	3	3	4	3C	3			D	3
Nitrating acid (mixture of sulphuric and nitric acids)	497								CAS No							
Acrylamide	23	0	0	0	R	2	0	2	2	(2)	1	2	CMNSs		D	3
Acrylamide solution (50% or less)	70								CAS No		79-06-1					
Acrylamide (ACAM) – Acrylic acid, sodium salt (NaAA) Copolymer (70:30 ACAM:NaAA) in water/iso- and cyclo-alkanes (C12+)	2553	(5)	NI	(5)	(NR)	(2)	(0)	(0)	(0)	(1)	1	(2)	ASs		SD	2
	4294								CAS No							
Acrylamide (ACAM) - Sodium 2-acrylamido-2-methyl-1-propanesulphonic acid (AMPS) Copolymer (68:32 ACAM:AMPS)	2536	0	NI	0	NR	1	0	(0)	(0)	(0)	(0)	(0)			Fp	2
Acrylamide (ACAM) - Sodium 2-acrylamido-2-methyl-1-propanesulphonic acid (AMPS) Copolymer (68:32 ACAM:AMPS)	4245								CAS No							
Acrylamide (ACAM) - Sodium 2-acrylamido-2-methyl-1-propanesulphonic acid (AMPS) Copolymer (70:30 ACAM:AMPS)	2535	0	NI	0	NR	0	0	(0)	(0)	(0)	(0)	(0)			Fp	2
Acrylamide (ACAM) - Sodium 2-acrylamido-2-methyl-1-propanesulphonic acid (AMPS) Copolymer (70:30 ACAM:AMPS)	4244								CAS No							
Acrylamide, polymer with sodium 2-acrylamido-2-methyl-1-propanesulphonic acid (AMPS), tetraethylene glycol diacrylate, and methylene-bisacrylamide	2534	0	NI	0	NR	1	0	0	0	(0)	0	0			Fp	2
Acrylamide, polymer with sodium 2-acrylamido-2-methyl-1-propanesulphonic acid (AMPS), tetraethylene glycol diacrylate, and methylene-bisacrylamide	4243								CAS No							
Acrylic acid	24	0	0	0	R	4	NI	2	2	2	3C	3			D	3
Acrylic acid	71								CAS No		79-10-7					

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Acrylic acid / dimethyldiallylammonium chloride copolymer, partial sodium salt (MWt 1500-4000, aqueous solution)	2406	0	NI	0	R	0	0	0	0	(0)	0	0			D	0
Acrylic acid / dimethyldiallylammonium chloride copolymer, partial sodium salt (MWt 1500-4000, aqueous solution)	3682	CAS No														
Acrylic acid/ethenesulphonic acid copolymer with phosphonate groups, sodium salt (aqueous solution)	2417	0	NI	0	NR	0	NI	0	(0)	(0)	0	0			D	0
Acrylic acid/ethenesulphonic acid copolymer with phosphonate groups, sodium salt solution	3693	CAS No														
Acrylonitrile	25	0	2	2	NR	3	0	2	3	3	2	2	CMSs	NT	DE	3
Acrylonitrile	72	CAS No 107-13-1														
Acrylonitrile-styrene copolymer dispersion in polyether polyol (LOA)	1432	NI	0	0	NI	1	NI	0	(0)	(0)	0	(0)			S	0
Acrylonitrile-Styrene copolymer dispersion in polyether polyol	73	CAS No														
Adiponitrile	26	0	0	0	R	1	NI	3	(3)	3	3	(3)			FD	3
Adiponitrile	74	CAS No 111-69-3														
Alachlor (ISO)	1488	3	3	3	NI	4	1	1	0	(2)	1	0	CSs		S	3
Alachlor technical (90% or more)	75	CAS No 15972-60-8														
Alcoholic beverages	293	0	0	0	R	0	0	0	0	0	0	1			D	1
Alcoholic beverages, n.o.s.	85	CAS No														
Alcoholic silicasol	2198	0	0	0	R	0	0	0	0	0	1	2			DE	2
Tetraethyl silicate monomer/oligomer (20% in ethanol)	2475	CAS No														
Alcohol(C12-C16) poly(20 and above)ethoxylates	1482	4	(3)	(3)	R	2	0	(0)	(0)	(2)	2	1			D	2
Alcohol (C12-C16) poly(20+)ethoxylates	78	CAS No														
Alcohol(C6-C17)(secondary) poly(3-6)ethoxylate	722	4	3	3	R	4	2	0	(0)	(3)	3	2			D	3
Alcohol (C6-C17) (secondary) poly(3-6)ethoxylates	81	CAS No														
Alcohol(C6-C17)(secondary) poly(7-12)ethoxylate	295	3	3	3	R	4	1	1	0	(3)	3	3			D	3
Alcohol (C6-C17) (secondary) poly(7-12)ethoxylates	80	CAS No														
Alcohol (C10-C18) poly (7) ethoxylate (#)	2488	NI	(3)	(3)	R	3	1	(1)	(0)	(2)	(2)	(2)			D	2
Alcohol (C10-C18) poly (7) ethoxylate	3979	CAS No 85422-93-1														
Alcohol (C8-C11) poly(2.5-9)ethoxylates	2094	3	3	3	R	3	NI	1	0	(2)	(2)	(2)			D	2
Alcohol (C9-C11) poly(2.5-9)ethoxylate	2209	CAS No														
Alcohol(C12-C16) poly(1-6) ethoxylates	294	5	3	3	R	4	1	0	0	(2)	2	2			FD	2
Alcohol (C12-C16) poly(1-6) ethoxylates	77	CAS No														
Alcohol(C12-C16) poly(7-19)ethoxylates	1481	4	3	3	R	4	1	1	0	(3)	3	3			D	3
Alcohol (C12-C16) poly(7-19)ethoxylates	79	CAS No														

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Alcohol(C12-C14)poly(2)ethoxylate sulphate, sodium salt (*)	2419 3695	2	NI	2	R	3	NI	NI	NI	NI	NI	NI			NI	NI
									CAS No							
Alcohols (C8-C11)	2279	5	2	2	(R)	(3)	(1)	(0)	(0)	(2)	(2)	(2)			Fp	2
Alcohols (C8-C11), primary, linear and essentially linear	2887								CAS No							
Alcohols, C13 and above as individuals and mixtures	2039	5	2	2	R	4	1	0	0	0	(1)	(1)			Fp	2
Alcohols (C13+)	86								CAS No							
Alcohols (C9-11), ethoxylated, phosphate	2547 4288	(0)	NI	(0)	R	3	1	0	0	(2)	1	2			D	2
									CAS No		136504-88-6					
Alcohols, C10-C16 ethoxylated propoxylated (*)	2450 3868	0	NI	0	R	3	NI	NI	NI	NI	NI	NI			NI	NI
									CAS No							
Alcohols (C12-C13), linear	2294	5	2	2	R	4	(1)	0	0	(1)	1	1			Fp	2
Alcohols (C12-C13), primary, linear and essentially linear	2950								CAS No							
Alcohols (C14-C18), linear	2293	5	2	2	R	0	1	0	0	(1)	1	1			Fp	2
Alcohols (C14-C18), primary, linear and essentially linear	2951								CAS No							
Alcohols, linear (C10-C14)	2365	(5)	(2)	(2)	(R)	(4)	(1)	0	0	(2)	(2)	(2)			Fp	2
Decyl/Dodecyl/Tetradecyl alcohol mixture	3128								CAS No							
Alkanes (C6-C9)	2202	(5)	NI	(5)	(R)	(4)	NI	(0)	(0)	(1)	(2)	(2)	N		FE	2
Alkanes (C6-C9)	88								CAS No							
Iso- and cyclo-alkanes (C10-C11)	2203	(5)	NI	(5)	NI	(0)	(0)	(0)	(0)	(1)	(1)	(0)			F	1
Iso- and cyclo-alkanes (C10-C11)	393								CAS No							
Iso-and cyclo-alkanes (C12+)	2204	(5)	NI	(5)	NI	(0)	NI	0	0	(1)	(0)	(0)	A		NI	2
Iso- and cyclo-alkanes (C12+)	394								CAS No							
Alkanes (C5-C7), linear and branched	2464	(5)	NI	(5)	(R)	(3)	(0)	0	0	0	2	0	NA		E	2
Alkanes (C5-C7), linear and branched	3799								CAS No							
Alkanes (C10-C17), linear and branched	2463	(5)	NI	(5)	R	0	1	0	0	(0)	0	0	A		F	3
Alkanes (C10-C17), linear and branched	3815								CAS No							
Alkanes (C10-C26), linear and branched	2392	0	NI	0	R	0	NI	0	0	(1)	1	1	A		F	3
Alkanes (C10-C26), linear and branched (flashpoint ≤60°C)	3736								CAS No		90622-53-0					
Alkanes (C4-C12) linear, branched and cyclic (containing benzene up to 1%)	2510	(4)	(4)	(4)	R	(3)	(2)	0	0	0	2	(1)	CMA		F	3
Alkanes (C4-C12) linear, branched and cyclic	3999								CAS No							
Alkanes (C9-C24) linear, branched and cyclic	2511	(5)	(4)	(4)	NR	(2)	(1)	0	(0)	0	(2)	0	A		F	3
Alkanes (C9-C24) linear, branched and cyclic (flashpoint >60°C)	3998								CAS No							

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Alkanes (C9-C24) linear, branched and cyclic	2540	(5)	(4)	(4)	NR	(2)	(1)	0	(0)	0	(2)	0	A		F	3
Alkanes (C9-C24) linear, branched and cyclic	4250								CAS No							
n-Alkanes (C9-C11)	2449	(5)	NI	(5)	R	0	(0)	0	0	(0)	1	0	A		F	3
n-Alkanes (C9-C11)	3884								CAS No							
n-Alkanes (C10-C20)	296	(5)	(5)	(5)	(R)	(0)	NI	(0)	(0)	(0)	(1)	(1)	A		Fp	3
n-Alkanes (C10-C20)	471								CAS No							
Alkane (C14-C17) sulphonic acid, sodium salt (60-65% solution)	334	2	2	2	R	3	1	0	0	(2)	2	2			D	2
Sodium alkyl (C14-C17) sulphonates (60-65% solution)	1153								CAS No							
Alkaryl polyether (C9-C20) (LOA)	1974	4	NI	4	NR	3	NI	0	0	(3)	2	3			S	2
Alkaryl polyethers (C9-C20)	90								CAS No							
Alkenoic acid ester, borated	2376	5	(3)	(3)	R	2	NI	0	0	(2)	2	0			Fp	2
	3153								CAS No							
Alkenylamide, long chain, more than C10	1858	3	NI	3	(NR)	4	NI	0	(0)	(1)	0	1			Fp	2
Alkenyl (C11+) amide	838								CAS No							
Alkenyl succinic anhydride	298	0	0	0	NR	1	NI	0	0	(2)	2	(2)	SsSr		FD	2
Alkenyl (C16-C20) succinic anhydride	2336								CAS No							
Alkyl acrylate/Vinyl pyridine copolymer in toluene	299	2	2	2	R	2	0	0	0	(2)	2	2	RNA		F/Fp	3
Alkyl acrylate/vinylpyridine copolymer in toluene	94								CAS No							
Alkyl/cyclo(C4-C5)alcohols	2447	(1)	(1)	(1)	(R)	(2)	(0)	(1)	(1)	(2)	(2)	(3)			FED	3
Alkyl/cyclo (C4-C5) alcohols	3962								CAS No							
Alkyl/cyclo(C4-C5)alcohols	2447	(1)	(1)	(1)	(R)	(2)	(0)	(1)	(1)	(2)	(2)	(3)			FED	3
	3825								CAS No							
Alkyl amine, alkenyl acid ester, mixture	1433	NI	NI	NI	NI	1	NI	(0)	(0)	NI	NI	NI			Fp	2
Alkyl(C8+)amine, Alkenyl (C12+) acid ester mixture	98								CAS No							
Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomers)	2267	4	4	4	R	4	4	0	0	(1)	1	0			S	1
Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomers)	280								CAS No							
Alkylated phenols (C4-C9)	2273	0	2	0	NR	1	0	1	0	(2)	1	1			Fp	2
Alkylated (C4-C9) hindered phenols	2575								CAS No							
Alkylbenzene distillation bottoms	300	0	2	2	NR	0	(3)	0	0	1	1	1			Fp	2
Alkylbenzene distillation bottoms	3106								CAS No							

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Alkyl (C12-C15) benzene/indane/indene mixture	1872	0	4	4	NR	0	NI	0	0	0	0	2			FE	2		
Alkylbenzene, alkylindane, alkylindene mixture (each C12-C17)	103								CAS No									
Alkylbenzene mixtures (containing at least 50% of toluene)	2303	(2)	(2)	(2)	(R)	(3)	(0)	0	0	(2)	2	2	ACMNR		FE	3		
Alkylbenzene mixtures (containing at least 50% of toluene)	2909								CAS No									
Alkyl (C3-C4) benzenes	2206	(3)	NI	(3)	R	4	NI	0	0	(2)	(2)	(1)			FE	2		
Alkyl (C3-C4) benzenes	91								CAS No									
Alkyl (C5-C8) benzenes	2207	5	4	4	(NR)	4	NI	0	0	(2)	(2)	(1)			F	2		
Alkyl (C5-C8) benzenes	92								CAS No									
Alkyl benzenes, C9-C17 (straight or branched)	1783	0	4	4	NR	1	NI	0	(0)	(1)	(1)	(1)			F	1		
Alkyl(C9+)benzenes	100								CAS No									
Alkylbenzenes mixture (containing less than 1% naphthalene)	2423	3	3	3	NR	4	NI	0	0	(2)	2	1	A		F	3		
Alkylbenzenes mixture (containing less than 1% naphthalene)	3600								CAS No									
Alkylbenzenes mixtures (containing naphthalene)	2424	(3)	(3)	(3)	(NR)	(4)	NI	0	0	(1)	1	1	A		F	3		
Alkylbenzenes mixtures (containing naphthalene)	3966								CAS No									
Alkyl(C11-C13)benzenesulphonates, straight chain	301	3	3	3	R	3	1	1	(1)	(3)	2	3			FD	3		
Alkylbenzene sulphonic acid, sodium salt solution	102								CAS No			42615-29-2						
Alkyl (C3-C11) benzenes with phenol-formaldehyde/acrylate polymers (33% or less) (#)	2517	4	NI	4	NR	2	0	0	0	(2)	(2)	(2)	MASs		F	3		
Alkyl (C3-C11) benzenes with phenol-formaldehyde/acrylate polymers (33% or less)	4198								CAS No									
Alkyl(branched C10-C18, C12 rich)phenols	2504	0	4	4	NR	5	3	0	0	(3)	3	3	R		Fp	3		
Alkylphenols (C10-C18, C12 rich)	4070								CAS No									
Alkyl dithiocarbamate (C19-C35)	2236	0	NI	0	NI	1	NI	0	0	(0)	0	0			S	0		
Alkyl dithiocarbamate (C19-C35)	2538								CAS No									
Alkyl dithio thiadiazole (C6-C24) (LOA)	1981	5	NI	5	NR	1	NI	0	0	(0)	0	0			S	2		
Alkyl dithiothiadiazole (C6-C24)	104								CAS No									
Alkyl(C4-C20) ester copolymer (LOA)	1986	NI	0	0	NR	0	NI	0	0	(0)	0	0			Fp	2		
Alkyl ester copolymer (C4-C20)	2202								CAS No									
Alkyl naphthalenes, crude (containing less than 1% naphthalene)	2425	4	4	4	R	4	NI	0	0	(1)	1	1	AC		F	3		
Alkyl naphthalenes (containing less than 1% naphthalene), crude	3601								CAS No									
Alkyl naphthalenes, crude (containing naphthalene)	2426	(4)	(4)	(4)	(R)	(4)	NI	0	0	(1)	1	1	AC		F	3		
Alkyl naphthalenes (containing naphthalenes), crude	3699								CAS No									
Alkyl (C7-C9) nitrates	8	4	NI	4	NR	3	NI	0	0	(3)	2	(3)			F	3		
Alkyl (C7-C9) nitrates	93								CAS No									

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Alkyl(C8-C40)phenol sulphide (LOA)	1985	0	NI	0	NR	0	NI	0	0	(1)	1	1			FD	1
Alkyl (C8-C40) phenol sulphide	2253								CAS No							
Alkyl(C8-C9)phenylamine, in aromatic solvent (LOA)	2096	2	NI	2	NR	3	NI	(0)	(0)	(2)	2	2			S	2
Alkyl (C8-C9) phenylamine in aromatic solvents	2200								CAS No							
Alkyl (C9-C15) phenyl propoxylate	2188	0	NI	0	NR	0	NI	0	0	(2)	2	2			FD	2
Alkyl (C9-C15) phenyl propoxylate	2430								CAS No							
Alkyl[(C8-C10)/(C12-C14)]:(<40%/>60%)polyglucoside mixture solution (max 55% active material)	2134	3	NI	3	R	3	0	0	0	(3)	2	3			D	3
Alkyl (C8-C10)/(C12-C14):(40% or less/60% or more) polyglucoside solution (55% or less)	2248								CAS No			141464-42-8				
Alkyl[(C8-C10)/(C12-C14)]:(>60%/<40%)polyglucoside mixture solution (max 55% active material)	2135	3	NI	3	R	2	0	0	0	(2)	2	2			D	2
Alkyl (C8-C10)/(C12-C14):(60% or more/40% or less) polyglucoside solution(55% or less)	2246								CAS No			141464-42-8				
Alkyl(C8-C10)polyglucoside solution (max 65% active material)	2136	1	NI	1	R	2	0	0	0	(2)	2	2			D	2
Alkyl (C8-C10) polyglucoside solution (65% or less)	2245								CAS No			68515-73-1				
Alkyl (C8-C10)/(C12-C14):(50%/50%) polyglucoside solution (55% or less)	2133	3	NI	3	R	2	0	0	0	(3)	2	(3)			D	3
Alkyl (C8-C10)/(C12-C14):(50%/50%) polyglucoside solution (55% or less)	2247								CAS No							
Alkyl(C12-C14)polyglucoside solution (max 55% active material)	2137	3	NI	3	R	3	0	0	0	(3)	2	3			D	3
Alkyl (C12-C14) polyglucoside solution (55% or less)	2249								CAS No			110615-47-9				
Alkyl (C10-C15, C12 rich) phenol poly(4-12)ethoxylate (#)	2480	(5)	(4)	(4)	(NR)	(2)	NI	(0)	(0)	(2)	(2)	(1)			SD	2
Alkyl (C10-C15, C12 rich) phenol poly(4-12)ethoxylate	3953								CAS No							
Alkylsulphonic acid ester of phenol (MESAMOLL)	1878	5	NI	5	NR	0	NI	0	(0)	(0)	0	0			S	0
Alkyl sulphonic acid ester of phenol	1701								CAS No			91082-17-6				
Alkyltoluenes	2374	0	2	2	NR	0	NI	0	(0)	(1)	0	1			Fp	2
Alkyl (C18+) toluenes	3148								CAS No							
Alkyl(C18-C28)toluenesulphonic acid (>90% in mineral oil)	2429	0	4	4	NR	3	NI	0	0	(3)	2	3	Ss		Fp	3
Alkyl(C18-C28)toluenesulphonic acid	3658								CAS No							
Alkyl(C18-C28)toluenesulphonic acid, calcium salts, borated (up to 70% in mineral oil)	2404	0	4	4	NR	0	NI	(0)	(0)	(1)	(1)	(1)	Ss		S	2
Alkyl(C18-C28)toluenesulphonic acid, calcium salts, borated	3661								CAS No							
Alkyl(C18-C28)toluenesulphonic acid, calcium salts, high overbase (up to 70% in mineral oil)	2373	(0)	(4)	(4)	(NR)	(0)	NI	0	0	(0)	0	0	Ss		S	2
Alkyl (C18-C28) toluenesulphonic acid, calcium salts, high overbase	3149								CAS No							
Alkyl(C18-C28)toluenesulphonic acid, calcium salts, low overbase (up to 60% in mineral oil)	2409	0	4	4	NR	0	NI	0	0	(2)	2	0	Ss		Fp	3
Alkyl (C18-C28) toluenesulphonic acid, calcium salts, low overbase	3685								CAS No							

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Allyl alcohol	28	0	0	0	R	4	NI	2	3	3	2	3	A		D	3
Allyl alcohol	105								CAS No		107-18-6					
Aluminium chloride/hydrogen chloride solution	336	Inorg	NI	2	Inorg	3	1	1	(0)	3	(3C)	3			D	3
Aluminium chloride (30% or less)/Hydrochloric acid (20% or less) solution	110								CAS No							
Aluminium hydroxide, sodium hydroxide, sodium carbonate solution (40% or less)	2438	Inorg	0	0	Inorg	3	NI	0	0	(3)	3B	(3)			D	3
Aluminium hydroxide, sodium hydroxide, sodium carbonate solution (40% or less)	3807								CAS No							
Aluminium sulphate solution	2205	Inorg	Inorg	2	Inorg	3	1	1	(0)	(3)	(2)	(3)			D	3
Aluminium sulphate solution	111								CAS No							
Amides, coco, N-[3-(dibutylamino) propyl], acrylates	2513	(4)	NI	(4)	NR	4	NI	0	0	(2)	2	2			Fp	2
	4162								CAS No		851545-09-0					
2-(2-Aminoethoxy) ethanol	75	0	0	0	NR	1	0	0	1	(3)	3	3			D	3
2-(2-Aminoethoxy) ethanol	37								CAS No		929-06-6					
Aminoethylethanolamine	68	0	0	0	NR	1	0	0	0	(3)	3B	2	SsSr		D	3
Aminoethyl ethanolamine	112								CAS No		111-41-1					
Aminoethylethanolamine/Aminoethyldiethanolamine solution	74	Inorg	0	0	NR	1	0	(0)	(0)	(3)	(3B)	(2)	SsSr		D	3
Aminoethyldiethanolamine/Aminoethylethanolamine solution	113								CAS No							
N-Aminoethylpiperazine	88	0	0	0	NR	1	NI	0	2	(3)	3	3	Ss		D	3
N-Aminoethylpiperazine	472								CAS No		140-31-8					
2-Amino-2-(hydroxymethyl)-1,3-propanediol solution(40% or less)	89	0	NI	0	NI	1	NI	0	0	NI	NI	NI			D	NI
2-Amino-2-hydroxymethyl-1,3-propanediol solution (40% or less)	38								CAS No		77-86-1					
2-Amino-2-methyl-1-propanol	90	0	0	0	NR	1	NI	0	0	(3)	3	3			DE	3
2-Amino-2-methyl-1-propanol	39								CAS No		124-68-5					
Ammonia (anhydrous and aqueous, 28% or less)	91	0	0	0	R	3	2	1	(2)	3	3	3			DE	3
Ammonia aqueous (28% or less)	114								CAS No		7664-41-7					
Ammonium bisulphite solution, greater than 15%	1730	NI	NI	NI	NI	1	NI	NI	NI	NI	2	2			D	2
Ammonium bisulphite solution (70% or less)	115								CAS No		10192-30-0					
Ammonium chloride solution (less than 25%)	2388	0	NI	0	Inorg	1	0	0	(0)	(2)	2	2			D	2
Ammonium chloride solution (less than 25%) (*)	3411								CAS No		12125-02-9					
Ammonium lignosulphonate (46% solution in water)	2086	0	NI	0	NR	0	NI	0	(0)	(0)	0	0			D	0
Ammonium lignosulphonate solutions	118								CAS No		8061-53-0					
Ammonium nitrate solutions	1912	Inorg	0	0	Inorg	1	NI	0	0	(2)	1	2			D	2
Ammonium nitrate solution (93% or less) (*)	119								CAS No							

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Ammonium polyphosphate solution	1764	Inorg	0	0	Inorg	1	NI	0	0	0	1	0			D	1
Ammonium polyphosphate solution	120								CAS No		10-34-0					
Ammonium sulphate	99	0	0	0	Inorg	1	(0)	0	(0)	(0)	0	0			D	0
Ammonium sulphate solution	121								CAS No		7783-20-2					
Ammonium sulphide soln.(45% or less)	310	Inorg	0	0	Inorg	3	NI	1	0	(2)	2	2	N		D	2
Ammonium sulphide solution (45% or less) (*)	122								CAS No		12124-99-1					
Ammonium thiocyanate/ Ammonium thiosulphate solution	1732	Inorg	0	0	Inorg	1	NI	1	NI	NI	NI	NI			D	NI
Ammonium thiocyanate (25% or less)/Ammonium thiosulphate (20% or less) solution	123								CAS No							
Ammonium thiosulphate solution (60% or less)	312	Inorg	0	0	Inorg	1	NI	0	(0)	(1)	(1)	(1)			D	1
Ammonium thiosulphate solution (60% or less)	124								CAS No		7783-18-8					
Amyl acetate	255	2	2	2	NR	2	NI	0	(0)	0	1	1		NT	FED	2
Amyl acetate (all isomers)	125								CAS No		628-63-7					
tert-Amyl ethyl ether	2428	3	NI	3	NR	1	NI	0	(0)	0	2	2			E	2
tert-Amyl ethyl ether	3623								CAS No							
tert-Amyl methyl ether	2141	1	NI	1	NI	4	NI	1	0	2	0	1			ED	2
tert-Amyl methyl ether	2210								CAS No							
Amyl propionate	1484	2	NI	2	R	2	NI	0	0	(2)	2	1			F	2
n-Pentyl propionate	484								CAS No		624-54-4					
Aniline	261	0	0	0	R	3	2	2	2	3	1	3	CTSs	NT	FD	3
Aniline	127								CAS No		62-53-3					
Apple juice	275	0	NI	0	R	0	0	0	0	0	0	0			D	0
Apple juice	130								CAS No							
Aryl polyolefin (C11-C50) (LOA)	1979	NI	NI	0	NR	0	NI	0	0	0	0	0			Fp	2
Aryl polyolefins (C11-C50)	131								CAS No							
L-Aspartic acid, homopolymer, sodium salt (aqueous solution)	2421	0	0	0	NR	0	NI	0	(0)	0	0	0			D	0
L-Aspartic acid, homopolymer, sodium salt (aqueous solution)	3697								CAS No							
Aviation alkylates (C8 paraffins and iso-paraffins BPT 95-120 Celcius)	286	(5)	NI	(5)	(R)	(4)	NI	0	0	(0)	(0)	(0)			FE	2
Aviation alkylates (C8 paraffins and iso-paraffins BPT 95 - 120°C)	132								CAS No							
Aziridine polymer with methyloxirane (78% in diethylene glycol monoethyl ether)	2436	0	NI	0	NR	2	0	0	0	0	1	0			Fp	2
Aziridine polymer with methyloxirane (78% in diethylene glycol monoethyl ether)	3751								CAS No							
Barium long chain alkaryl sulphonate (C11-C50) (LOA)	1978	4	NI	4	NR	3	NI	2	0	(2)	0	0			S	2
Barium long chain (C11-C50) alkaryl sulphonate	2370								CAS No							

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Benzaldehyde	2498	1	NI	1	R	3	NI	1	(1)	2	2	2			FD	2
Benzaldehyde	4132								CAS No		100-52-7					
Benzene	324	2	1	1	R	2	NI	1	0	0	2	2	CTM	NT	E	3
Benzene and mixtures having 10% benzene or more (i)	133								CAS No		71-43-2					
Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl), 4-hydroxy-C7-C9 alcohols branched and linear	2378	0	3	3	NR	3	0	0	0	(0)	0	0			Fp	2
Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl), 4-hydroxy-C7-C9 alcohols branched and linear	3405								CAS No							
Benzene sulphonyl chloride	320	1	1	1	R	3	NI	1	(2)	(3)	3	3	Ss		SD	3
Benzene sulphonyl chloride	134								CAS No		98-09-9					
1,2,4-Benzene tricarboxylic acid, trioctyl ester	1733	0	0	0	NR	0	NI	0	(0)	2	1	1			Fp	2
Benzenetricarboxylic acid, trioctyl ester	136								CAS No							
Benzyl acetate	348	1	NI	1	R	3	1	1	0	2	1	1			SD	2
Benzyl acetate	138								CAS No		140-11-4					
Benzyl alcohol	349	1	NI	1	R	2	NI	1	1	2	2	2			SD	2
Benzyl alcohol	139								CAS No		100-51-6					
Benzyl chloride	352	NI	1	1	R	3	1	1	(2)	3	3	3	CSsA		S	3
Benzyl chloride	140								CAS No		100-44-7					
Bis(2-ethylhexyl) terephthalate	2437	0	3	3	R	0	0	0	0	(1)	1	1			Fp	2
Bis(2-ethylhexyl) terephthalate	3752								CAS No							
N,N-Bis(2-hydroxyethyl)oleamide (LOA)	2110	5	NI	5	NR	NI	NI	0	0	(2)	2	2			Fp	2
N,N-bis(2-hydroxyethyl) oleamide	2201								CAS No							
Bismuth oxide	2483	Inorg	(0)	(0)	Inorg	(0)	(0)	0	(0)	0	0	0			S	0
Bismuth oxide	4059								CAS No		1304-76-3					
Bis[3-(triethoxysilyl)propyl]amine	2444	1	NI	1	R	1	NI	0	0	(2)	2	2			D	2
Bis[3-(triethoxysilyl)propyl]amine	3823								CAS No		13497-18-2					
Borax, anhydrous or hydrated, crude or refined	359	Inorg	0	0	Inorg	1	0	0	0	(1)	1	1	R		S	3
Borax	143								CAS No		1303-96-4					
Boric acid	360	Inorg	0	0	Inorg	1	0	0	(0)	(1)	1	1	R		S	3
Boric acid	2254								CAS No		10043-35-3					
Brassica carinata oil containing less than 3% free fatty acids	2562	(0)	NI	(0)	(R)	(2)	NI	(0)	(0)	(0)	(1)	(1)			Fp	2
Brassica carinata oil containing less than 3% free fatty acids	4320								CAS No							

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Bromochloromethane	2084	1	1	1	NR	1	NI	0	0	0	1	0			SD	1
Bromochloromethane	145								CAS No		74-97-5					
1-Bromopropane	2229	2	NI	2	NI	NI	NI	0	(0)	0	(2)	(2)			SD	2
1-Bromopropane	2696								CAS No							
Butanol	381	0	(0)	0	R	0	NI	0	0	0	2	3		NT	D	3
Butyl alcohol (all isomers)	2216								CAS No		71-36-3					
Butanol	381	0	(0)	0	R	0	NI	0	0	0	2	3		NT	D	3
n-Butyl alcohol	474								CAS No		71-36-3					
sec-Butanol	383	0	(0)	0	R	0	NI	0	0	0	0	2		NT	D	2
sec-Butyl alcohol	638								CAS No		78-92-2					
tert-Butanol	384	0	0	0	NR	1	NI	0	0	0	1	3		NT	D	3
tert-Butyl alcohol	686								CAS No		75-65-0					
2-Butanone	385	0	NI	0	R	1	0	0	0	1	2	2			DE	2
Methyl ethyl ketone	446								CAS No		78-93-3					
Butene oligomer	386	0	NI	0	NR	(4)	0	0	0	0	0	1			FE	2
Butene oligomer	146								CAS No							
2-Butoxyethanol/hyperbranched polyesteramide mixture	2446	NI	NI	(0)	NR	(2)	NI	1	2	2	1	2			D	2
2-Butoxyethanol (58%)/Hyperbranched polyesteramide (42%) (mixture)	3901								CAS No							
Butyl acetate	387	1	NI	1	R	2	NI	0	0	0	0	1			FED	2
Butyl acetate (all isomers)	147								CAS No		123-86-4					
Butyl acrylate	390	2	NI	2	R	3	NI	1	1	1	2	2	SsA		FED	2
Butyl acrylate (all isomers)	148								CAS No		141-32-2					
Butylamine	392	0	NI	0	R	2	NI	2	2	3	3C	3			DE	3
Butylamine (all isomers)	154								CAS No		109-73-9					
Butyl benzene	1774	4	NI	4	NI	4	1	0	0	(2)	2	1			Fp	2
Butylbenzene (all isomers)	155								CAS No		104-51-8					
Butyl benzyl phthalate	398	4	4	4	R	4	2	0	0	(0)	(0)	(0)	R		S	3
Butyl benzyl phthalate	149								CAS No		85-68-7					
Butyl butyrate	399	2	NI	2	(R)	2	NI	0	0	(1)	1	NI			FE	2
Butyl butyrate (all isomers)	150								CAS No		109-21-7					
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture	2295	(5)	NI	(5)	(R)	(3)	NI	0	0	0	2	2	Ss		FE	2
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture	153								CAS No							

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Butylene glycol(s)	402	0	NI	0	R	1	NI	1	0	0	0	0			D	1
Butylene glycol	156								CAS No		110-63-4					
Butylene glycol methyl ether acetate	953	1	1	1	R	3	NI	0	(0)	(1)	1	1			FED	1
3-Methoxybutyl acetate	58								CAS No		4435-53-4					
Butylene glycol monomethyl ether	952	0	NI	0	R	1	NI	0	0	(1)	0	1			D	1
3-Methoxy-1-butanol	57								CAS No		2517-43-3					
1,2-Butylene oxide	403	0	NI	0	NR	2	NI	1	1	2	2	2	C		DE	3
1,2-Butylene oxide	8								CAS No		106-88-7					
Butyl methacrylate	409	2	NI	2	NR	1	NI	0	0	0	2	2	Ss		FE	2
Butyl methacrylate	151								CAS No		97-88-1					
Butyl octyl phthalate	410	5	NI	5	(R)	0	2	0	(0)	(1)	(1)	(1)			Fp	2
Butyl octyl phthalate	2749								CAS No		84-78-6					
Butyl phosphate/dibutyl phosphate mixture	2434	2	NI	2	R	1	0	0	(0)	(3)	2	3			D	3
Butyl phosphate/dibutyl phosphate mixture	3749								CAS No							
Butyl propionate	1483	2	NI	2	R	2	NI	0	0	0	1	1			FED	2
n-Butyl propionate	476								CAS No		590-01-2					
1-Butylpyrrolidin-2-one	2490	1	(1)	1	R	1	0	1	0	0	1	2			D	2
	4124								CAS No		3470-98-2					
Butyl stearate	413	0	NI	0	(R)	0	NI	0	NI	NI	2	NI			Fp	2
Butyl stearate	152								CAS No		123-95-5					
Butyraldehyde	416	1	NI	1	R	2	0	0	1	0	3	3			DE	3
Butyraldehyde (all isomers)	157								CAS No		123-72-8					
Butyric acid	418	0	NI	0	R	2	0	0	0	0	3A	3			D	3
Butyric acid	158								CAS No		107-92-6					
Butyrolactone	420	0	NI	0	R	(3)	NI	1	(0)	0	0	1	C		D	3
gamma-Butyrolactone	360								CAS No		96-48-0					
Calcium alkyl (long chain) salicylate (overbased) in mineral oil (LOA)	70	0	NI	0	NR	2	NI	0	0	(1)	(1)	(1)	Ss		Fp	3
Calcium long-chain alkyl salicylate (C13+)	166								CAS No							
Calcium alkyl phenol sulphide,polyolefin phosphorosulphide mixture (LOA)	1435	NI	NI	NI	NR	4	NI	0	0	(0)	NI	NI			NI	NI
Calcium alkyl (C9) phenol sulphide/Polyolefin phosphorosulphide mixture	160								CAS No							
Calcium alkyl salicylate	2015	3	NI	3	NR	2	NI	0	0	(2)	2	2			Fp	2
Calcium alkyl (C10-C28) salicylate	3152								CAS No							

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Calcium bromide (solutions)	427	Inorg	NI	0	Inorg	0	0	(0)	(0)	(2)	(1)	(2)			D	2
Drilling brines (containing calcium bromide)	308								CAS No		7789-41-5					
Calcium carbonate slurry	2016	Inorg	0	0	Inorg	0	NI	0	(0)	(0)	0	0			S	0
Calcium carbonate slurry	161								CAS No		471-34-1					
Calcium chloride solution	2519	Inorg	0	0	Inorg	0	0	1	0	(1)	1	1			D	0
Calcium chloride solution (less than 35%) (*)	4227								CAS No		10043-52-4					
Calcium hydroxide	431	Inorg	0	0	Inorg	2	NI	0	(0)	(2)	1	2			S	2
Calcium hydroxide slurry	162								CAS No		1305-62-0					
Calcium hypochlorite solutions containing 15% Ca(OCl)2 or more	432	Inorg	0	0	Inorg	5	NI	1	0	2	3A	3			D	3
Calcium hypochlorite solution (more than 15%)	164								CAS No		7778-54-3					
Calcium hypochlorite solutions containing less than 15% but more than 1.5% Ca(OCl)2	2073	Inorg	0	0	Inorg	(4)	NI	1	0	2	3A	3			D	3
Calcium hypochlorite solution (15% or less)	163								CAS No		7778-54-3					
Calcium lignosulphonate (52% solution in water)	2087	0	NI	0	NR	0	NI	0	(0)	(0)	0	0			D	0
Calcium lignosulphonate solutions	165								CAS No		8061-52-7					
Calcium long chain alkaryl sulphonate (C11-C50) (LOA)	1973	NI	0	0	NR	0	NI	0	0	(1)	1	1			FD	1
Calcium alkaryl sulphonate (C11-C50)	169								CAS No							
Calcium long chain alkyl (C5-C10) phenate (LOA)	2106	0	NI	0	NR	2	NI	0	0	(0)	0	0			FD	1
Calcium long-chain alkyl (C5-C10) phenate	168								CAS No							
Calcium long chain alkyl (C11-C40) phenate (LOA)	2097	0	NI	0	NR	0	NI	0	0	(1)	1	1			Fp	2
Calcium long-chain alkyl (C11-C40) phenate	167								CAS No							
Calcium long chain alkyl phenate sulphide (C8-C40) (LOA)	1756	0	NI	0	NR	1	NI	0	0	(1)	1	1			Fp	2
Calcium long-chain alkyl phenate sulphide (C8-C40)	170								CAS No							
Calcium long-chain alkyl phenolic amine (C8-C40)	1728	NI	NI	NI	NR	0	NI	0	0	(1)	1	(1)			Fp	2
	171								CAS No							
Calcium long-chain alkyl (C18-C28) salicylate	2383	0	NI	0	NR	0	NI	0	0	(1)	1	0	Ss		Fp	3
Calcium long-chain alkyl (C18-C28) salicylate	3426								CAS No							
Calcium nitrate	1803	Inorg	0	0	Inorg	0	NI	0	(0)	(1)	1	1			D	1
Calcium nitrate solutions (50% or less)	172								CAS No		10124-37-5					
Calcium nitrate/ Magnesium nitrate/Potassium chloride solution	1734	Inorg	0	0	Inorg	1	0	0	(0)	(1)	(1)	1			D	1
Calcium nitrate/Magnesium nitrate/Potassium chloride solution	173								CAS No							
Camelina oil	2440	(0)	NI	(0)	(R)	(0)	(0)	(0)	(0)	(1)	(0)	(1)			Fp	2
Camelina oil	3767								CAS No		68956-68-3					

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Camphor oil, white	1897	NI	NI	NI	NI	NI	NI	2	NI	(2)	1	NI		(T)	FE	2
Camphor oil	174								CAS No		8008-51-3					
Caprolactam	436	0	NI	0	R	1	0	1	1	2	1	2			D	3
epsilon-Caprolactam (molten or aqueous solutions)	310								CAS No		105-60-2					
Carbolic oil	437	(3)	3	(3)	(NR)	(3)	(1)	2	2	3	3	3	ATNCM		FED	3
Carbolic oil	176								CAS No							
Carbon disulphide	439	2	1	1	NR	3	NI	2	(3)	4	3A	3	RN		SD	3
Carbon disulphide	177								CAS No		75-15-0					
Cashew nut shell oil (untreated)	443	0	NI	0	R	0	NI	(0)	(0)	(2)	2	(2)	Ss		Fp	3
Cashew nut shell oil (untreated)	179								CAS No							
Castor oil (containing less than 10% free fatty acids)	2314	0	NI	0	R	(2)	NI	0	0	(1)	1	1			Fp	2
Castor oil	3044								CAS No							
Cesium Formate, drilling brines	2384	0	3	3	Inorg	2	NI	1	0	(2)	2	2			D	2
Cesium formate solution (*)	3421								CAS No		3495-36-1					
Cetyl/Eicosyl methacrylate (mixture)	445	0	NI	0	(NR)	(0)	NI	0	(0)	(1)	(1)	(1)			Fp	2
Cetyl/Eicosyl methacrylate mixture	180								CAS No							
Chlorinated paraffins (C18 and above) with any level of chlorine	2024	0	4	4	NR	0	2	0	0	(1)	(1)	(1)	C		S	3
Chlorinated paraffins (C18+) with any level of chlorine	183								CAS No							
Chlorinated paraffins (C10-C13) with 60% chlorine or more	2021	5	5	5	NR	5	2	0	0	(1)	1	1	C		S	3
Chlorinated paraffins (C10-C13)	181								CAS No							
Chlorinated paraffins (C10- C13) with less than 60% chlorine	2020	5	5	5	NR	5	3	(0)	(0)	(1)	(1)	(1)	C		S	3
Chlorinated paraffins (C10-C13) (60% chlorine or less)	2832								CAS No							
Chlorinated paraffins (C14-C17) with less than 1% shorter chain length	2112	5	4	4	NR	6	3	0	0	(2)	2	2	C		S	3
Chlorinated paraffins (C14-C17) (with 50% chlorine or more, and less than 1% C13 or shorter chains)	182								CAS No							
Chloroacetic acid	450	0	NI	0	R	2	0	2	3	(4)	3C	3	A		D	3
Chloroacetic acid (80% or less)	184								CAS No		79-11-8					
Chlorobenzene	456	2	2	2	NR	3	0	1	0	2	2	0			S	2
Chlorobenzene	185								CAS No		108-90-7					
Chlorohydrins	463	0	NI	0	R	0	NI	(2)	(2)	(3)	(3A)	3	C		D	3
Chlorohydrins (crude)	187								CAS No		96-24-2					
N-(3-Chloro-2-hydroxypropyl) trimethylammonium chloride solution (75% or less)	2286	0	0	0	NR	1	NI	0	0	(2)	0	(2)	C		D	3
N-(3-Chloro-2-hydroxypropyl)trimethyl ammonium chloride solution (75% or less)	2579								CAS No							

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4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution	1536	2	NI	2	NI	2	NI	1	0	2	1	1			S	2
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution	62								CAS No							
Chloronitrobenzenes	467	2	2	2	NR	3	NI	2	2	2	1	1			S	2
o-Chloronitrobenzene	533								CAS No			25167-93-5				
1-(4-Chlorophenyl)-4,4-dimethyl-3-pentanone	1772	3	3	3	NR	3	NI	0	0	(1)	1	0			S	1
1-(4-Chlorophenyl)-4,4- dimethyl-pentan-3-one	21								CAS No							
2-Chloropropionic acid	474	0	NI	0	R	1	NI	1	(3)	2	3A	3			D	3
2- or 3-Chloropropionic acid	36								CAS No			598-78-7				
3-Chloropropylene	478	1	1	1	R	3	NI	1	0	2	1	3	T		E	3
Allyl chloride	106								CAS No			107-05-1				
Chlorosulphonic acid	479	Inorg	0	0	Inorg	2	NI	(2)	(3)	4	3C	3			D	3
Chlorosulphonic acid	188								CAS No			7790-94-5				
m-Chlorotoluene	481	3	NI	3	NR	2	NI	2	0	(2)	1	1			S	2
m-Chlorotoluene	426								CAS No			108-41-8				
o-Chlorotoluene	480	3	3	3	NR	3	1	0	0	0	1	1			S	1
o-Chlorotoluene	534								CAS No			95-49-8				
o-Chlorotoluene	480	3	3	3	NR	3	1	0	0	0	1	1			S	1
Chlorotoluenes (mixed isomers)	189								CAS No			95-49-8				
p-Chlorotoluene	482	3	3	3	NR	3	0	0	0	0	1	1			S	2
p-Chlorotoluene	551								CAS No			106-43-4				
Choline chloride, solutions	485	0	NI	0	R	1	NI	0	(0)	(0)	0	0			D	0
Choline chloride solutions	190								CAS No			67-48-1				
Choline hydroxide solution	2525	0	(0)	0	R	1	0	(0)	(0)	(3)	3	3			D	3
Choline hydroxide solution	4234								CAS No			123-41-1				
Cinnamaldehyde	2485	1	(2)	(2)	R	2	0	1	1	(2)	2	1	Ss		SD	2
Cinnamaldehyde	4061								CAS No			104-55-2				
Citric acid	493	0	NI	0	R	1	0	0	(0)	(3)	1	3			D	3
Citric acid (70% or less)	748								CAS No			77-92-9				
Citric juices	494	0	0	0	Inorg	0	0	0	0	0	0	0			D	0
Water	740								CAS No							
Clay	495	Inorg	0	0	Inorg	0	0	0	0	0	0	0			S	0
Clay slurry	191								CAS No							

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Coal slurry	498	Inorg	0	0	Inorg	0	0	0	0	0	0	0			S	0
Coal slurry	192	CAS No														
Coal tar	499	(4)	4	4	NR	3	1	0	0	0	2	2	CMR	(T)	S	3
Coal tar	193	CAS No 8007-45-2														
Coal tar naphtha	500	3	NI	3	NR	3	NI	0	0	(1)	1	1	C	(T)	FE	3
Coal tar naphtha solvent	194	CAS No 8030-30-6														
Coal tar pitch (molten)	491	3	(3)	(3)	NR	(4)	(2)	0	0	(1)	1	0	CM		S	3
Coal tar pitch (molten) (*)	195	CAS No 65996-93-2														
Cobalt naphthenate in solvent naphtha	501	NI	NI	NI	NR	3	NI	0	(0)	(1)	NI	1	C		FE	3
Cobalt naphthenate in solvent naphtha	196	CAS No														
Cocoa butter	2342	0	NI	0	R	0	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
Cocoa butter	3096	CAS No														
Coconut acid oil	2370	0	0	0	R	3	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Coconut acid oil	3139	CAS No														
Coconut fatty acid distillate	2366	0	NI	0	R	(3)	NI	0	(0)	(1)	(1)	(1)			Fp	2
Coconut fatty acid distillate	3130	CAS No														
Coconut oil	503	0	NI	0	R	1	NI	0	(0)	(1)	0	(1)			Fp	2
Coconut oil	2772	CAS No 8001-31-8														
Coconut oil fatty acid	505	0	0	0	(R)	(3)	NI	0	(0)	(1)	(1)	(1)			Fp	2
Coconut oil fatty acid	197	CAS No 61788-47-4														
Coconut oil fatty acid methyl ester	506	5	0	0	R	0	NI	(0)	(0)	(0)	(0)	(1)			Fp	2
Coconut oil fatty acid methyl ester	198	CAS No 61788-59-8														
Concentrated filtrate of the neutralized reaction product of 5-[2-(methylthio)alkyl]imidazolidine-2,4-dione and potassium carbonate	2524	0	NI	0	R	1	0	0	(0)	0	0	0			D	0
Concentrated filtrate of the neutralized reaction product of 5-[2-(methylthio)alkyl]imidazolidine-2,4-dione and potassium carbonate	4233	CAS No														
Copper salt of long chain(>C17) alkanolic acid (LOA)	2111	0	NI	0	(R)	2	NI	0	0	(0)	0	0			Fp	2
Copper salt of long chain (C17+) alkanolic acid	2214	CAS No														
Corn oil	521	0	NI	0	R	(2)	NI	0	(0)	(1)	1	1			Fp	2
Corn Oil	2781	CAS No 8001-30-7														
Cotton seed oil	523	0	NI	0	R	(2)	NI	(0)	(0)	(1)	0	1			Fp	2
Cotton seed oil	2783	CAS No 8001-29-4														

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Creosote (coal tar)	524	(4)	(4)	(4)	NR	4	(2)	1	0	2	2	1	CMRSs	(T)	S	3
Creosote (coal tar) (amended)	199								CAS No		8001-58-9					
Creosote (wood tar)	525	NI	NI	NI	NR	5	NI	1	0	2	2	1	CM	(T)	SD	3
Creosote (wood)	200								CAS No		8021-39-4					
Creosote (coal tar) C8-C22, MW 116-278	2514	NI	(3)	(3)	(NR)	4	1	1	0	(2)	2	1	CMRSs		S	3
Creosote (coal tar) (C8-C22, MW 116-278)	4163								CAS No							
Cresol/Phenol/Xylenol mixture	2471	(2)	(2)	(2)	R	(3)	(1)	1	2	3	3B	3			SD	3
Cresol/Phenol/Xylenol mixture	4021								CAS No							
Cresols (mixed isomers)	527	2	2	2	R	3	(1)	2	2	4	3A	3		T	SD	3
Cresols (all isomers)	201								CAS No		1319-77-3					
Cresylic acids, dephenolized	1875	2	2	2	R	3	0	(2)	(2)	(3)	(3A)	(3)		(T)	S	3
Cresylic acid, dephenolized	202								CAS No							
Cresylic acid, sodium salt solution	1914	(2)	(2)	(2)	(R)	(3)	(0)	1	(1)	(3)	3	3	TCM	(T)	D	3
Cresylic acid, sodium salt solution	203								CAS No							
Crotonaldehyde	528	0	NI	0	NR	4	1	2	4	4	2	3			D	3
Crotonaldehyde	204								CAS No		4170-30-3					
Crude Piperazine	2331	0	NI	0	R	2	NI	(1)	(2)	(3)	3	3	SsSr		D	3
Crude Piperazine	2810								CAS No							
Crude Tall Oil	2357	4	NI	4	R	2	0	0	0	(0)	0	0	Ss		Fp	3
Tall oil, crude	3118								CAS No							
1,5,9-Cyclododecatriene	534	5	5	5	NR	4	NI	0	0	1	2	1	A		F	3
1,5,9-Cyclododecatriene	17								CAS No		4904-61-4					
Cycloheptane	535	4	NI	4	(NR)	4	NI	(0)	0	(1)	(0)	(1)			FE	2
Cycloheptane	205								CAS No		291-64-5					
Cyclohexane	536	3	3	3	NR	3	NI	0	0	1	0	1			E	2
Cyclohexane	206								CAS No		110-82-7					
Cyclohexane-1,2-dicarboxylic acid, diisononyl ester	2472	0	3	3	R	0	0	0	0	(1)	1	0			Fp	2
Cyclohexane-1,2-dicarboxylic acid, diisononyl ester	3915								CAS No		166412-78-8					
Cyclohexane oxidation products, sodium salts solution	2458	0	NI	0	Inorg	1	0	0	(0)	(0)	0	0			D	0
Cyclohexane oxidation products, sodium salts solution	3739								CAS No							
Cyclohexanol	537	1	NI	1	R	2	NI	0	0	0	2	2			Fp	2
Cyclohexanol	207								CAS No		108-93-0					

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TRN Name	TRN															
Cyclohexanone	539	0	1	1	R	1	0	1	1	1	2	2			FED	2
Cyclohexanone	208								CAS No		108-94-1					
Cyclohexanone/Cyclohexanol mixture	1436	1	1	1	R	2	NI	1	1	1	2	2			FED	2
Cyclohexanone, Cyclohexanol mixture	209								CAS No							
Cyclohexyl acetate	541	2	NI	2	(R)	(2)	NI	0	0	(2)	2	1			FED	2
Cyclohexyl acetate	210								CAS No		622-45-7					
Cyclohexylamine	542	1	NI	1	R	2	NI	2	2	3	3	3			D	3
Cyclohexylamine	211								CAS No		108-91-8					
1,3-Cyclopentadiene dimer (molten)	545	3	3	3	NR	3	NI	2	0	2	2	2			Fp	2
1,3-Cyclopentadiene dimer (molten)	11								CAS No		77-73-6					
Cyclopentane	546	3	NI	3	NR	3	NI	(0)	(0)	0	1	(1)			E	2
Cyclopentane	212								CAS No		287-92-3					
Cyclopentene	547	2	NI	2	(R)	3	NI	1	1	0	(2)	(0)	A		E	2
Cyclopentene	213								CAS No		142-29-0					
Decahydronaphthalene	551	4	4	4	NR	3	NI	0	0	2	2	1			F	1
Decahydronaphthalene	214								CAS No		91-17-8					
Decane	554	5	NI	5	R	0	0	0	0	0	1	0			F	1
Decane	2620								CAS No		124-18-5					
Decanoic acid	555	4	NI	4	R	4	1	0	0	(2)	2	2			Fp	2
Decanoic acid	215								CAS No		334-48-5					
1-Decene	558	5	NI	5	R	4	2	0	0	0	2	0	A		F	3
Decene	216								CAS No		872-05-9					
Decyl acetate	1767	4	NI	4	NI	NI	NI	0	0	(1)	(1)	(1)			F	1
Decyl acetate	217								CAS No		112-17-4					
Decyl acrylate	559	5	NI	5	(R)	5	NI	0	0	(2)	2	1			Fp	2
Decyl acrylate	218								CAS No		2156-96-9					
Decyloxytetrahydrothiophene dioxide	1859	3	NI	3	NR	4	NI	0	0	(1)	1	0			Fp	2
Decyloxytetrahydrothiophene dioxide	220								CAS No							
Dextrose solution	562	0	0	0	R	0	NI	0	0	0	0	(0)			D	0
Glucose solution	361								CAS No		50-99-7					
Dextrose solution	562	0	0	0	R	0	NI	0	0	0	0	(0)			D	0
Dextrose solution	221								CAS No		50-99-7					

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Diacetone alcohol	563	0	NI	0	R	1	0	0	0	(2)	2	2			D	2
Diacetone alcohol	226								CAS No		123-42-2					
Dialkyldiphenylamines (LOA)	1852	5	NI	5	NR	1	0	0	0	(0)	0	0			FD	0
Dialkyl (C8-C9) diphenylamines	2255								CAS No							
Dialkyl (C9 - C10) phthalates	2359	(0)	(0)	(0)	(R)	(0)	(0)	(0)	(0)	(1)	(1)	(1)			Fp	2
Dialkyl (C9 - C10) phthalates	3121								CAS No							
Dialkyl phthalates C9-C13	566	(0)	(4)	(4)	(NR)	(0)	(2)	(0)	(0)	(1)	(1)	(1)	R		Fp	3
Dialkyl (C7-C13) phthalates	227								CAS No							
2,6-Diaminohexanoic acid phosphonate mixed salts solution (#)	2469	1	NI	1	NR	1	(0)	(1)	(1)	(3)	(3)	(3)			D	3
2,6-Diaminohexanoic acid phosphonate mixed salts solution	3989								CAS No							
Diammonium hydrogen phosphate	98	0	0	0	Inorg	1	NI	0	0	(0)	(1)	(1)			D	1
Ammonium hydrogen phosphate solution	117								CAS No		7783-28-0					
Dibromomethane	574	1	NI	1	NR	(2)	NI	1	0	0	(2)	(2)			SD	2
Dibromomethane	228								CAS No		74-95-3					
Di-n-butylamine	577	2	NI	2	R	3	NI	2	2	3	3	3			FD	3
Dibutylamine	231								CAS No		111-92-2					
Di-butyl ether	578	3	3	3	NR	2	NI	0	0	0	1	1			FE	2
n-Butyl ether	475								CAS No		142-96-1					
Dibutyl hydrogen phosphonate	1857	1	NI	1	NI	2	NI	0	0	(3)	3	3			F	3
Dibutyl hydrogen phosphonate	229								CAS No		1809-19-4					
2,4-Di-tert-butyl phenol	2083	5	4	4	NR	4	NI	NI	NI	NI	NI	NI			NI	NI
2,4-Di-tert-butylphenol	2339								CAS No		96-76-4					
2,6-Di-tert-butyl phenol	2082	4	NI	4	NR	4	NI	0	0	(1)	1	1			Fp	2
2,6-Di-tert-butylphenol	2250								CAS No		128-39-2					
Di-n-butyl phthalate	582	4	4	4	R	4	1	0	0	1	0	1	R		S	3
Dibutyl phthalate	230								CAS No		84-74-2					
Dibutyl terephthalate	2430	5	(3)	(3)	R	4	2	0	0	(0)	0	0			S	0
Dibutyl terephthalate	3596								CAS No							
Dichlorobenzene (all isomers)	333	3	4	4	NR	3	1	1	0	1	(2)	2	CMR	T	S	3
Dichlorobenzene (all isomers)	232								CAS No							
3,4-Dichlorobut-1-ene	2079	2	2	2	NR	3	NI	1	0	2	2	3			S	3
3,4-Dichloro-1-butene	56								CAS No		760-23-6					

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1,1-Dichloroethane	590	1	NI	1	NR	1	NI	1	(1)	0	2	2			SD	2
1,1-Dichloroethane	4								CAS No		75-34-3					
1,2-Dichloroethane	591	1	1	1	NR	2	0	1	0	2	1	2	C		SD	3
Ethylene dichloride	330								CAS No		107-06-2					
1,6-Dichlorohexane	593	3	NI	3	NR	3	NI	0	(0)	(0)	0	0			S	0
1,6-Dichlorohexane	19								CAS No		2163-00-0					
Dichloromethane	594	1	2	2	NR	1	0	1	0	0	2	2	C		SD	3
Dichloromethane	234								CAS No		75-09-2					
2,4-Dichlorophenol	596	3	2	2	NR	3	2	3	2	3	3	3		T	S	3
2,4-Dichlorophenol	30								CAS No		120-83-2					
2,4-dichlorophenoxyacetic acid, choline salt	2523	2	2	2	NR	1	1	1	0	0	1	2			D	2
2,4-dichlorophenoxyacetic acid, choline salt	4232								CAS No							
2,4-Dichlorophenoxyacetic acid, diethanolamine salt, solution	599	0	1	1	R	2	NI	1	0	(3)	1	3		(T)	D	3
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution	32								CAS No							
2,4-Dichlorophenoxyacetic acid, dimethylamine salt, 70 % or less solution	600	0	1	1	R	3	NI	1	0	(3)	1	3		(T)	D	3
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution (70% or less)	33								CAS No							
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt soln.	602	0	NI	0	R	2	NI	1	0	(3)	(1)	3		(T)	D	3
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution	34								CAS No							
1,1-Dichloropropane	605	2	1	1	NR	2	1	0	0	1	1	1			SD	1
1,1-Dichloropropane	5								CAS No		78-99-9					
1,2-Dichloropropane	606	2	1	1	NR	2	0	1	0	2	2	2			SD	2
1,2-Dichloropropane	9								CAS No		78-87-5					
1,3-Dichloropropane	607	2	1	1	NR	2	1	0	NI	NI	NI	NI			SD	NI
1,3-Dichloropropane	12								CAS No		142-28-9					
Dichloropropane and dichloropropene, mixture	608	(2)	(1)	(1)	(NR)	(4)	(1)	2	1	2	3	3	CSs		SD	3
Dichloropropene/Dichloropropane mixtures	235								CAS No		8003-19-8					
1,3-Dichloropropene	612	1	NI	1	NR	4	1	2	1	2	3	3	CSs		SD	3
1,3-Dichloropropene	13								CAS No		542-75-6					
2,2-Dichloropropionic acid	609	2	2	2	NR	2	NI	1	0	(3)	3	3			D	3
2,2-Dichloropropionic acid	28								CAS No		75-99-0					
Di-(2-chloro-iso-propyl) ether	615	2	2	2	NR	2	NI	2	0	2	0	2			SD	2
2,2'-Dichloroisopropyl ether	25								CAS No		108-60-1					

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Dicyclopentadiene(80-90%)/Co-dimers(10-20%), mixtures	2389	2	3	3	NR	3	0	2	0	3	2	2	AR		FED	3
Dicyclopentadiene, Resin Grade, 81-89%	3559	CAS No														
Diethanolamine	620	0	NI	0	R	1	0	1	0	0	2	3	T		D	3
Diethanolamine	236	CAS No 111-42-2														
Diethylamine	621	0	NI	0	R	2	NI	1	2	3	3C	3			DE	3
Diethylamine	240	CAS No 109-89-7														
2,6-Diethylaniline	1437	3	3	3	NR	2	NI	1	1	(2)	1	2			FD	2
2,6-Diethylaniline	35	CAS No 579-66-8														
Diethyl benzene (mixed isomers)	624	4	4	4	NR	3	NI	0	(0)	(2)	2	1			F	2
Diethylbenzene	242	CAS No 25340-17-4														
Di-(2-ethylbutyl) phthalate	625	5	NI	5	R	0	2	0	0	(1)	1	(1)	R		Fp	3
Di-(2-ethylbutyl) phthalate	2750	CAS No 84-75-3														
Diethylene glycol	628	0	NI	0	R	0	0	1	0	2	1	1			D	2
Diethylene glycol	243	CAS No 111-46-6														
Diethylene glycol di-n-butyl ether	629	2	NI	2	NI	1	NI	0	0	(1)	1	1			FD	1
Diethylene glycol dibutyl ether	244	CAS No 112-73-2														
Diethylene glycol diethyl ether	630	0	NI	0	NR	0	NI	1	0	(2)	(2)	2			D	2
Diethylene glycol diethyl ether	245	CAS No 112-36-7														
Diethylene glycol initiated polyoxypropylene diamine	2353	0	NI	0	NR	2	NI	0	0	(3)	3B	(3)			D	3
Polyetheramine	2946	CAS No														
Diethylene glycol initiated polyoxypropylene diamine	2353	0	NI	0	NR	2	NI	0	0	(3)	3B	(3)			D	3
Diethylene glycol initiated polyoxypropylene diamine	3113	CAS No														
Diethylene glycol phthalate	1438	2	NI	2	NR	1	NI	0	0	(2)	(1)	2			S	2
Diethylene glycol phthalate	247	CAS No														
Diethylene triamine	638	0	1	1	(R)	2	NI	1	3	3	3A	3	Ss		FD	3
Diethylenetriamine	248	CAS No 111-40-0														
Diethylenetriamine pentaacetic acid, pentapotassium salt solution (40%) (**)	2466	1	NI	1	NR	2	NI	NI	NI	NI	NI	NI			D	NI
Diethylenetriamine pentaacetic acid, pentapotassium salt (40% solution)	3929	CAS No														
Diethylenetriamine pentaacetic acid, pentasodium salt (40% solution in water)	2076	0	NI	0	NR	0	NI	0	(0)	(0)	0	0			D	0
Diethylenetriaminepentaacetic acid, pentasodium salt solution	249	CAS No														
Diethylenetriamine pentamethylene phosphonic acid, pentasodium salt solution (47 %) (**)	2467	0	NI	0	R	2	NI	NI	NI	NI	NI	NI			D	NI
Diethylenetriamine pentamethylene phosphonic acid, pentasodium salt solution	3930	CAS No														

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Diethyl ethanolamine	622	0	NI	0	NR	3	NI	1	1	2	3	3			D	3
Diethylaminoethanol	241								CAS No		100-37-8					
Diethyl ether	640	0	1	1	NR	0	NI	1	0	0	1	1			DE	2
Diethyl ether (*)	237								CAS No		60-29-7					
Di-(2-ethylhexyl) adipate	641	0	2	2	R	4	2	0	0	0	1	1	R		Fp	3
Di-(2-ethylhexyl) adipate	222								CAS No		103-23-1					
Di-(2-ethylhexyl) phosphoric acid	643	(2)	1	1	NR	2	NI	0	1	(2)	2	2			Fp	2
Di-(2-ethylhexyl) phosphoric acid	223								CAS No		298-07-7					
Di-(2-ethylhexyl) phthalate	642	0	4	4	R	0	0	0	0	1	1	1	R		Fp	3
Di-(2-ethylhexyl) phthalate	2751								CAS No		117-81-7					
Diethyl phthalate	648	3	3	3	R	2	0	0	0	(1)	1	1			S	1
Diethyl phthalate	238								CAS No		84-66-2					
Diethyl sulphate	649	1	NI	1	R	(2)	NI	1	2	3	2	3	CM		SD	3
Diethyl sulphate	239								CAS No		64-67-5					
Diglycidyl ether of Bisphenol A	653	3	NI	3	NR	4	NI	0	0	(2)	1	2	Ss		S	2
Diglycidyl ether of bisphenol A	250								CAS No		1675-54-3					
Diglycidyl ether of Bisphenol F	728	0	NI	0	NR	3	NI	0	(0)	(2)	1	(2)	SsR		S	3
Diglycidyl ether of bisphenol F	251								CAS No		55492-52-9					
Diheptyl phthalate	655	0	(4)	(4)	R	0	NI	0	0	(1)	1	1			Fp	3
Diheptyl phthalate	252								CAS No		3648-21-3					
Di-n-hexyl adipate	656	5	NI	5	(NR)	5	0	0	0	(1)	0	1			FE	1
Di-n-hexyl adipate	224								CAS No		110-33-8					
Di-hexyl phthalate	2125	5	NI	5	R	0	2	0	0	(1)	1	1	R		Fp	3
Dihexyl phthalate	253								CAS No		84-75-3					
1,4-Dihydro-9,10-dihydroxy anthracene disodium salt (soln.)	657	1	NI	1	NI	1	NI	0	NI	NI	NI	NI			D	NI
1,4-Dihydro-9,10-dihydroxyanthracene, disodium salt solution	15								CAS No							
Diisobutene	575	4	4	4	NR	3	NI	0	0	0	1	0			FE	2
Diisobutylene	257								CAS No		11071-47-9					
Diisobutylamine	576	(2)	NI	(2)	(R)	(3)	NI	2	(2)	2	(3)	(3)			FED	3
Diisobutylamine	256								CAS No		110-96-3					
Diisobutyl ketone	579	3	NI	3	R	2	NI	0	0	2	2	2			F	2
Diisobutyl ketone	254								CAS No		108-83-8					

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Diisobutyl phthalate	581	4	(4)	4	R	(4)	1	0	0	1	0	0	R		S	3
Diisobutyl phthalate	255								CAS No		84-69-5					
Diisodecyl phthalate	619	0	0	0	(R)	0	(0)	0	0	(1)	0	1			Fp	2
Diisodecyl phthalate	3119								CAS No		26761-40-0					
Diisoheptyl phthalate	2391	0	(4)	(4)	R	0	0	0	0	(1)	1	1	R		Fp	3
Diisoheptyl phthalate	3561								CAS No							
Diisononyl adipate	690	0	NI	0	R	0	0	0	0	(1)	1	1			Fp	2
Diisononyl adipate	258								CAS No		33703-08-1					
Diisononyl phthalate	691	0	0	0	R	0	0	0	0	(0)	0	0			Fp	2
Diisononyl phthalate	3120								CAS No							
Diisooctyl phthalate	693	0	4	4	(R)	0	0	0	0	(1)	1	0			Fp	2
Diisooctyl phthalate	259								CAS No		27554-26-3					
Diisopropanolamine	703	0	NI	0	NR	1	NI	0	0	0	2	3			FD	3
Diisopropanolamine	260								CAS No		110-97-4					
Diisopropylamine	705	1	NI	1	NR	2	0	1	1	2	3	3			ED	3
Diisopropylamine	261								CAS No		108-18-9					
Diisopropyl benzene (mixed isomers)	2220	5	4	4	NR	4	NI	0	0	2	2	1		(T)	F	2
Diisopropylbenzene (all isomers)	262								CAS No							
1,3-Diisopropylbenzene	706	5	4	4	NR	4	NI	0	0	2	2	1			F	2
1,3-Diisopropyl benzene	2626								CAS No		25321-09-9					
Diisopropyl ether	711	1	NI	1	NR	2	NI	0	0	0	1	2			E	2
Isopropyl ether	406								CAS No		108-20-3					
Diisopropyl naphthalene, mixed isomers	712	5	4	4	NR	3	NI	0	0	(1)	1	1			Fp	2
Diisopropyl naphthalene	263								CAS No		38640-62-9					
Dimethyl acetamide	658	0	NI	0	R	1	NI	0	0	2	1	2			D	2
N,N-Dimethylacetamide solution (40% or less)	466								CAS No		127-19-5					
Dimethyl acetamide	658	0	NI	0	R	1	NI	0	0	2	1	2			D	2
N,N-Dimethylacetamide	2730								CAS No		127-19-5					
Dimethyl adipate	659	1	NI	1	(R)	4	NI	0	0	(0)	1	1			SD	2
Dimethyl adipate	264								CAS No		627-93-0					
Dimethylamine (40-50% aq.sol.)	661	0	NI	0	R	3	0	2	0	2	3B	3	Ss	NT	DE	3
Dimethylamine solution (greater than 55% but not greater than 65%)	272								CAS No		124-40-3					

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Dimethylamine (40-50% aq.sol.)	661	0	NI	0	R	3	0	2	0	2	3B	3	Ss	NT	DE	3
Dimethylamine solution (45% or less)	270								CAS No		124-40-3					
Dimethylamine (40-50% aq.sol.)	661	0	NI	0	R	3	0	2	0	2	3B	3	Ss	NT	DE	3
Dimethylamine solution (greater than 45% but not greater than 55%)	271								CAS No		124-40-3					
N,N-Dimethyl cyclohexylamine	665	2	NI	2	NR	2	NI	1	2	3	3C	3			FD	3
N,N-Dimethylcyclohexylamine	467								CAS No		98-94-2					
Dimethyl disulphide	1616	1	NI	1	NR	3	2	2	0	2	1	1			SD	2
Dimethyl disulphide	2504								CAS No		624-92-0					
N,N-Dimethyldodecylamine	2126	3	NI	3	R	4	NI	1	(1)	(3)	3	3			F	3
N,N-Dimethyldodecylamine	468								CAS No		112-18-5					
Dimethylethanolamine	667	0	NI	0	R	2	NI	1	1	2	3	3			D	3
Dimethylethanolamine	273								CAS No		108-01-0					
Dimethyl formamide	676	0	0	0	R	1	0	0	1	2	1	2	R		D	3
Dimethylformamide	274								CAS No		68-12-2					
Dimethyl glutarate	670	0	NI	0	R	3	NI	0	0	2	3	2	A		SD	3
Dimethyl glutarate	265								CAS No		26717-67-9					
Dimethyl hydrogen phosphite	673	0	NI	0	NR	2	NI	1	0	0	1	1			D	1
Dimethyl hydrogen phosphite	266								CAS No		868-89-9					
2,2-Dimethyloctanoic acid	675	3	NI	3	R	4	1	0	0	(2)	2	2			Fp	2
Dimethyl octanoic acid	267								CAS No		29662-90-6					
Dimethyl phthalate	678	2	2	2	R	2	0	0	0	(1)	0	1			SD	1
Dimethyl phthalate	268								CAS No		131-11-3					
2,2-Dimethylpropane-1,3-diol	679	0	0	0	NR	0	0	0	0	0	2	2			FD	2
2,2-Dimethylpropane-1,3-diol (molten or solution)	29								CAS No		126-30-7					
Dimethyl succinate	681	0	NI	0	NI	2	NI	0	0	0	0	2			SD	2
Dimethyl succinate	269								CAS No		106-65-0					
Dinitrotoluene	688	2	2	2	NR	4	2	2	(2)	(2)	1	0	CMR		S	3
Dinitrotoluene (molten)	276								CAS No		25321-14-6					
Dinonylphenol-formaldehyde-nonylphenol copolymer (62% in paraffin oil)	2557	(5)	NI	(5)	NR	0	0	0	0	(0)	0	0			Fp	2
	4315								CAS No							
Dinonyl phthalate	689	0	NI	0	R	0	0	0	0	(1)	1	1			Fp	2
Dinonyl phthalate	2993								CAS No		84-76-4					

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Di-n-octyl phthalate	692	0	(4)	(4)	(R)	0	0	0	0	(1)	1	(1)			Fp	2
Dioctyl phthalate	277								CAS No		117-84-0					
1,4-Dioxane	682	0	0	0	NR	0	0	0	0	0	0	2	C		D	3
1,4-Dioxane	16								CAS No		123-91-1					
Dipentene	686	4	NI	4	NR	2	NI	0	0	(2)	2	2	Ss		F	3
Dipentene	278								CAS No		138-86-3					
Diphenyl	694	3	4	4	R	4	1	0	0	(1)	0	1			S	1
Diphenyl	279								CAS No		92-52-4					
Diphenylamine (molten)	2186	3	3	3	NR	3	1	0	0	(1)	1	1			S	1
Diphenylamine (molten)	285								CAS No							
Diphenylamine, reaction product with 2,4,4-trimethylpentene	1500	NI	1	1	NR	3	NI	0	0	(1)	1	1			Fp	2
Diphenylamine, reaction product with 2,2,4-Trimethylpentene	286								CAS No							
Diphenylamines, alkylated	1770	5	NI	5	NR	(3)	NI	0	0	(1)	(1)	(1)			F	2
Diphenylamines, alkylated	287								CAS No							
Diphenyl/Diphenyl ether (mixtures)	698	NI	NI	4	NR	4	1	0	0	(1)	1	1		(T)	S	1
Diphenyl/Diphenyl ether mixtures	283								CAS No		8004-13-5					
Diphenyl ether	699	4	4	4	NR	4	NI	0	0	0	1	1		T	S	1
Diphenyl ether	281								CAS No		101-84-8					
Diphenyl ether/ Biphenyl phenyl ether mixtures	702	5	NI	5	NR	4	NI	0	0	0	1	1		(T)	S	1
Diphenyl ether/Diphenyl phenyl ether mixture	282								CAS No							
Diphenylmethane-4,4'-diisocyanate (#)	700	5	2	2	NR	0	0	0	0	3	2	2	SsSr		S	3
Diphenylmethane diisocyanate	288								CAS No		101-68-8					
Diphenylol propane-epichlorohydrin resins	2237	3	NI	3	NR	4	NI	0	0	(2)	1	2			S	2
Diphenylol propane-epichlorohydrin resins	290								CAS No							
Di-n-propylamine	704	1	NI	1	NR	3	NI	2	2	2	3C	3			FED	3
Di-n-propylamine	225								CAS No		142-84-7					
Dipropylene glycol	707	0	1	1	R	0	NI	0	0	0	0	1			D	1
Dipropylene glycol	291								CAS No		25265-71-8					
Dipropylene glycol dibenzoate	708	3	NI	3	R	3	NI	0	0	0	0	0			S	0
Dipropylene glycol dibenzoate	2431								CAS No		94-51-9					
Di-n-propyl phthalate	713	3	NI	3	(R)	3	NI	(0)	(0)	(1)	(1)	(1)	R		S	3
Di-n-propyl phthalate	2752								CAS No		131-16-8					

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Distilled Resin Oil, DRO	2299	(3)	NI	(3)	(NR)	(3)	NI	0	0	(2)	2	1	MN		FE	3
Resin oil, distilled	2958	CAS No														
Dithiocarbamate ester (C7-C35)	2185	NI	2	2	NR	4	NI	0	0	(1)	1	1			S	1
Dithiocarbamate ester (C7-C35)	2371	CAS No														
Ditridecyl adipate	2351	0	NI	0	NR	0	NI	0	0	(2)	2	1			Fp	2
Ditridecyl adipate	293	CAS No														
Ditridecyl phthalate	714	0	(0)	0	NR	0	(0)	0	0	(1)	1	(1)			Fp	2
Ditridecyl phthalate	2994	CAS No 119-06-2														
Diundecyl phthalate	715	0	(0)	0	NR	0	0	0	0	(1)	1	1			Fp	2
Diundecyl phthalate	294	CAS No 3648-20-2														
Dodecane	718	5	NI	5	(R)	0	NI	0	0	(1)	(1)	(0)			Fp	2
Dodecane (all isomers)	295	CAS No 112-40-3														
tert-Dodecanethiol	2233	5	4	4	NR	0	0	0	0	(2)	2	1	Ss		F	3
tert-Dodecanethiol	2418	CAS No														
1-Dodecanol	719	5	2	2	R	4	1	0	0	(1)	1	(1)			Fp	2
Dodecyl alcohol	298	CAS No 112-53-8														
1-Dodecene (#)	2473	5	NI	5	R	0	NI	0	0	1	1	(0)	A		F	3
1-Dodecene	3990	CAS No 112-41-4														
Dodecene (all isomers) (#)	720	5	NI	5	NR	4	NI	0	0	1	1	0	A		F	3
Dodecene (all isomers)	296	CAS No														
2-Dodecenyl succinic acid, dipotassium salt, solution	727	4	NI	4	NR	1	NI	(0)	(0)	NI	NI	NI			D	NI
Dodecenylsuccinic acid, dipotassium salt solution	297	CAS No 57195-28-5														
Dodecylamine/Tetradecylamine mixture	721	3	NI	3	R	4	NI	1	0	(3)	3	3			F	3
Dodecylamine/Tetradecylamine mixture	303	CAS No														
Dodecyl benzene	126	0	NI	0	NR	0	3	0	0	(2)	(2)	(1)			F	2
Dodecylbenzene	304	CAS No 123-01-3														
Dodecyl benzene sulphonic acid (contains 1.5% Sulphuric acid)	1739	NI	NI	3	R	3	1	1	(1)	(2)	(1)	(1)			D	2
Alkyl (C11-C17) benzene sulphonic acid	101	CAS No														
Dodecyl diphenyl oxide disulphonate (solns.)	723	(5)	NI	5	NR	4	1	1	0	(3)	1	3			D	3
Dodecyl diphenyl ether disulphonate solution	299	CAS No														
Dodecyl hydroxypropyl sulphide (LOA)	1861	5	NI	5	NI	4	NI	0	0	(0)	0	0			FD	0
Dodecyl hydroxypropyl sulphide	2252	CAS No														

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n-Dodecyl mercaptan	2462	5	3	3	NR	5	NI	0	0	(3)	3	(3)	Ss		F	3	
n-Dodecyl mercaptan	3743	CAS No															
Dodecyl/octadecyl methacrylate (mixtures)	2116	(5)	NI	(5)	(NR)	(0)	NI	0	0	(1)	1	(1)			Fp	2	
Dodecyl/Octadecyl methacrylate mixture	1717	CAS No															
Dodecyl/pentadecyl methacrylate (mixture)	724	(5)	NI	(5)	(NR)	(0)	NI	0	(0)	(1)	(1)	(1)			Fp	2	
Dodecyl/Pentadecyl methacrylate mixture	302	CAS No															
Dodecyl phenol	725	0	4	4	NI	4	(3)	0	0	(3)	3	2	R		Fp	3	
Dodecyl phenol	301	CAS No										27193-86-8					
Dodecyl-, Tetradecyl-, Hexadecyl-dimethylamine mixture	2248	3	NI	3	R	5	2	1	(1)	(3)	3C	3			F	3	
Alkyl (C12+) dimethylamine	2485	CAS No															
Dodecylxylene	1763	0	NI	0	NI	0	NI	0	0	(1)	1	1			Fp	2	
Dodecyl Xylene	306	CAS No															
Epichlorohydrin	731	0	0	0	R	2	NI	2	2	3	3A	3	CSs		D	3	
Epichlorohydrin	309	CAS No										106-89-8					
Ethanol	732	0	NI	0	R	0	NI	0	0	0	1	2			D	2	
Ethyl alcohol	315	CAS No										64-17-5					
Ethanolamine	733	0	NI	0	R	2	0	1	1	3	3A	3			D	3	
Ethanolamine	311	CAS No										141-43-5					
Ethanoltriazine (aqueous solution)	2411	(0)	NI	(0)	R	3	NI	1	0	4	0	2	Ss		D	3	
1,3,5-Hexahydrotriethanol-1,3,5-triazine solution	3687	CAS No										4719-04-4					
Ethoxylated long chain (>C16)alkyloxyalkanamine (LOA)	2103	5	NI	5	NR	1	NI	0	0	(3)	3	(3)			Fp	3	
Ethoxylated long chain (C16+) alkyloxyalkylamine	2203	CAS No															
Ethoxylated tallow amine (>95%)	2313	0	NI	0	NR	4	NI	1	(1)	3	2	3	Ss		Fp	3	
Ethoxylated tallow amine (> 95%)	2959	CAS No															
Ethoxylated tallow amine, glycol mixture	2252	2	NI	2	NR	6	NI	1	0	3	2	3			D	3	
Ethoxylated tallow amine, glycol mixture	2476	CAS No															
Ethyl acetate	735	0	2	2	R	1	0	0	0	1	0	1			DE	2	
Ethyl acetate	312	CAS No										141-78-6					
Ethyl acetoacetate	736	0	0	0	R	1	NI	0	0	(1)	1	1			D	1	
Ethyl acetoacetate	313	CAS No										141-97-9					
Ethyl acrylate	734	1	NI	1	R	3	1	1	2	2	2	2	CSs	T	ED	3	
Ethyl acrylate	314	CAS No										140-88-5					

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Ethylamine	1016	0	NI	0	R	2	NI	2	2	1	3	3			GD	3
Ethylamine (*)	322								CAS No		75-04-7					
Ethylamine solutions (72% or less)	2219	NI	NI	0	R	2	NI	2	2	1	3	3			DE	3
Ethylamine solutions (72% or less)	323								CAS No							
Ethyl amyl ketone	1784	2	NI	2	NI	2	NI	0	0	(2)	2	NI			FD	2
Ethyl amyl ketone	316								CAS No		106-68-3					
Ethylbenzene	740	3	2	2	R	3	(1)	0	0	0	2	2	T		FE	3
Ethylbenzene	324								CAS No		100-41-4					
N-Ethyl butylamine	745	1	NI	1	NI	NI	NI	1	1	2	3	3			FED	3
N-Ethylbutylamine	477								CAS No		13360-63-9					
Ethyl tert-butyl ether (#)	2085	1	NI	1	NR	2	0	0	0	(1)	1	0			E	1
Ethyl tert-butyl ether (amended)	320								CAS No		637-92-3					
Ethyl butyrate	748	1	NI	1	NI	2	NI	0	0	(2)	2	NI			FED	2
Ethyl butyrate	317								CAS No		105-54-4					
Ethyl cyclohexane	751	4	4	4	NR	3	NI	(0)	(0)	(1)	(1)	(1)			FE	2
Ethylcyclohexane	325								CAS No		1678-91-7					
N-Ethyl cyclohexylamine	752	2	NI	2	NI	(3)	NI	1	2	2	3	3			FED	3
N-Ethylcyclohexylamine	478								CAS No		5459-93-8					
S-Ethyl dipropylthiocarbamate	2081	3	2	2	NI	3	NI	1	1	2	2	(2)	N		F	3
S-Ethyl dipropylthiocarbamate	2302								CAS No		759-94-4					
Ethylene carbonate	755	0	NI	0	R	0	NI	0	0	(2)	1	2			SD	2
Ethylene carbonate	326								CAS No		96-49-1					
Ethylene chlorohydrin	756	0	0	0	R	3	NI	2	3	4	2	3			D	3
Ethylene chlorohydrin	327								CAS No		107-07-3					
Ethylene cyanohydrin	757	0	0	0	NI	2	NI	1	0	(2)	1	2			D	2
Ethylene cyanohydrin	328								CAS No		109-78-4					
Ethylene diamine	758	0	1	1	R	3	1	1	2	1	3	3	SsSr		D	3
Ethylenediamine	343								CAS No		107-15-3					
Ethylene diamine, tetra acetic acid, di- and tetra-sodium salt	759	0	NI	0	NR	2	0	1	(1)	(2)	1	2			D	2
Ethylenediaminetetraacetic acid, tetrasodium salt solution	344								CAS No		64-02-8					
Ethylene dibromide	760	1	2	2	NR	3	NI	2	2	2	3	3	CRT		SD	3
Ethylene dibromide	329								CAS No		106-93-4					

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Ethylene glycol	761	0	NI	0	R	0	NI	1	(1)	(1)	0	0			D	1
Ethylene glycol	331								CAS No		107-21-1					
Ethylene glycol acrylate	869	0	NI	0	R	4	NI	1	3	3	3	3	MSs		D	3
2-Hydroxyethyl acrylate	51								CAS No		818-61-1					
Ethylene glycol butyl ether acetate (#)	764	1	NI	1	R	2	NI	1	1	(1)	1	1			FD	1
Ethylene glycol butyl ether acetate	334								CAS No		112-07-2					
Ethylene glycol diacetate	765	0	NI	0	NI	2	NI	0	0	(1)	1	NI			D	1
Ethylene glycol diacetate	335								CAS No		111-55-7					
Ethylene glycol ethyl ether acetate	767	0	NI	0	R	2	0	1	0	1	1	1	R		D	3
2-Ethoxyethyl acetate	41								CAS No		111-15-9					
Ethylene glycol methyl butyl ether	772	1	NI	1	NI	1	NI	NI	NI	NI	NI	NI			D	NI
Ethylene glycol methyl butyl ether	336								CAS No		13343-98-1					
Ethylene glycol methyl ether acetate	773	0	NI	0	R	2	NI	0	0	(0)	(1)	1	R		D	3
Ethylene glycol methyl ether acetate	337								CAS No		110-49-6					
Ethylene glycol monoacetate	762	0	NI	0	R	2	NI	0	0	(3)	NI	(3)			D	3
Ethylene glycol acetate	333								CAS No		542-59-6					
Ethylene glycol monoalkyl ethers	2268	0	NI	0	R	2	NI	1	2	2	1	2			D	2
Ethylene glycol monoalkyl ethers	338								CAS No							
Ethylene glycol monoalkyl ethers (31% or less)/Ethylene glycol (25% or less)/Ethoxylated alcohols (15% or less)/Ethoxylated imidazolines (10% or less)/2-mercaptoethanol (5% or less) solution	2543	(3)	NI	(3)	(R)	(3)	(0)	(1)	(2)	(3)	(2)	(3)	TSs		D	3
	4283								CAS No							
Ethylene glycol monoethyl ether	766	0	NI	0	R	0	0	0	0	1	2	2			D	3
2-Ethoxyethanol	40								CAS No		110-80-5					
Ethylene glycol phenyl ether	775	1	NI	1	R	1	0	1	0	0	1	2			SD	2
Ethylene glycol phenyl ether	339								CAS No		122-99-6					
Ethylene glycol phenyl ether/Diethylene glycol phenyl ether, mixture	1740	NI	NI	1	R	1	NI	1	0	(2)	(2)	(2)			SD	2
Ethylene glycol phenyl ether/Diethylene glycol phenyl ether mixture	340								CAS No							
Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture (#)	2477	NI	(1)	(1)	R	1	NI	1	(1)	(2)	(1)	(1)	R		D	3
Ethylene glycol (>75%)/Sodium alkyl carboxylates/borax mixture	4006								CAS No							
Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture (#)	2475	NI	(1)	(1)	R	1	NI	1	(1)	(1)	0	0			D	1
Ethylene glycol (>85%)/Sodium alkyl carboxylates mixture	4005								CAS No							

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Ethylene oxide	77	NI	NI	NI	NI	NI	NI	1	(1)	3	3	3	CMR		GD	3
Ethylene oxide	2744								CAS No		75-21-8					
Ethylene-propylene copolymer	1508	NI	NI	NI	NI	NI	NI	(0)	(0)	(0)	(0)	(0)			NI	0
Propylene-Butylene copolymer	633								CAS No							
Ethylene vinyl acetate copolymer (emulsion)	779	0	1	1	NR	0	0	0	(0)	(2)	2	0			S	2
Ethylene-vinyl acetate copolymer (emulsion)	342								CAS No							
Ethyl 3-ethoxypropionate	1439	1	NI	1	NR	2	NI	0	0	0	1	1			FD	1
Ethyl-3-ethoxypropionate	321								CAS No		763-69-9					
2-Ethylhexanoic acid	776	2	NI	2	R	2	NI	0	0	(2)	2	2			FD	3
2-Ethylhexanoic acid	45								CAS No		149-57-5					
2-Ethylhexyl acrylate	782	3	NI	3	R	2	NI	0	0	(2)	2	2	Ss		F	3
2-Ethylhexyl acrylate	46								CAS No		103-11-7					
2-Ethylhexyl esters of fatty acids	2221	0	NI	0	R	1	NI	0	(0)	(0)	1	0			F	1
	2578								CAS No							
2-Ethyl-2-(hydroxymethyl)propane-1,3-diol C8-C10 ester (LOA)	2054	0	NI	0	R	0	NI	0	(0)	(0)	0	(0)			Fp	2
2-Ethyl-2-(hydroxymethyl) propane-1,3-diol (C8-C10) ester	42								CAS No							
5-Ethylidene-2-norbornene	783	3	3	3	NR	3	0	0	0	2	1	2			FE	2
Ethylidene norbornene	345								CAS No		16219-75-3					
Ethyl isoamyl ketone	737	NI	NI	NI	NI	NI	NI	0	0	(1)	1	(2)			FD	2
Ethyl isoamyl ketone	2618								CAS No		541-85-5					
Ethyl methacrylate	785	1	NI	1	R	2	0	0	0	0	(2)	(2)	Ss		FE	2
Ethyl methacrylate	318								CAS No		97-63-2					
N-Ethyl-2-methallylamine	2228	0	NI	0	NR	2	NI	3	2	2	3A	3			D	3
N-Ethylmethylallylamine	2417								CAS No							
o-Ethyl phenol	788	2	NI	2	NI	(2)	NI	1	NI	NI	NI	NI			S	NI
o-Ethylphenol	535								CAS No		90-00-6					
Ethyl propionate	790	1	NI	1	NI	2	0	0	(1)	(2)	2	2			ED	2
Ethyl propionate	319								CAS No		105-37-3					
2-Ethyl-3-propylacrolein	791	2	NI	2	R	3	NI	0	0	1	3	3			F	3
2-Ethyl-3-propylacrolein	43								CAS No		645-62-5					
Ethyl toluene (all isomers)	2297	3	NI	3	NI	(3)	NI	0	0	0	2	2			F	2
Ethyl toluene	346								CAS No							

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Fast Pyrolysis Bio-oil	2545	(4)	NI	(4)	NR	2	0	0	(0)	(3)	3A	(3)	ASs		Fp	3
	4285								CAS No		1207435-39-9					
Fatty acid methyl esters	2362	0	NI	0	R	2	NI	0	(0)	(2)	2	2			Fp	2
Fatty acid methyl esters (m)	3125								CAS No							
Fatty acids, essentially linear, C6-C18, 2-ethylhexyl ester	2253	0	NI	0	R	1	NI	0	0	(1)	1	0			Fp	2
Fatty acids, essentially linear (C6-C18) 2-ethylhexyl ester	1914								CAS No							
Fatty acids, essentially linear, C6-C18, 2-ethylhexyl ester	2253	0	NI	0	R	1	NI	0	0	(1)	1	0			Fp	2
Fatty acid (C8-C16) ethyl hexyl esters	2759								CAS No							
Fatty acids, linear, C8-C18 saturated with C18 unsaturated	2260	(4)	NI	(4)	R	(4)	(1)	(0)	(0)	(1)	(1)	(1)			Fp	2
Fatty acids, (C8-C18)	2779								CAS No							
Fatty acids, linear C12+ saturated with C12+ unsaturated	2261	5	0	0	(R)	0	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Fatty acids, (C12+)	2780								CAS No							
Fatty acids saturated, C8-C10	2324	0	NI	0	R	4	NI	0	0	(3)	3C	3			Fp	3
Fatty acids, (C8-C10)	3079								CAS No							
Fatty acids, unsaturated, linear, C16+	2259	0	0	0	R	(0)	NI	0	0	(0)	0	0			Fp	2
Fatty acids, (C16+)	2778								CAS No							
Fatty acids, C18 unsaturated, reaction products with triethanolamine, dimethyl sulphate-quaternized	2548	(0)	NI	(0)	R	(2)	(0)	0	0	(2)	0	2			S	2
	4289								CAS No							
Fatty alcohols, linear, (C12+)	2326	(5)	(2)	(2)	(R)	(4)	(1)	0	0	(1)	1	1			Fp	2
Alcohols (C12+), primary, linear	3081								CAS No							
Fatty alcohols, linear, (C16+)	2327	(5)	(2)	(2)	(R)	(0)	(1)	0	0	(1)	1	1			Fp	2
Alcohols, linear (C16+)	3082								CAS No							
Ferric chloride	339	Inorg	5	5	Inorg	2	0	1	(0)	(3)	2	3			D	3
Ferric chloride solutions	348								CAS No		7705-08-0					
Ferric hydroxyethyl ethylene diamine triacetic acid, tri- sodium salt, solution	796	NI	NI	NI	NI	NI	NI	0	0	(1)	(0)	1			D	1
Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution	349								CAS No							
Ferric nitrate/nitric acid solution	337	Inorg	(5)	(5)	Inorg	(2)	(0)	0	(0)	(3)	3	3			D	3
Ferric nitrate/Nitric acid solution	350								CAS No							
Fish by-products (fresh)	2499	NI	NI	(0)	NR	1	(0)	(0)	(0)	(0)	(0)	(0)			FD	1
Fish by-products (fresh) (*)	3893								CAS No							
Fish oil (containing less than 10% free fatty acids)	2316	0	NI	0	R	2	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
Fish oil	3046								CAS No							

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TRN Name	TRN															
Fish protein concentrate (containing 4% or less formic acid)	2502	NI	NI	(0)	R	1	(0)	(0)	(0)	(0)	(1)	(1)			D	1
Fish protein concentrate (containing 4% or less formic acid)	4090								CAS No							
Fish silage (containing 3% or less formic acid with antioxidant)	2500	NI	NI	(0)	R	0	(0)	(0)	(0)	(0)	(1)	(1)			FD	1
Fish silage (containing 3% or less formic acid with antioxidant)	3892								CAS No							
Fish silage protein concentrate (containing 4% or less formic acid)	2487	NI	0	0	R	2	NI	(0)	(0)	(0)	(1)	(1)			D	2
Fish silage protein concentrate (containing 4% or less formic acid)	4062								CAS No							
Fish solubles	1509	NI	NI	NI	NI	NI	NI	(0)	(0)	(0)	(0)	(0)			NI	NI
Fish solubles (water-based fish meal extract)	351								CAS No							
Fluorosilicic acid	806	Inorg	0	0	Inorg	2	NI	2	(2)	4	3	3			D	3
Fluorosilicic acid	2716								CAS No		16961-83-4					
Fluorosilicic acid solution (20-30%)	2240	Inorg	2	2	Inorg	2	0	(1)	(1)	(3)	3B	3	T		D	3
Fluorosilicic acid solution (20-30%)	353								CAS No							
Formaldehyde (37%-50% solution)	807	0	NI	0	R	2	NI	2	2	3	3	3	CMSs	NT	D	3
Formaldehyde solutions (45% or less)	354								CAS No		50-00-0					
Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol, methyloxirane and oxirane (60% in naphtha)	2560	(5)	(5)	(5)	NR	1	0	0	0	(0)	0	0			Fp	2
	4318								CAS No							
Formaldehyde, polymer with isobutyleneated phenol	2377	NI	NI	NI	NR	NI	NI	NI	NI	NI	NI	NI			Fp	NI
Formaldehyde, polymer with isobutyleneated phenol	1203								CAS No							
Formamide	808	0	NI	0	NR	1	NI	0	0	1	1	2	R		D	3
Formamide	355								CAS No		75-12-7					
Formic acid	809	0	NI	0	R	2	NI	1	(1)	2	3C	3			D	3
Formic acid (85% or less acid)	356								CAS No		64-18-6					
Formic acid	809	0	NI	0	R	2	NI	1	(1)	2	3C	3			D	3
Formic acid (over 85%)	3830								CAS No		64-18-6					
Formic acid mixture (containing up to 18% propionic acid and up to 25% sodium formate)	2408	0	NI	0	R	1	NI	(0)	(0)	(2)	(2)	(3)			D	3
Formic acid mixture (containing up to 18% propionic acid and up to 25% sodium formate)	3684								CAS No							
Fumaric adduct of rosin (water dispersion)	810	3	NI	3	NR	3	NI	0	(0)	(3)	0	3	Ss		D	3
Fumaric adduct of rosin, water dispersion	357								CAS No		65997-04-8					
Furfural	812	0	NI	0	R	2	1	2	(2)	3	2	2	C		D	3
Furfural	358								CAS No		98-01-1					
Furfuryl alcohol	813	0	NI	0	R	1	NI	2	2	3	2	2			D	2
Furfuryl alcohol	359								CAS No		98-00-0					

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Glucitol/glycerol blend propoxylated (containing 10% or more amines)	2441	2	NI	2	NR	1	1	1	0	(2)	(1)	(1)			D	2
Glucitol/glycerol blend propoxylated (containing 10% or more amines)	3919								CAS No							
Glucitol/glycerol blend, propoxylated (containing less than 10% amines)	2368	0	NI	0	NR	1	NI	1	0	(2)	(1)	(1)			SD	2
Glucitol/glycerol blend propoxylated (containing less than 10% amines)	3074								CAS No							
Glycerine	814	0	NI	0	R	0	0	0	0	(1)	0	1			D	1
Glycerine	363								CAS No			56-81-5				
Glycerine (83%)/ Dioxane-dimethanol (17%) mixture	1743	NI	NI	NI	R	1	NI	0	(0)	(1)	(0)	1			D	1
Glycerine (83%), Dioxanedimethanol (17%) mixture	364								CAS No							
Glycerol ethoxylated	2360	0	NI	0	R	0	NI	0	0	(0)	0	0			D	0
Glycerol ethoxylated	3123								CAS No							
Glycerol monooleate	1898	0	0	0	R	0	NI	0	(0)	(1)	1	1			Fp	2
Glycerol monooleate	365								CAS No			25496-72-4				
Glycerol propoxylated	2346	0	NI	0	NR	1	NI	1	0	(2)	1	0			D	2
Glycerol propoxylated	3110								CAS No							
Glycerol, propoxylated and ethoxylated	2276	0	NI	0	NR	1	0	0	0	0	0	0			SD	2
Glycerol, propoxylated and ethoxylated	2872								CAS No							
Glycerol/sorbitol blend, propoxylated and ethoxylated	2372	0	NI	0	NR	2	(0)	(0)	(0)	(0)	(0)	(0)			S	0
	3136								CAS No							
Glycerol/sucrose blend, propoxylated and ethoxylated	2361	0	NI	0	NR	1	NI	0	0	0	0	0			SD	0
Glycerol/sucrose blend propoxylated and ethoxylated	3124								CAS No							
Glyceryl triacetate	816	0	NI	0	R	1	0	1	0	0	0	1			D	1
Glyceryl triacetate	367								CAS No			102-76-1				
Glycidyl ester of C10 trialkyl acetic acid	441	3	NI	3	NR	3	NI	0	0	(2)	2	1			F	2
Glycidyl ester of C10 trialkylacetic acid	368								CAS No							
Glycine, Sodium salt, solution	817	0	NI	0	NI	0	NI	0	(0)	(1)	(0)	(1)			D	1
Glycine, sodium salt solution	369								CAS No			56-40-6				
Glycolic acid	2218	0	0	0	R	1	NI	1	(1)	2	3C	3			D	3
Glycolic acid solution (70% or less)	2539								CAS No							
Glyoxal solutions (40% or less)	84	0	NI	0	R	1	NI	0	0	2	2	3	MSsSr		D	3
Glyoxal solution (40% or less)	370								CAS No			107-22-2				
Glyoxylic acid	1535	0	NI	0	R	2	0	0	0	(3)	0	3	Ss		D	3
Glyoxylic acid solution (50 % or less)	371								CAS No			298-12-4				

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Glyphosate solution, without surfactant	1765	0	0	0	NR	3	0	0	0	(3)	0	3			D	3
Glyphosate solution (not containing surfactant)	2204								CAS No		1071-83-6					
Grape Seed Oil	2442	(0)	NI	(0)	(R)	(0)	(0)	(0)	(0)	(1)	(0)	(1)			Fp	2
Grape Seed Oil	3643								CAS No		8024-22-4					
Groundnut oil	820	0	NI	0	R	(2)	NI	(0)	(0)	(0)	(0)	0			Fp	2
Groundnut oil	2769								CAS No		8002-03-7					
Heptane	827	4	NI	4	R	4	NI	0	0	0	(1)	1	A		E	2
Heptane (all isomers)	372								CAS No		142-82-5					
Heptanoic acid	831	2	NI	2	R	1	NI	0	0	1	3B	(3)			FD	3
n-Heptanoic acid	479								CAS No		111-14-8					
Heptanol (all isomers)	2223	2	NI	2	R	(2)	NI	0	0	(2)	(1)	(2)			FD	2
Heptanol (all isomers) (d)	373								CAS No							
1-Heptanol	828	2	NI	2	R	2	0	1	0	2	(2)	(2)			FD	2
1-Heptanol	2688								CAS No		111-70-6					
Heptene (all isomers)	2225	3	NI	3	NI	2	NI	(0)	(0)	(0)	(2)	(1)			E	2
Heptene (all isomers)	374								CAS No							
1-Heptene	832	3	NI	3	NI	2	NI	(0)	(0)	(0)	(2)	(1)			E	2
1-Heptene	2685								CAS No							
Heptyl acetate	833	3	NI	3	(R)	(3)	NI	0	0	(2)	1	2			F	2
Heptyl acetate	375								CAS No		112-06-1					
Hexadecyl naphthalene/dihexadecyl naphthalene mixture	2159	0	NI	0	NR	0	NI	0	0	(1)	1	1			Fp	2
1-Hexadecylnaphthalene / 1,4-bis(hexadecyl)naphthalene mixture	2373								CAS No							
Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)	2489	(2)	NI	(2)	R	3	NI	1	(1)	(3)	3A	3	Ss		D	3
Hexahydro-1,3,5-trimethyl-1,3,5-triazine solution (45% or less)	4123								CAS No		108-74-7					
Hexamethylene diamine	845	0	NI	0	R	2	NI	1	1	(3)	3A	3	R		D	3
Hexamethylenediamine solution	380								CAS No		124-09-4					
Hexamethylene diamine	845	0	NI	0	R	2	NI	1	1	(3)	3A	3	R		D	3
Hexamethylenediamine (molten)	378								CAS No		124-09-4					
Hexamethylene diamine	845	0	NI	0	R	2	NI	1	1	(3)	3A	3	R		D	3
Hexamethylenediamine	377								CAS No		124-09-4					
Hexamethylene diamine adipate, 50% in water	846	0	NI	0	R	1	NI	0	(0)	(0)	0	0			D	0
Hexamethylenediamine adipate (50% in water)	379								CAS No		3323-53-3					

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TRN Name	TRN															
Hexamethylene diisocyanate	2142	3	0	0	NR	2	NI	1	2	4	3	3	SsSr		S	3
Hexamethylene diisocyanate	18								CAS No		822-06-0					
Hexamethylene glycol	847	0	NI	0	R	1	NI	0	0	(1)	0	1			D	1
Hexamethylene glycol	376								CAS No		629-11-8					
Hexamethyleneimine	848	1	NI	1	NI	2	NI	3	1	2	2	2			FED	2
Hexamethyleneimine	381								CAS No		111-49-9					
Hexamethylene tetramine (40% solution)	849	0	NI	0	R	0	NI	0	0	(1)	0	1	Ss		D	2
Hexamethylenetetramine solutions	382								CAS No		100-97-0					
Hexane	850	3	NI	3	R	4	NI	0	0	0	2	2	NA		E	2
Hexane	2683								CAS No		100-54-3					
Hexane	850	3	NI	3	R	4	NI	0	0	0	2	2	NA		E	2
Hexane (all isomers)	383								CAS No		100-54-3					
1,6-Hexanediol, distillation overheads	2143	4	NI	4	NR	2	NI	0	0	2	1	2			FED	2
1,6-Hexanediol, distillation overheads	2641								CAS No							
Hexanoic acid	853	2	NI	2	R	2	NI	0	0	(3)	(3)	3			FD	3
Hexanoic acid	384								CAS No		142-62-1					
1-Hexanol	854	1	0	0	(R)	2	NI	1	0	(3)	1	3			FD	3
Hexanol	385								CAS No		111-27-3					
Hexene (all isomers)	2224	3	NI	3	R	3	NI	(0)	(0)	(1)	(1)	(1)			E	2
Hexene (all isomers)	386								CAS No							
1-Hexene	855	3	NI	3	R	3	NI	0	0	0	1	1			E	2
1-Hexene	2681								CAS No		592-41-6					
2-Hexene (mixed isomers)	856	3	NI	3	R	3	NI	(0)	(0)	0	(1)	(1)			E	2
2-Hexene (mixed isomers)	2682								CAS No							
Hexyl acetate	857	2	NI	2	NI	3	NI	0	0	(1)	1	1			FE	2
Hexyl acetate	387								CAS No		142-92-7					
sec-Hexyl acetate	858	2	NI	2	NI	3	NI	0	0	0	1	(2)			FED	2
Methylamyl acetate	456								CAS No		108-84-9					
Hexylene glycol	859	0	NI	0	R	0	0	0	0	(3)	2	3			D	2
Hexylene glycol	388								CAS No		107-41-5					
Hydrocarbon wax	2278	(5)	NI	(5)	NR	0	0	(0)	(0)	(0)	(0)	(0)	CT		Fp	3
Hydrocarbon wax	741								CAS No							

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Hydrochloric acid	864	Inorg	0	0	Inorg	1	NI	1	1	3	3C	3			DE	3
Hydrochloric acid (*)	389								CAS No		7647-01-0					
Hydrogenated Starch Hydrolysate	2347	0	NI	0	R	0	NI	0	0	(0)	0	0			D	0
Hydrogenated starch hydrolysate	3077								CAS No							
Hydrogen peroxide, more than 60%	867	Inorg	0	0	Inorg	3	NI	1	0	2	3	3			D	3
Hydrogen peroxide solutions (over 60% but not over 70% by mass)	390								CAS No		7722-84-1					
Hydrogen peroxide, more than 60%	867	Inorg	0	0	Inorg	3	NI	1	0	2	3	3			D	3
Hydrogen peroxide, more than 60%	2689								CAS No		7722-84-1					
Hydrogen peroxide, more than 8% but not more than 60%	2231	Inorg	0	0	Inorg	3	NI	1	0	(2)	3	3			D	3
Hydrogen peroxide, more than 8% but not more than 60%	2690								CAS No							
Hydrogen peroxide, more than 8% but not more than 60%	2231	Inorg	0	0	Inorg	3	NI	1	0	(2)	3	3			D	3
Hydrogen peroxide solutions (over 8% but not over 60% by mass)	391								CAS No							
N-(2-Hydroxyethyl) ethylene diamine triacetic acid, trisodium salt (solution)	870	0	NI	0	NI	1	NI	0	0	(1)	1	1	R		D	3
N-(Hydroxyethyl)ethylenediaminetriacetic acid, trisodium salt solution	470								CAS No		150-30-0					
[[[2-hydroxyethyl)imino]dimethylene]bisphosphonic acid, sodium salt	2493	0	NI	0	NR	1	NI	0	0	(0)	0	1			D	1
	4127								CAS No		22036-78-8					
1-(2-Hydroxyethyl)-2-nor(tall oil alkyl)-2-imidazoline	2556	5	NI	5	NR	5	2	0	0	(3)	3	3			Fp	3
	4314								CAS No							
2-Hydroxy-4-(methylthio) butanoic acid	871	1	NI	1	R	1	NI	0	0	(3)	1	3			D	3
2-Hydroxy-4-(methylthio)butanoic acid	49								CAS No		583-91-5					
Icosa(oxypropane-2,3-diyl)s	2092	NI	NI	NI	NI	NI	NI	0	(0)	(2)	2	(2)			Fp	2
Icosa(oxypropane-2,3-diyl)s	392								CAS No							
Icosa(oxypropane-2,3-diyl)s	2092	NI	NI	NI	NI	NI	NI	0	(0)	(2)	2	(2)			Fp	2
Icosa(oxypropane-2,3-diyl)s	2691								CAS No							
Illipe oil (containing less than 10% free fatty acids)	2304	(0)	NI	(0)	(R)	(0)	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Illipe oil	3034								CAS No							
Imidazolium compounds, 1-benzyl-4,5-dihydro-1-(hydroxyethyl)-2-norcoco alkyl, chlorides	2505	(0)	NI	(0)	NR	4	NI	NI	NI	NI	(2)	(3)			Fp	3
Imidazolium compounds, 1-benzyl-4,5-dihydro-1-(hydroxyethyl)-2-norcoco alkyl, chlorides	4157								CAS No		61791-52-4					
Interesterified Mixed Vegetable Oils	2355	0	NI	0	R	(0)	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Interesterified vegetable oils	3115								CAS No							
Isoalkanes (C16-C18)	2526	0	NI	0	R	1	NI	(0)	(0)	(0)	(0)	(0)	A		F	1
Isoalkanes (C16-C18)	4235								CAS No							

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Isobutanol	382	0	NI	0	R	1	0	0	0	1	2	3			D	3
Isobutyl alcohol	397								CAS No		78-83-1					
Isobutyl formate	405	1	NI	1	NI	1	NI	0	(0)	0	(1)	(2)			E	2
Isobutyl formate	398								CAS No		542-55-2					
Isobutyl methacrylate	408	2	NI	2	NR	1	NI	0	0	0	2	2	Ss		FED	2
Isobutyl methacrylate	2673								CAS No		97-86-9					
Isobutyric acid	419	0	NI	0	R	2	NI	2	2	(3)	3	3			E	NI
Isobutyric acid	2459								CAS No		79-31-2					
Isodecanol	557	3	2	2	R	3	NI	0	0	0	2	1			Fp	2
Decyl alcohol (all isomers)	219								CAS No		25339-17-7					
Isononanol	1059	3	NI	3	NR	3	1	0	0	(2)	2	2			Fp	2
Nonyl alcohol (all isomers)	510								CAS No		2430-22-0					
Isononylaldehyde	2300	3	NI	3	NR	(3)	NI	0	0	(2)	2	1			F	2
Isononylaldehyde	2754								CAS No							
Isooctaldehyde	1071	2	NI	2	NI	3	NI	0	0	(1)	1	1			F	1
Octyl aldehydes	542								CAS No		63885-09-6					
Isooctanol	1076	3	NI	3	R	2	0	1	0	(2)	2	(2)			F	2
iso-Octanol	2675								CAS No		26952-21-6					
Isooctylamine	1081	2	NI	2	NI	3	NI	1	1	3	3	3			FD	3
2-Ethylhexylamine	48								CAS No		104-75-6					
Isopentene	1113	2	NI	2	NI	2	NI	(0)	(0)	(0)	(0)	(1)			E	2
iso-Pentene	2677								CAS No		563-45-1					
Isophorone	879	1	1	1	R	2	0	1	1	(2)	1	2			FD	2
Isophorone	399								CAS No		78-59-1					
Isophorone diamine	880	0	0	0	NR	2	0	1	(1)	(3)	3	3	Ss		D	3
Isophoronediamine	401								CAS No		2855-13-2					
Isophorone diisocyanate	881	1	NI	1	NR	3	NI	0	0	3	3	3	SsSr		S	3
Isophorone diisocyanate	400								CAS No		4098-71-9					
Isoprene	882	2	2	2	NR	3	1	0	0	0	1	2	CM		E	3
Isoprene	402								CAS No		78-79-5					
Isopropanol	1181	0	NI	0	R	0	0	0	0	0	1	2			D	2
Isopropyl alcohol	405								CAS No		67-63-0					

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Isopropanolamine	1182	0	NI	0	R	2	NI	0	1	0	3	3			D	3
Isopropanolamine	403								CAS No		78-96-6					
Isopropyl acetate	1192	1	NI	1	R	1	NI	0	0	0	1	2			ED	2
Isopropyl acetate	404								CAS No		108-21-4					
Isopropylamine	1195	0	NI	0	R	2	NI	2	2	1	3	3			DE	3
Isopropylamine	407								CAS No		75-31-0					
Isopropylamine (70%)	2350	0	NI	0	R	2	NI	2	2	1	3	3			DE	3
Isopropylamine (70% or less) solution	395								CAS No							
Isopropyl benzene	1197	3	2	2	R	3	NI	0	0	0	2	1			FE	2
Propylbenzene (all isomers)	623								CAS No		98-82-8					
Isopropyl benzene	1197	3	2	2	R	3	NI	0	0	0	2	1			FE	2
Isopropylbenzene	2687								CAS No		98-82-8					
Isopropyl cyclohexane	1199	4	NI	4	(NR)	(3)	NI	(0)	(0)	(1)	(0)	(1)			FE	2
Isopropylcyclohexane	408								CAS No		696-29-7					
Isopropyltoluenes	549	4	4	4	(NR)	3	NI	0	(0)	1	2	(1)			FE	2
p-Cymene	552								CAS No		99-87-6					
Isovaleraldehyde	1390	1	NI	1	R	3	NI	0	0	0	2	2			D	2
Valeraldehyde (all isomers)	731								CAS No		590-86-3					
Jatropha oil	2402	0	NI	(0)	(R)	(2)	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Jatropha oil	3637								CAS No							
Kaolin slurry	883	Inorg	NI	0	Inorg	0	NI	0	0	0	0	0			S	0
Kaolin slurry	409								CAS No		1332-58-7					
Lactic acid	886	0	NI	0	R	1	NI	0	0	(3)	2	3			D	3
Lactic acid	410								CAS No		50-21-5					
Lactonitrile solution (80% or less)	887	0	NI	0	R	4	NI	3	4	(4)	NI	NI			D	3
Lactonitrile solution (80% or less)	411								CAS No		78-97-7					
Lard (containing less than 10% free fatty acids)	2317	0	NI	0	R	0	NI	0	(0)	(1)	0	1			Fp	2
Lard	3047								CAS No							
Latex, ammonia inhibited	889	0	NI	0	NI	(2)	NI	0	0	(1)	0	1			D	1
Latex, ammonia (1% or less)- inhibited	413								CAS No							
Lauric acid	891	4	NI	4	R	4	1	0	(0)	(2)	1	2			Fp	2
Lauric acid	415								CAS No		143-07-7					

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Lauroamidopropyl betaine solution (#)	2479	(4)	(2)	(2)	R	(4)	(1)	(0)	(0)	(3)	(1)	(3)			D	3
	4055								CAS No		4292-10-8					
Lauryl methacrylate	893	0	2	2	R	0	0	0	(0)	(1)	1	1			F	1
Dodecyl methacrylate	300								CAS No		142-90-5					
Lecithin (soybeans)	2146	0	NI	0	R	0	NI	0	0	(0)	0	(0)			SD	0
Lecithin	417								CAS No							
Lignin sulphonic acid, salt solution	34	0	NI	0	(NR)	(0)	NI	0	(0)	(0)	(0)	(0)			D	0
Ligninsulphonic acid, sodium salt solution	419								CAS No							
Linear alkyl (C12-16) propoxyamine ethoxylate	2380	3	0	3	NR	4	NI	1	(1)	(3)	3	(3)			D	3
Alkyl(C12-C16) propoxyamine ethoxylate	3423								CAS No							
Linseed oil (containing less than 4% free fatty acids)	2318	0	NI	0	R	(2)	NI	0	(0)	(1)	0	(1)			Fp	2
Linseed oil	3048								CAS No							
Long chain alkaryl polyether (C11-C20) (LOA)	1982	(4)	NI	(4)	NR	3	(1)	0	0	(2)	0	2			Fp	2
Long-chain alkaryl polyether (C11-C20)	421								CAS No							
Long chain alkaryl sulphonic acid (C16-C60) (LOA)	1966	0	NI	0	(NR)	0	NI	0	0	(2)	(1)	2			Fp	2
Long-chain alkaryl sulphonic acid (C16-C60)	424								CAS No							
Long-chain alkylphenate/Phenol sulphide mixture	1754	(0)	NI	(0)	(NR)	0	NI	0	0	(2)	2	2			Fp	2
Long-chain alkylphenate/Phenol sulphide mixture	425								CAS No							
Long chain alkylphenol (C14-C18) (#)	2478	(0)	NI	(0)	NR	(0)	(0)	(0)	(0)	(2)	(2)	(0)			Fp	2
Long-chain alkylphenol (C14-C18)	4029								CAS No							
Long chain alkylphenol (C18-C30) (#)	2476	(0)	NI	(0)	(NR)	(1)	(0)	(0)	(0)	(2)	(2)	(0)			Fp	2
Long-chain alkylphenol (C18-C30)	4040								CAS No							
Long-chain polyetheramine in alkyl(C2-C4)benzenes	1457	NI	NI	NI	NR	2	NI	0	0	(2)	2	2			Fp	2
	422								CAS No							
Lubrizol polyolefin anhydride	1865	0	NI	0	NR	1	NI	0	0	(2)	1	(2)			Fp	2
Polyolefin anhydride	605								CAS No							
L-Lysine solution (50% or less)	2199	0	0	0	R	1	0	0	0	0	1	NI			D	1
L-Lysine solution (60% or less)	2306								CAS No							
Magnesium alkyl (long chain) salicylate (overbased) in mineral oil (LOA)	71	(0)	NI	(0)	NR	(2)	NI	0	0	(1)	(1)	(1)	Ss		S	2
Magnesium long-chain alkyl salicylate (C11+)	429								CAS No							
Magnesium chloride	915	Inorg	0	0	Inorg	1	0	0	0	(0)	0	0			D	0
Magnesium chloride solution	427								CAS No		7786-30-3					

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Magnesium hydroxide slurry	916	Inorg	0	0	Inorg	0	NI	0	0	(1)	(0)	1			S	1
Magnesium hydroxide slurry	428								CAS No		1309-42-8					
Magnesium lignosulphonate solutions	2356	(0)	NI	(0)	(NR)	(0)	NI	0	0	(0)	(0)	(0)			D	0
Ligninsulphonic acid, magnesium salt solution	3116								CAS No							
Magnesium long chain alkaryl sulphonate (C11-C50) (LOA)	1967	0	NI	0	NR	0	NI	0	0	(2)	1	2			Fp	2
Magnesium long-chain alkaryl sulphonate (C11-C50)	430								CAS No							
Maleic acid/Acrylic acid/Ethenylsulphonic acid/Ethenylphosphonic acid polymer, sodium salt in aqueous/ethylene glycol solution	2528	0	NI	0	(NR)	0	0	(0)	(0)	(3)	(2)	(3)	Ss		D	3
	4237								CAS No							
Maleic acid/allyl sulphonic acid copolymer with phosphonate groups, partial sodium salt (aqueous solution)	2412	0	NI	0	NR	0	NI	(0)	(0)	(0)	(0)	(0)			D	0
Maleic acid/allyl sulphonic acid copolymer with phosphonate groups, partial sodium salt (aqueous solution)	3688								CAS No							
Maleic anhydride	921	1	NI	1	R	2	0	1	2	(3)	3	3	SsSr		D	3
Maleic anhydride	431								CAS No		108-31-6					
Maleic anhydride - sodium allylsulphonate copolymer (aqueous solution)	2410	0	NI	0	NR	1	NI	0	0	(0)	(0)	0			D	0
Maleic anhydride-sodium allylsulphonate copolymer solution	3686								CAS No							
Maltitol Syrup	2348	0	NI	0	R	0	NI	0	0	(0)	0	0			D	0
Maltitol solution	3078								CAS No							
Mango kernel oil (containing less than 10% free fatty acids)	2305	(0)	NI	(0)	(R)	(0)	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Mango kernel oil	3035								CAS No							
2-Mercaptobenzothiazol	925	2	1	1	NR	4	2	0	0	(0)	0	0	Ss		S	2
Mercaptobenzothiazol, sodium salt solution	432								CAS No		149-30-4					
2-Mercaptoethanol	2495	0	NI	0	NR	1	NI	2	2	2	2	3	SsT		D	3
2-Mercaptoethanol	4129								CAS No		60-24-2					
Mesityl oxide	946	1	NI	1	R	(1)	NI	1	0	2	2	2			D	2
Mesityl oxide	433								CAS No		141-79-7					
Metam-sodium (ISO)	202	0	NI	0	NR	4	NI	1	2	(2)	2	1	Ss		D	2
Metam sodium solution	434								CAS No		137-42-8					
Methacrylic acid-alkoxypoly (alkylene oxide) methacrylate co-polymer sodium salt (45% or less solution)	2288	NI	0	0	NR	1	NI	0	(0)	(1)	1	0			D	1
Methacrylic acid - alkoxypoly (alkylene oxide) methacrylate copolymer, sodium salt aqueous solution (45% or less)	2819								CAS No							
Methacrylic acid, inhibited	948	0	NI	0	R	2	0	1	2	2	3	3			D	3
Methacrylic acid	435								CAS No		79-41-4					

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Methacrylic resin in 1,2 Dichloroethane soln.	2046	1	1	1	NR	2	0	(1)	(0)	(2)	(1)	(2)	C		SD	3
Methacrylic resin in ethylene dichloride	436								CAS No							
Methacrylonitrile	949	0	NI	0	R	2	0	2	2	3	1	1	Ss	NT	ED	3
Methacrylonitrile	437								CAS No							
											126-98-7					
Methanesulphonic acid	2561	0	NI	0	R	0	0	1	1	(3)	3	3			D	3
	4319								CAS No							
Methanol	951	0	NI	0	R	0	0	(2)	(2)	(2)	2	2	T		DE	3
Methyl alcohol (*)	441								CAS No							
											67-56-1					
(2-Methoxymethylethoxy)propanols	2452	0	NI	0	R	0	(0)	0	0	(0)	0	0			D	0
	3870								CAS No							
Methyl acetate	954	0	NI	0	R	1	NI	0	0	0	1	2			DE	2
Methyl acetate	438								CAS No							
											79-20-9					
Methyl acetoacetate	335	0	NI	0	R	1	NI	0	0	(2)	1	2			D	2
Methyl acetoacetate	439								CAS No							
											105-45-3					
Methyl acrylate	955	0	NI	0	R	3	NI	1	1	2	2	3	MSs		D	3
Methyl acrylate	440								CAS No							
											96-33-3					
Methylamine solution 42% or less	957	0	NI	0	R	2	NI	2	(2)	3	3	3	M	NT	DE	3
Methylamine solutions (42% or less)	455								CAS No							
											74-89-5					
Methyl amyl alcohol	958	1	NI	1	R	1	NI	1	0	2	1	3			FED	3
Methylamyl alcohol	457								CAS No							
											108-11-2					
Methyl amyl ketone	959	1	NI	1	NI	1	NI	1	0	0	1	1			FED	2
Methyl amyl ketone	442								CAS No							
											110-43-0					
N-Methyl aniline	961	1	NI	1	(NR)	3	1	1	1	(2)	(1)	1			FD	2
N-Methylaniline	3107								CAS No							
											100-61-8					
alpha-Methylbenzyl alcohol with acetophenone (15% or less)	2399	1	NI	1	(R)	(1)	NI	(1)	(0)	(3)	(2)	(3)	R		Fp	3
alpha-Methylbenzyl alcohol with acetophenone (15% or less)	3634								CAS No							
											98-85-1					
2-Methyl-2-butanol	964	1	1	1	(R)	(1)	0	1	1	1	3	2			D	3
tert-Amyl alcohol	685								CAS No							
											75-85-4					
3-Methyl-1-butanol	965	1	1	1	(R)	1	0	1	0	(2)	2	2			FED	2
Isoamyl alcohol	396								CAS No							
											123-51-3					
3-Methyl-1-butanol	965	1	1	1	(R)	1	0	1	0	(2)	2	2			FED	2
Amyl alcohol, primary	126								CAS No							
											123-51-3					

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Methyl butenol	967	0	NI	0	R	2	NI	1	0	(2)	2	2			D	2
Methylbutenol	458								CAS No		556-82-1					
Methyl tert-butyl ether	969	1	NI	1	NR	1	0	0	0	0	2	1		T	ED	2
Methyl tert-butyl ether	454								CAS No		1634-04-4					
Methyl butyl ketone	970	1	NI	1	(R)	1	(0)	0	0	0	1	1	RN		FED	3
Methyl butyl ketone	443								CAS No		591-78-6					
Methylbutynol	968	0	NI	0	NR	1	NI	1	1	0	0	2			D	2
Methylbutynol	459								CAS No		115-19-5					
Methylbutynol	968	0	NI	0	NR	1	NI	1	1	0	0	2			D	2
2-Methyl-2-hydroxy-3-butyne	52								CAS No		115-19-5					
Methyl butyrate	973	1	NI	1	NI	(2)	NI	0	0	2	2	(2)			ED	2
Methyl butyrate	444								CAS No		623-42-7					
Methyl cyclohexane	976	3	3	3	NR	3	1	0	0	1	1	1	A		E	2
Methylcyclohexane	460								CAS No		108-87-2					
Methyl cyclopentadiene, dimer	977	4	NI	4	(NR)	(3)	NI	0	(0)	(2)	(2)	(2)			F	2
Methylcyclopentadiene dimer	461								CAS No		26472-00-4					
Methyl cyclopentadienyl manganese tricarbonyl (60-70%) in mineral oil	2213	3	NI	3	NR	4	NI	2	3	4	1	1			S	3
Methylcyclopentadienyl manganese tricarbonyl	2692								CAS No							
N-Methyldiethanolamine	1491	0	NI	0	R	2	NI	1	0	(2)	1	2			D	2
Methyl diethanolamine	445								CAS No		105-59-9					
N,N'-methylene-bis(5-methyloxazolidine)	2555	0	NI	0	R	3	1	1	2	(3)	3B	3	CMTSs		D	3
	4296								CAS No							
Methylene dithiocyanate	2235	2	NI	2	NR	5	NI	2	0	4	3	3	Ss		NI	3
Methylene bithiocyanate	2693								CAS No		6317-18-6					
2-Methyl-6-ethylaniline	984	2	NI	2	NR	2	NI	1	1	(2)	0	2			FD	2
2-Methyl-6-ethyl aniline	54								CAS No		24549-06-2					
2-Methyl-5-ethylpyridine	986	2	NI	2	R	2	0	1	2	(3)	3	3			FD	3
2-Methyl-5-ethyl pyridine	53								CAS No		104-90-5					
Methyl formate	987	0	NI	0	R	1	NI	1	0	2	0	2			DE	2
Methyl formate	447								CAS No		107-31-3					
N-Methylglucamine, 60% aqueous solution	2048	0	NI	0	R	0	NI	1	0	(3)	0	3			D	3
N-Methylglucamine solution (70% or less)	482								CAS No		6284-40-8					

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less)	2397	0	NI	0	R	0	NI	2	2	3	0	1			FD	2
2-Methylglutaronitrile with 2-Ethylsuccinonitrile (12% or less)	3632								CAS No		4553-62-2					
Methyl heptyl ketone	988	3	NI	3	R	3	NI	0	0	NI	NI	NI			FED	NI
Methyl heptyl ketone	448								CAS No		821-55-6					
Methyl isobutyl ketone	971	1	NI	1	R	1	0	1	0	2	2	3			FED	3
Methyl isobutyl ketone	449								CAS No		108-10-1					
Methyl methacrylate	995	1	NI	1	R	2	NI	0	0	0	2	2	Ss		ED	2
Methyl methacrylate	450								CAS No		80-62-6					
3-Methyl-3-methoxy butanol	996	1	NI	1	NR	0	NI	0	(0)	(2)	1	(2)			FD	2
3-Methyl-3-methoxybutanol	59								CAS No							
3-Methyl-3-methoxybutyl acetate	997	1	NI	1	NR	0	NI	0	(0)	NI	NI	NI			F	NI
3-Methyl-3-methoxybutyl acetate	60								CAS No							
Methyl naphthalenes	1999	4	NI	4	(NR)	(4)	NI	1	0	(2)	1	1		T	F	2
Methyl naphthalene (molten)	451								CAS No							
2-Methyl pentane	1000	3	NI	3	NI	4	NI	(0)	(0)	(2)	(2)	(2)			E	2
2-Methylpentane	2684								CAS No		107-83-5					
2-Methyl-1,3-propanediol	2200	0	0	0	NR	0	0	0	0	(0)	0	0			D	0
2-Methyl-1,3-propanediol	2213								CAS No							
Methyl propyl ketone	1003	0	NI	0	(R)	0	NI	1	0	(2)	1	2			FED	2
Methyl propyl ketone	452								CAS No		107-87-9					
2-Methyl pyridine	1005	1	NI	1	R	1	NI	1	2	1	3A	3			D	3
2-Methylpyridine	55								CAS No		109-06-8					
3-Methylpyridine	1006	1	NI	1	R	1	NI	1	2	2	3	3			D	3
3-Methylpyridine	61								CAS No		108-99-6					
4-Methylpyridine	1007	1	NI	1	(R)	1	NI	1	2	2	3	3			D	3
4-Methylpyridine	63								CAS No		108-89-4					
N-Methylpyrrolidone	1008	0	NI	0	R	1	NI	0	0	2	1	2	R		D	3
N-Methyl-2-pyrrolidone	481								CAS No		872-50-4					
Methyl salicylate	86	2	NI	2	R	2	NI	1	1	(2)	2	1	R		SD	3
Methyl salicylate	453								CAS No		119-36-8					
alpha-Methylstyrene	1010	3	3	3	NR	3	NI	0	0	1	2	1	M	(T)	FE	3
alpha-Methylstyrene	107								CAS No		98-83-9					

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3-(Methylthio) propionaldehyde	993	0	NI	0	R	3	1	1	1	2	2	3	NSs	T	D	3
3-(methylthio)propionaldehyde	2368								CAS No		3268-49-3					
Metolachlor (ISO)	113	2	2	2	NR	5	1	1	0	(2)	1	0	Ss		S	2
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide	469								CAS No		51218-45-2					
Mixed acid oil	2306	(0)	NI	(0)	(R)	(0)	NI	0	(0)	(1)	(1)	1			Fp	2
Acid oil mixture from soyabean, corn (maize) and sunflower oil refining	3036								CAS No							
Mixture of dithiophosphate salts in water	2381	1	0	1	NR	2	NI	0	0	(2)	2	2			D	2
Dialkyl thiophosphates sodium salts solution	3424								CAS No							
Molasses	1013	0	NI	0	R	0	NI	0	0	0	0	0			D	0
Molasses	462								CAS No							
Molybdenum polysulphide long chain alkyl dithiocarbamide complex	2344	4	2	2	NR	2	0	0	0	(2)	2	2			Fp	2
Molybdenum polysulphide long chain alkyl dithiocarbamide complex	3108								CAS No							
Mononitrobenzene	1017	1	1	1	R	3	(4)	(2)	2	2	1	1	CRT		SD	3
Nitrobenzene	501								CAS No		98-95-3					
Morpholine	1018	0	0	0	R	2	NI	1	2	2	3	3			D	3
Morpholine	463								CAS No		110-91-8					
Myrcene	1019	4	NI	4	R	4	1	0	0	(2)	2	NI			F	2
Myrcene	465								CAS No		123-35-3					
Naphthalene (molten)	1	3	3	3	NR	4	1	1	(0)	(1)	0	0	T	T	S	2
Naphthalene (molten)	493								CAS No		91-20-3					
Naphthalene, crude (molten) (#)(!)	2459	NI	(3)	(3)	NR	3	0	0	(0)	(2)	2	2	CMT		Fp	3
Naphthalene crude (molten)	3858								CAS No		85117-10-8					
Naphthalene sulphonic acid condensed with formaldehyde, sodium salt, solution	1020	0	1	1	(NR)	1	NI	0	(0)	(1)	0	1			D	1
Naphthalenesulphonic acid-Formaldehyde copolymer, sodium salt solution	494								CAS No		9084-06-4					
Neodecanoic acid	1025	4	NI	4	NR	2	NI	0	0	(2)	0	2			Fp	2
Neodecanoic acid	496								CAS No		26896-20-8					
Nitric acid (90% or less)	1029	Inorg	NI	0	Inorg	2	NI	(3)	(1)	3	3C	3			D	3
Nitric acid (70% and over)	498								CAS No		7697-37-2					
Nitric acid (90% or less)	1029	Inorg	NI	0	Inorg	2	NI	(3)	(1)	3	3C	3			D	3
Nitric acid (less than 70%)	499								CAS No		7697-37-2					
Nitriлотriacetic acid, trisodium salt	1030	0	NI	0	R	1	0	1	(0)	0	1	1	CMR		D	3
Nitriлотriacetic acid, trisodium salt solution	500								CAS No		5094-31-3					

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TRN Name	TRN															
Nitroethane	1037	0	NI	0	NR	2	NI	1	0	(2)	(0)	(1)			SD	2
Nitroethane	502								CAS No		79-24-3					
Nitroethane (80%)/Nitropropane (20%)	2245	0	1	1	NR	2	NI	1	1	2	0	1			E	2
Nitroethane(80%)/ Nitropropane(20%)	503								CAS No							
Nitroethane, 1-Nitropropane (each 15% or more) mixture	2270	(0)	(1)	(1)	(NR)	(2)	NI	1	1	2	0	1			FED	2
Nitroethane, 1-Nitropropane (each 15% or more) mixture	2212								CAS No							
2-Nitrophenol	1041	1	2	2	R	3	(2)	0	0	(1)	1	1			S	1
o-Nitrophenol (molten)	536								CAS No		88-75-5					
1-Nitropropane	1044	0	1	1	NR	1	NI	1	0	2	0	1			FED	2
1-Nitropropane	2747								CAS No		108-03-2					
1- or 2- Nitropropane	2242	0	1	1	NR	1	NI	2	0	2	0	1	C		FED	3
1- or 2-Nitropropane	20								CAS No							
2-Nitropropane	1045	0	1	1	NR	2	NI	2	0	2	0	0	C		FED	3
2-Nitropropane	2748								CAS No		79-46-9					
Nitropropane (60%) Nitroethane (40%) (mixture)	1046	0	1	1	NR	2	NI	1	0	2	0	1	C		FED	3
Nitropropane (60%)/Nitroethane (40%) mixture	504								CAS No							
o-Nitrotoluene	1049	2	2	2	NR	2	(1)	1	0	(2)	0	1	CMR		S	3
o-Nitrotoluene	2745								CAS No		88-72-2					
p-Nitrotoluene	1051	2	1	1	NR	3	0	1	0	(2)	0	1	R		S	3
p-Nitrotoluene	2746								CAS No		99-99-0					
o- or p-Nitrotoluenes	2241	2	2	2	NR	3	(1)	1	0	(2)	0	1	CMR		S	3
o- or p-Nitrotoluenes	532								CAS No							
Nonane	1054	4	NI	4	R	4	NI	0	0	1	1	1	A		FE	2
Nonane (all isomers)	506								CAS No		111-84-2					
Nonanoic acid	1055	3	NI	3	R	2	NI	0	0	(3)	2	3			F	3
Nonanoic acid (all isomers)	507								CAS No		112-05-0					
Nonene (all isomers)	2222	4	NI	4	NI	3	NI	0	0	0	1	1	A		FE	2
Nonene (all isomers)	508								CAS No							
1-Nonene	1060	4	NI	4	NI	3	NI	0	0	0	1	1	A		FE	2
1-Nonene	2680								CAS No		27215-95-8					
Nonyl acetate	1766	4	NI	4	NI	NI	NI	0	0	NI	NI	NI			F	NI
Nonyl acetate	509								CAS No		143-13-5					

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Nonyl methacrylate monomer	1061	5	NI	5	R	3	NI	(0)	(0)	(1)	(1)	(1)			F	1
Nonyl methacrylate monomer	511								CAS No		2696-43-7					
Nonyl phenol	1062	5	4	4	NR	5	3	1	0	(3)	3	3			Fp	3
Nonylphenol	512								CAS No		25154-52-3					
Nonyl(C6-C12)phenol poly(4-12)ethoxylate	1063	4	NI	4	NR	3	1	0	0	(2)	2	1			D	2
Alkyl(C7-C11)phenol poly(4-12) ethoxylate	97								CAS No							
Nonyl(C6-C12)phenol poly(4-12)ethoxylate	1063	4	NI	4	NR	3	1	0	0	(2)	2	1			D	2
Nonylphenol poly(4+)ethoxylate	513								CAS No							
9-Octadecen-1-amine, (Z)-	2559	(4)	NI	(4)	R	4	2	1	(0)	(3)	3	(3)			F	3
	4317								CAS No							
Octamethylcyclotetrasiloxane	2398	5	5	5	NR	0	3	0	0	0	0	0			F	1
Octamethylcyclotetrasiloxane	3633								CAS No							
Octane	1072	5	NI	5	(R)	4	NI	(0)	(0)	0	0	0	A		FE	2
Octane (all isomers)	538								CAS No		111-65-9					
Octanoic acid (Caprylic acid)	1074	3	NI	3	R	1	NI	0	0	(3)	3	3			F	3
Octanoic acid (all isomers)	539								CAS No		124-07-2					
1-Octanol	1075	3	NI	3	R	2	0	1	0	(2)	2	2			Fp	2
Octanol (all isomers)	540								CAS No		111-87-5					
1-Octanol	1075	3	NI	3	R	2	0	1	0	(2)	2	2			Fp	2
1-Octanol	2676								CAS No		111-87-5					
Octene (all isomers)	1079	4	NI	4	NR	3	NI	0	0	0	2	1	A		FE	2
Octene (all isomers)	541								CAS No							
Octyl acetate	1080	3	NI	3	R	2	NI	0	0	(1)	1	NI			FD	1
n-Octyl acetate	483								CAS No		112-14-1					
Octyl decyl adipate	1082	0	NI	0	(R)	(0)	(0)	(0)	(0)	(1)	(1)	(1)			Fp	2
Octyl decyl adipate	543								CAS No		110-29-2					
n-Octyl mercaptan	2461	4	3	3	NR	5	NI	1	0	(1)	1	0	Ss		F	3
n-Octyl mercaptan	3742								CAS No							
Olefin/Alkyl ester copolymer (molecular weight 2000+) (LOA)	1965	NI	NI	0	NR	0	NI	0	0	(0)	0	0			Fp	2
Olefin-Alkyl ester copolymer (molecular weight 2000+)	546								CAS No							
Olefin mixture (C7-C9)	2385	5	4	4	NR	4	NI	(0)	0	0	2	1	A		E	2
Olefin mixture (C7-C9) C8 rich, stabilized	3548								CAS No		97593-00-5					

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Olefin mixtures (C5-C7)	2243	3	NI	3	R	3	NI	(0)	(0)	(1)	(2)	(1)			E	2		
Olefin mixtures (C5-C7)	545								CAS No									
Olefin mixtures (C5-C15)	2321	(5)	NI	(5)	NR	(4)	NI	(0)	(0)	(2)	(2)	(1)	A		FE	2		
Olefin mixtures (C5-C15)	544								CAS No									
Olefins C13 and above, all isomers (#)	2028	5	NI	5	NR	0	NI	0	0	(1)	(1)	0	A		Fp	3		
Olefins (C13+, all isomers)	547								CAS No									
alpha-Olefins (C6-C18),mixture	2030	(5)	NI	(5)	NR	(4)	NI	(0)	(0)	(2)	(2)	(1)	A		FE	2		
alpha-Olefins (C6-C18) mixtures	108								CAS No									
alpha-Olefins (C12+), mixture (#)	2516	(5)	(5)	(5)	(R)	(0)	NI	(0)	(0)	(1)	(1)	(0)	A		Fp	3		
alpha-Olefins (C12+), mixture	4197								CAS No									
Oleic acid	1089	0	NI	0	R	0	NI	0	1	(2)	1	1			Fp	2		
Oleic acid	548								CAS No			112-80-1						
Oleylamine	1862	0	NI	0	NR	4	NI	1	(1)	(3)	3B	3			Fp	3		
Oleylamine	550								CAS No									
Olive oil	1090	0	NI	0	R	(2)	NI	(0)	(0)	(1)	1	1			Fp	2		
Olive oil	2771								CAS No			8001-25-0						
Orange juice	2375	0	0	0	R	0	0	0	0	(0)	0	0			D	0		
Orange juice	3151								CAS No									
Orange juice (not concentrated)	2382	0	0	0	R	0	0	0	0	(0)	0	0			D	0		
Orange juice (not concentrated)	3425								CAS No									
Oxatetra-azahydroxyalkanoic acid, substituted with acetic acid / acetoxylethanolamine	2413	1	NI	1	R	1	NI	0	0	0	0	0			D	0		
Oxatetra-azahydroxyalkanoic acid, substituted with acetic acid / acetoxylethanolamine	3689								CAS No									
Oxirane, methyl-, polymer with 1,3-diisocyanatomethylbenzene and oxirane (80% in naphtha)	2558	(5)	(5)	(5)	NR	3	0	0	0	(0)	0	0			Fp	2		
	4316								CAS No									
Oxygenated aliphatic hydrocarbon mixture	2266	5	2	(2)	NR	1	NI	0	0	(1)	1	1			FE	2		
Oxygenated aliphatic hydrocarbon mixture	2825								CAS No									
Palm acid oil	2307	(0)	NI	(0)	(R)	(0)	NI	0	(0)	(1)	0	1			Fp	2		
Palm acid oil	3037								CAS No									
Palm fatty acid distillate	2310	NI	NI	(0)	(R)	(0)	NI	0	(0)	(1)	0	1			Fp	2		
Palm fatty acid distillate	3040								CAS No									
Palm kernel fatty acid distillate	2335	(0)	0	0	R	(3)	NI	0	(0)	(2)	1	2			Fp	2		
Palm kernel fatty acid distillate	3111								CAS No									

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Palm kernel olein (containing less than 5 % free fatty acids)	2308	(0)	NI	(0)	(R)	1	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Palm kernel olein	3038								CAS No							
Palm kernel stearin (containing less than 5% free fatty acids)	2309	0	(0)	(0)	(R)	0	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Palm kernel stearin	3039								CAS No							
Palm Mid Fraction	2363	(0)	NI	(0)	(R)	(0)	NI	0	0	(0)	(0)	(0)			Fp	2
Palm mid-fraction	3126								CAS No							
Palm nut oil	1094	0	NI	0	R	1	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
Palm kernel oil	2766								CAS No							
Palm nut oil fatty acid	1095	0	NI	0	R	(3)	NI	0	0	(2)	1	2			Fp	2
Palm kernel acid oil	553								CAS No							
Palm oil (containing less than 15% free fatty acids)	2249	0	NI	0	R	0	NI	0	(0)	(0)	0	0			Fp	2
Palm oil	2764								CAS No							
Palm oil (containing more than 15% and less than 30% free fatty acids)	2364	0	NI	0	R	0	NI	0	0	(2)	(2)	(2)			Fp	2
Non-edible industrial grade palm oil	3127								CAS No							
Palm oil fatty acid methyl ester	1097	0	NI	0	R	0	NI	0	0	0	0	1			Fp	2
Palm oil fatty acid methyl ester	554								CAS No							
Palm oil mill effluent oil	2550	(0)	NI	(0)	(R)	(1)	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
	4291								CAS No							
Palm oil mill effluent oil fatty acid distillate	2551	(0)	NI	(0)	(R)	(3)	NI	(0)	(0)	(2)	(2)	(2)			Fp	2
	4292								CAS No							
Palm oil mill effluent oil refined	2552	(0)	NI	(0)	(R)	(1)	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
	4293								CAS No							
Palm olein	2250	0	NI	0	R	0	NI	0	(0)	(0)	0	0			Fp	2
Palm olein	2765								CAS No							
Palm stearin	2251	0	NI	0	R	0	NI	0	(0)	(0)	0	0			Fp	2
Palm stearin	555								CAS No							
Paraffin wax, highly-refined	1086	(5)	NI	(5)	(NR)	0	(0)	(0)	(0)	(0)	(0)	(0)			Fp	2
Paraffin wax, highly-refined	556								CAS No			8002-74-2				
Paraffin wax, semi-refined	2244	(5)	NI	(5)	NR	0	(0)	(0)	(0)	(0)	(0)	(0)	T		Fp	3
Paraffin wax, semi-refined	565								CAS No							
Paraldehyde	1098	0	0	0	NR	0	NI	1	0	0	1	3			D	3
Paraldehyde	557								CAS No			123-63-7				

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Pentachloroethane	1099	3	2	2	NI	3	1	1	(1)	1	(1)	(1)	CT		S	3
Pentachloroethane	558								CAS No		76-01-7					
1,3-Pentadiene	1102	2	NI	2	NR	2	NI	0	0	0	1	(2)			E	2
1,3-Pentadiene	14								CAS No		504-60-9					
1,3-Pentadiene (greater than 50%), cyclopentene and isomers, mixtures.	2390	NI	NI	(3)	(NR)	(3)	NI	(2)	(1)	(3)	(2)	(2)	CMR		E	3
1,3-Pentadiene (greater than 50%), cyclopentene and isomers, mixtures	3560								CAS No							
Pentaethylene hexamine	1103	0	NI	0	NI	4	NI	1	(2)	(3)	3	(3)	Ss		D	3
Pentaethylenehexamine	560								CAS No		4067-16-7					
Pentane	1105	3	NI	3	R	3	NI	0	0	0	1	1			E	2
Pentane (all isomers)	561								CAS No		109-66-0					
1,5-Pentanedial solution, (5-50%) (#)	1107	0	NI	0	R	3	0	1	0	3	3	3	SsSr		D	3
Glutaraldehyde solutions (50% or less)	362								CAS No		111-30-8					
Pentanoic acid	1109	1	NI	1	NI	2	NI	1	2	(3)	3	3			FD	3
Pentanoic acid	562								CAS No		109-52-4					
Pentanoic acid (64%)/2-methyl butyric acid (36%) mixture	2144	(1)	NI	(1)	NI	(2)	NI	(1)	(2)	(3)	3	(3)			FD	3
n-Pentanoic acid (64%)/2-Methyl butyric acid (36%) mixture	2211								CAS No							
1-Pentanol	1110	1	1	1	(R)	1	0	1	0	(3)	2	3			FED	3
n-Amyl alcohol	473								CAS No		71-41-0					
2-Pentanol	1111	1	1	1	R	1	0	0	(0)	(2)	2	2			D	2
sec-Amyl alcohol	637								CAS No		6032-29-7					
Pentasodium triphosphate (*)	2418	Inorg	0	0	Inorg	1	NI	NI	NI	NI	NI	NI			NI	NI
	3694								CAS No							
Pentene (all isomers)	1992	2	NI	2	NI	(2)	NI	(0)	(0)	(0)	(0)	(1)			E	2
Pentene (all isomers)	563								CAS No							
1-Pentene	1114	2	NI	2	NI	(2)	NI	(0)	(0)	0	(0)	(1)			E	2
1-Pentene	2679								CAS No		109-67-1					
2-Pentene	1115	2	NI	2	NI	2	NI	(0)	(0)	(0)	(0)	(1)			E	2
2-Pentene	2678								CAS No		109-68-2					
Phenol	1124	1	2	2	R	3	0	2	2	(3)	3	3		NT	S	3
Phenol	566								CAS No		108-95-2					
Phenylxylethane	1135	5	4	4	NR	(2)	NI	1	0	(1)	(0)	0			F	1
1-Phenyl-1-xylyl ethane	23								CAS No		40766-31-2					

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Phosphate esters, alkyl(C12-C14)amine (LOA)	1854	2	NI	2	NR	3	NI	0	(0)	(2)	1	2			FD	2		
Phosphate esters, alkyl (C12-C14) amine	1345								CAS No									
[[[(phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]]]tetrakisphosphonic acid, ammonium salt solution (60% or less)	2509	0	NI	0	NR	2	(0)	(0)	(0)	(1)	(1)	(1)			D	1		
[[[(Phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]]]tetrakisphosphonic acid, ammonium salt solution (60% or less)	4077								CAS No			70714-66-8						
Phosphoric acid	1138	0	NI	0	Inorg	1	NI	1	1	3	3	3			D	3		
Phosphoric acid	567								CAS No			7664-38-2						
Phosphorus (elemental yellow)	1139	Inorg	(3)	(3)	Inorg	6	4	0	0	0	2	1			S	2		
Phosphorus, yellow or white (*)	568								CAS No			7732-14-0						
Phthalic anhydride (molten)	1146	1	NI	1	R	2	0	1	0	(3)	1	3	SsSr		S	3		
Phthalic anhydride (molten)	569								CAS No			85-44-9						
alpha-Pinene	40	4	NI	4	R	4	NI	0	0	0	1	(1)	Ss	T	F	3		
alpha-Pinene	109								CAS No			80-56-8						
beta-Pinene	41	4	NI	4	(R)	4	NI	0	0	0	1	(1)	Ss	NT	F	3		
beta-Pinene	141								CAS No			1330-16-1						
Pine oil	1148	4	NI	4	NR	4	NI	0	0	(1)	(1)	(1)	Ss	(T)	Fp	3		
Pine oil	570								CAS No			8002-09-3						
Piperazine, 68% Aqueous	2433	0	NI	0	NR	2	NI	0	0	2	3A	3	SsSrN		SD	3		
Piperazine, 68% solution	3748								CAS No			110-85-0						
Pol (2-8) alkylene (C2-C3) glycols/ Polyalkylene (C2-C10) glycols monoalkyl ethers and their borate esters	2358	(1)	NI	(1)	(R)	(1)	(0)	0	0	0	2	2			D	2		
Brake fluid base mix: Poly(2-8)alkylene (C2-C3) glycols/Polyalkylene (C2-C10) glycols monoalkyl (C1-C4) ethers and their borate esters	144								CAS No									
Polyacrylic acid (40% solution)	2302	(2)	NI	(2)	NR	1	NI	0	0	(1)	1	1			D	1		
Polyacrylic acid solution (40% or less)	2709								CAS No									
Polyalkene sulphonic acid (C16-C18), sodium salt	2527	(3)	(2)	(3)	(R)	(4)	NI	(1)	(0)	(2)	(2)	(2)			D	2		
Polyalkene sulphonic acid (C16-C18), sodium salt solution	4236								CAS No									
Polyalkene sulphonic acid (C20-C28), sodium salt (#)	2481	(5)	(4)	(4)	(NR)	1	0	(1)	(0)	(2)	(2)	(2)			Fp	2		
Polyalkene sulphonic acid (C20-C28), sodium salt	4057								CAS No									
Poly(C18-C22)alkyl acrylate in xylene	1151	(3)	NI	(3)	NR	2	NI	0	0	(2)	2	1			Fp	2		
Polyalkyl (C18-C22) acrylate in xylene	580								CAS No									
Polyalkylalkenaminesuccinimide, molybdenum oxysulphide	2379	NI	0	0	NR	0	NI	0	0	(0)	0	0			Fp	2		
Polyalkylalkenaminesuccinimide, molybdenum oxysulphide	3422								CAS No									

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Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	1152	1	NI	1	R	1	0	0	0	0	2	2			D	2
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	576								CAS No							
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate	2254	1	NI	1	NR	2	1	0	0	0	2	2			D	2
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate	575								CAS No							
Poly N-alkylmethacrylamide ammonium acrylate copolymer (20 % in DEGME) (**)	2468	0	NI	0	NR	2	NI	NI	NI	NI	NI	NI			D	NI
	3931								CAS No							
Poly alkyl methacrylate (C1-C20) (LOA)	1984	(5)	NI	(5)	NR	0	NI	0	0	0	0	0			Fp	2
Polyalkyl (C10-C20) methacrylate	2189								CAS No							
Poly alkyl(C10-C18) methacrylate/ethylene-propylene copolymer mixture	2201	0	0	0	NR	0	0	0	0	(1)	1	1	A		Fp	3
Polyalkyl (C10-C18) methacrylate/ethylene-propylene copolymer mixture	2188								CAS No							
Poly alkyl(C18-C22)methacrylates/lauryl acrylate/vinyl acetate (40% in naphtha)	2512	(5)	(5)	(5)	NR	0	NI	0	0	(1)	1	(1)			Fp	2
	4161								CAS No							
Polyaluminium chloride (sol.)	1136	Inorg	0	0	Inorg	0	NI	(0)	(0)	(1)	(0)	(1)			D	1
Polyaluminium chloride solution	584								CAS No		1327-41-9					
Polybutene	1154	0	NI	0	(NR)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			Fp	2
Polybutene	585								CAS No		9003-29-6					
Polybutenylsuccinimide in oil	2055	5	NI	5	NR	0	NI	(0)	(0)	(0)	0	(0)			Fp	2
Polybutenyl succinimide	586								CAS No							
Poly(2+)cyclic aromatics	2246	4	4	4	NR	(4)	NI	(1)	(1)	(2)	(1)	(1)	CM		S	3
Poly(2+)cyclic aromatics	574								CAS No							
Polyether, borated	1863	0	NI	0	NR	3	1	0	(0)	(1)	1	0			D	1
Polyether, borated	572								CAS No							
Polyether (molecular weight 2000+) (LOA)	1975	0	NI	0	NR	1	NI	0	(0)	(0)	0	0			Fp	2
Polyether (molecular weight 1350+)	587								CAS No							
Polyethylene amines / paraffin mixtures	1991	(5)	NI	(5)	NR	3	0	0	(1)	(3)	(2)	(3)	Ss		Fp	3
Polyethylene polyamines (more than 50% C5 -C20 paraffin oil)	591								CAS No							
Polyethylene glycol	1157	0	NI	0	NR	0	NI	0	0	0	1	1			D	1
Polyethylene glycol	589								CAS No		25322-68-3					
Polyethylene glycol dimethyl ether	1158	0	NI	0	NR	0	NI	0	0	(1)	1	(1)			D	1
Polyethylene glycol dimethyl ether	590								CAS No		24991-55-7					
Poly(ethylene glycol) methylbutenyl ether (MW >1000)	2395	NI	0	0	R	1	NI	0	0	(0)	0	0			D	0
Poly(ethylene glycol) methylbutenyl ether (MW>1000)	3501								CAS No							

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Polyethylene glycol sorbitol hexaoleate	2533	0	NI	0	R	2	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Polyethylene glycol sorbitol hexaoleate	4242	CAS No														
Polyethylene polyamines	2367	0	NI	0	NR	3	0	1	0	(3)	2	(3)	Ss		D	3
Polyethylene polyamines	3131	CAS No														
Polyferric sulphate solution	338	Inorg	0	0	Inorg	(2)	NI	1	(1)	(3)	3	(3)			D	3
Polyferric sulphate solution	592	CAS No														
Polyglycerine, sodium salt, solution	1874	0	NI	0	R	0	NI	0	0	(3)	(2)	3			D	3
Polyglycerin, sodium salt solution (containing less than 3% sodium hydroxide)	593	CAS No														
Polyglycerol	1511	NI	NI	NI	NI	NI	NI	0	(0)	(0)	(0)	(0)			D	0
Polyglycerol	594	CAS No														
Poly (iminoethylene)-graft-N-poly (ethyleneoxy) solution (90% or less)	2287	0	0	0	NR	0	NI	0	0	(1)	0	1			D	1
Poly(iminoethylene)-graft-N-poly(ethyleneoxy) solution (90% or less)	2537	CAS No														
Polyisobutenamine in aliphatic (C10-C14) solvent	2192	0	0	0	NR	2	NI	0	(0)	(2)	2	1			FED	2
Polyisobutenamine in aliphatic (C10-C14) solvent	2374	CAS No														
(Polyisobutene) amino products in aliphatic hydrocarbons	2455	0	NI	(5)	NR	2	NI	0	0	(1)	1	0	A		Fp	3
(Polyisobutene) amino products in aliphatic hydrocarbons	3811	CAS No														
Polyisobutenyl anhydride adduct	2127	0	NI	0	NR	0	NI	0	0	(1)	0	1			FD	1
Polyisobutenyl anhydride adduct	2256	CAS No														
Poly(4+)isobutylene	2264	0	NI	0	NR	0	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Polyisobutylene (MW≤224)	578	CAS No														
Polymethylene polyphenyl isocyanate	1153	NI	(2)	(2)	NR	0	0	0	0	(2)	2	2	SsSr		S	2
Polymethylene polyphenyl isocyanate	595	CAS No 9016-87-9														
Polyolefin acid, potassium salt	1895	NI	NI	NI	NR	0	NI	0	0	(0)	0	0			NI	0
Potassium salt of polyolefin acid	2199	CAS No														
Polyolefinamide alkene(C16+)amine (LOA)	2104	5	NI	5	NR	0	NI	0	0	(1)	1	(1)			Fp	2
Polyolefin amide alkeneamine (C17+)	597	CAS No														
Polyolefin amide alkeneamine (C28+) (LOA)	1971	0	NI	0	NR	0	NI	0	0	(0)	1	(1)			NI	1
Polyolefin amide alkeneamine (C28+)	598	CAS No														
Polyolefin amide alkeneamine borate (C28-C250) (LOA)	1970	0	NI	0	NR	0	NI	0	0	(0)	0	(0)			Fp	2
Polyolefin amide alkeneamine borate (C28-C250)	600	CAS No														
Polyolefin amide alkeneamine/molybden oxysulphide mi	2256	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI			NI	NI
Polyolefin amide alkeneamine/molybdenum oxysulphide mixture	603	CAS No														

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Polyolefin amide alkylene amine polyol	1989	0	2	2	NR	0	NI	0	0	(0)	0	0			Fp	3
Polyolefin amide alkeneamine polyol	602								CAS No							
Poly (17+) olefin amine	2049	0	NI	0	NR	2	NI	0	(0)	(1)	(1)	(1)			Fp	2
Poly (17+) olefin amine	571								CAS No			98761-78-5				
Polyolefinamine (C28-C250) (LOA)	2107	0	NI	0	NR	2	NI	0	(0)	(2)	2	(1)			Fp	2
Polyolefinamine in alkyl (C2-C4) benzenes	610								CAS No							
Polyolefinamine (C28-C250) (LOA)	2107	0	NI	0	NR	2	NI	0	(0)	(2)	2	(1)			Fp	2
Polyolefinamine (C28-C250)	609								CAS No							
Polyolefinamine (C28-C250) (LOA)	2107	0	NI	0	NR	2	NI	0	(0)	(2)	2	(1)			Fp	2
Polyolefinamine in aromatic solvent	611								CAS No							
Polyolefin aminoester salt	2095	0	NI	0	NR	1	NI	0	0	(1)	1	(1)			Fp	2
Polyolefin aminoester salts (molecular weight 2000+)	604								CAS No							
Polyolefin ester (C28-C250) (LOA)	1969	0	NI	0	NR	0	NI	0	0	(0)	0	0			Fp	2
Polyolefin ester (C28-C250)	606								CAS No							
Polyolefin (molecular weight 300+) (LOA)	1968	0	NI	0	NR	0	NI	0	0	0	0	0			Fp	2
Polyolefin (molecular weight 300+)	596								CAS No							
Polyolefin phenolic amine (C28-C250) (LOA)	1980	0	NI	0	NI	0	NI	0	0	(1)	(1)	(1)			Fp	2
Polyolefin phenolic amine (C28-C250)	607								CAS No							
Polyolefin phosphoro sulphide - barium derivative (C28-C250) (LOA)	1976	0	NI	0	NI	2	NI	0	(0)	(0)	(0)	(0)			S	0
Polyolefin phosphorosulphide, barium derivative (C28-C250)	608								CAS No							
Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, phosphate	2506	(4)	(3)	(3)	NR	3	(1)	(1)	(1)	(3)	(2)	(3)			S	3
Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, phosphate	4158								CAS No			51811-79-1				
Polyoxyethylene sorbitan monooleate	1442	3	(2)	3	R	2	0	0	(0)	(0)	0	0			D	0
Poly(20)oxyethylene sorbitan monooleate	577								CAS No			9005-65-6				
Polyoxypropylene diamine	2352	1	NI	1	NR	1	NI	0	0	(3)	3	3			D	3
	3112								CAS No							
Polyphosphoric acids, esters with triethanolamine, sodium salts solution	2549	0	NI	0	NR	1	0	0	0	(0)	0	0			D	0
	4290								CAS No							
Polypropylene	1512	0	NI	0	NR	(0)	NI	(0)	(0)	(0)	(0)	(0)			F	1
Poly(5+)propylene	579								CAS No			9003-07-0				
Polypropylene glycol	1159	0	NI	0	(NR)	1	NI	1	0	(1)	1	1			D	1
Polypropylene glycol	612								CAS No			25322-69-4				

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Polysiloxane	1161	NI	4	4	NI	2	NI	0	(0)	(0)	0	0			F	1
Polysiloxane	613								CAS No							
Polysiloxane	1161	NI	4	4	NI	2	NI	0	(0)	(0)	0	0			F	1
Dimethylpolysiloxane	275								CAS No							
Poly (tetramethylene) ether glycol (mw 600-3000)	2147	2	NI	2	NR	3	NI	0	0	(0)	0	(0)			FD	0
Poly(tetramethylene ether) glycol (mw 600-3000)	2540								CAS No							
Potassium carbonate solution	2465	Inorg	0	0	Inorg	2	NI	0	0	(0)	2	2			D	2
Potassium carbonate solution	3928								CAS No							
Potassium chloride solution	1513	0	0	0	Inorg	1	0	0	(0)	(0)	0	0			D	0
Potassium chloride solution	614								CAS No		7447-40-7					
Potassium chloride solution (less than 26%)	2345	Inorg	0	0	Inorg	0	0	0	(0)	(0)	0	0			D	0
Potassium chloride solution (less than 26%)	3109								CAS No							
Potassium formate solution (75% or more)	2121	0	NI	0	R	0	NI	(0)	(0)	(2)	2	2			D	2
Potassium formate solutions (*)	615								CAS No		590-29-4					
Potassium hydroxide (sol.)	1171	Inorg	0	0	Inorg	2	NI	2	(2)	(3)	3C	3			D	3
Potassium hydroxide solution	616								CAS No		1310-58-3					
Potassium iodide	2484	Inorg	(0)	(0)	Inorg	1	0	0	0	(0)	0	0	T		D	2
Potassium iodide	4060								CAS No		7681-11-0					
Potassium oleate	1497	3	NI	3	R	4	NI	(0)	(0)	(1)	1	1			FD	1
Potassium oleate	617								CAS No		143-18-0					
Potassium thiosulphate solution (50% or less)	2152	Inorg	0	0	Inorg	2	NI	0	0	(2)	2	(2)			D	2
Potassium thiosulphate (50% or less)	2335								CAS No							
Propanol	1180	0	NI	0	R	0	NI	1	0	0	1	2	R		D	3
n-Propyl alcohol	488								CAS No		71-23-8					
Propanolamine	1183	0	NI	0	R	2	NI	0	1	(3)	3	3			D	3
n-Propanolamine	485								CAS No		156-87-6					
2-Propene-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer (aqueous solution)	2420	0	NI	0	R	2	0	0	(0)	(0)	0	(0)			D	0
2-Propene-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer	3696								CAS No							
2-Propenoic acid polymer with 4-(1,1-dimethylethyl)phenol, formaldehyde, 2,5-furandione, 2-methyloxirane and oxirane (65% in naphtha/xylene)	2491	(5)	NI	(5)	NR	2	NI	0	0	(0)	(0)	0	A		Fp	3
2-Propenoic acid polymer with 4-(1,1-dimethylethyl)phenol, formaldehyde, 2,5-furandione, 2-methyloxirane and oxirane (65% in naphtha/xylene)	4125								CAS No		178603-70-8					

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2-Propenoic acid polymer with furandione (65% in 2-butoxyethanol)	2435	0	NI	0	NR	2	0	1	0	0	2	2			Fp	2		
2-Propenoic acid polymer with furandione (65% in 2-butoxyethanol)	3750								CAS No									
beta-Propiolactone	1184	0	NI	0	R	(2)	NI	2	(2)	4	3B	3	CM		D	3		
beta-Propiolactone	142								CAS No			57-57-8						
Propionaldehyde	1185	0	NI	0	R	2	NI	1	0	1	2	2			DE	2		
Propionaldehyde	619								CAS No			123-38-6						
Propionic acid	1186	0	NI	0	R	2	NI	0	0	(3)	3B	3			D	3		
Propionic acid	620								CAS No			79-09-4						
Propionic anhydride	1187	0	NI	0	R	2	NI	0	0	(3)	2	3			FD	3		
Propionic anhydride	621								CAS No			123-62-6						
Propionitrile	1188	0	NI	0	NI	0	NI	3	3	4	1	2	R		D	3		
Propionitrile	622								CAS No			107-12-0						
Propyl acetate	1191	1	NI	1	R	2	NI	0	0	0	1	1			ED	1		
n-Propyl acetate	487								CAS No			109-60-4						
Propylamine	1194	0	NI	0	NI	1	NI	2	2	3	3	3			DE	3		
n-Propylamine	490								CAS No			107-10-8						
Propyl benzene	1196	NI	NI	NI	NI	3	NI	NI	NI	NI	NI	NI		(T)	FE	NI		
Propylbenzene	2686								CAS No			103-65-1						
Propyl chloride	1198	2	NI	2	NI	1	NI	0	NI	NI	NI	NI			FED	2		
n-Propyl chloride	489								CAS No			540-54-5						
Propylene carbonate	2056	0	NI	0	R	0	NI	0	0	(3)	2	3			D	3		
Propylene carbonate	624								CAS No			108-32-7						
Propylene dimer	1201	3	NI	3	R	3	NI	NI	NI	NI	NI	NI			E	2		
Propylene dimer	625								CAS No									
1,2-Propylene glycol	1202	0	NI	0	R	0	0	0	0	0	0	0			D	0		
Propylene glycol	626								CAS No			57-55-6						
Propylene glycol methyl ether acetate	1759	0	NI	0	NR	1	NI	0	0	0	0	1			D	1		
Propylene glycol methyl ether acetate	627								CAS No			108-65-6						
Propylene glycol monoalkyl ether	1958	0	NI	0	NR	0	NI	0	1	0	2	3			D	3		
Propylene glycol monoalkyl ether	628								CAS No									
Propylene glycol phenyl ether	2057	1	NI	1	NI	1	NI	0	0	(1)	(1)	(1)			SD	1		
Propylene glycol phenyl ether	629								CAS No			4169-04-4						

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Propylene oxide	76	0	NI	0	R	2	NI	1	2	2	2	3	CM		DE	3
Propylene oxide	630								CAS No		75-56-9					
Propylene oxide/Ethylene oxide mixture	78	0	NI	0	R	1	NI	1	1	3	3	3	CMR		DE	3
Ethylene oxide/Propylene oxide mixture with an ethylene oxide content of not more than 30% by mass	341								CAS No							
Propylene tetramer	2255	NI	4	4	NR	(4)	NI	(0)	(0)	(1)	(1)	(1)			F	1
Propylene tetramer	631								CAS No		6842-15-5					
Propylene trimer	1207	5	4	4	NR	3	2	(0)	(0)	(1)	(1)	(1)			FE	2
Propylene trimer	632								CAS No		13987-01-4					
Pyridine	1213	0	NI	0	R	3	0	1	1	2	1	3		NT	D	3
Pyridine	634								CAS No		110-86-1					
Pyridine bases	2131	1	NI	1	R	2	NI	2	1	(3)	3B	3			FED	3
Paraldehyde-ammonia reaction product	1989								CAS No							
Pyridinium, 1-(phenylmethyl)-, alkyl derivatives, chlorides (30% or less)/Ethoxylated nonylphenols (10% or less) in isopropanol (15% or less)/Methanol (3% or less) solution	2544	(3)	NI	(3)	(NR)	(4)	(2)	(1)	(0)	(3)	(3B)	(3)	TSs		D	3
	4284								CAS No							
Pyridinium, 1-(phenylmethyl)-, ethyl methyl derivs., chlorides	2507	3	NI	3	NR	4	2	NI	NI	NI	(3B)	(3)			D	3
Pyridinium, 1-(phenylmethyl)-, ethyl methyl derivs., chlorides	4159								CAS No		68909-18-2					
Pyrolysis gasoline	2271	(4)	(3)	(3)	(R)	(3)	(1)	1	0	(2)	2	2	TCM		FE	3
Pyrolysis gasoline (containing benzene)	1990								CAS No							
Quaternary ammonium compounds, benzyl-C12-18 (even-numbered)-alkyldimethyl, chlorides	2565	(3)	NI	(3)	(R)	(4)	(1)	(1)	(0)	(3)	(3B)	(3)			FD	3
	4323								CAS No							
Quaternary ammonium compounds, benzyl-C12-14 (even-numbered)-alkyldimethyl, chlorides solution	2494	3	NI	3	NR	4	NI	1	0	(3)	3B	3			D	3
	4128								CAS No		68424-85-1					
Rapeseed oil (high erucic acid; containing less than 4% free fatty acids)	2315	0	NI	0	R	(2)	NI	(0)	(0)	(0)	(1)	(1)			Fp	2
Rapeseed oil	3045								CAS No							
Rapeseed oil (Low erucic acid containing less than 4% free fatty acids)	2296	0	NI	0	R	(2)	NI	0	0	0	(1)	(1)			Fp	2
Rapeseed oil (low erucic acid containing less than 4% free fatty acids)	2956								CAS No							
Rape seed oil fatty acid, methyl ester	2209	0	0	0	R	0	NI	0	(0)	(1)	1	1			Fp	2
Rape seed oil fatty acid methyl esters	2576								CAS No							
Rice bran oil (containing less than 15% of free fatty acids)	2312	(0)	NI	(0)	(R)	(0)	NI	0	(0)	(1)	0	1			Fp	2
Rice bran oil	3043								CAS No							

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TRN Name	TRN															
Rosin	1219	3	NI	3	NR	3	NI	0	0	2	(1)	1	Ss		S	2
Rosin	635								CAS No		8050-09-7					
Rosin soap (disproportionated solution)	1220	3	NI	3	NR	3	NI	0	NI	NI	NI	NI			S	NI
Rosin soap (disproportionated) solution	636								CAS No							
Safflower oil (containing less than 5% free fatty acids)	1222	(0)	NI	(0)	(R)	(0)	NI	(0)	(0)	(1)	1	1			Fp	2
Safflower oil	3041								CAS No		8001-23-8					
Saturated and unsaturated alkyl (C10-C20) phosphite (LOA)	2108	0	NI	0	R	1	NI	0	0	(0)	0	0			Fp	2
Alkyl (C10-C20, saturated and unsaturated) phosphite	96								CAS No							
Shea butter (containing less than 15% free fatty acids)	2311	(0)	NI	(0)	NR	(0)	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
Shea butter	3042								CAS No							
Silica slurry	1514	Inorg	0	0	Inorg	0	0	(0)	(0)	0	(0)	(0)			S	0
Microsilica slurry	2507								CAS No		7631-86-9					
Sodium acetate	1498	0	NI	0	R	0	NI	0	0	0	1	1			D	1
Sodium acetate solutions	639								CAS No		127-09-3					
Sodium aluminate (solution)	1234	Inorg	0	0	Inorg	3	1	(0)	(0)	(3)	(3)	(3)			D	3
Sodium aluminate solution	641								CAS No		11138-49-1					
Sodium aluminosilicate slurry	1235	Inorg	0	0	Inorg	1	0	0	0	0	1	1			S	1
Sodium aluminosilicate slurry	643								CAS No		1344-00-9					
Sodium benzoate	1475	0	NI	0	R	1	NI	0	(0)	(1)	0	1			D	1
Sodium benzoate	644								CAS No		532-32-1					
Sodium bicarbonate solution (less than 10%)	2386	0	NI	0	Inorg	0	0	0	0	(0)	0	0			D	0
Sodium bicarbonate solution (less than 10%)	3558								CAS No		144-55-8					
Sodium borohydride/sodium hydroxide mixture (soln.)	1239	Inorg	0	0	Inorg	2	NI	(2)	(1)	(3)	(3)	(3)			D	3
Sodium borohydride (15% or less)/Sodium hydroxide solution (*)	645								CAS No							
Sodium bromide solution (less than 50%)	2387	Inorg	NI	0	Inorg	0	0	0	0	(1)	0	1	R		D	3
Sodium bromide solution (less than 50%) (*)	3410								CAS No		7647-15-6					
Sodium carbonate	1243	Inorg	0	0	Inorg	1	NI	0	0	2	1	2			SD	2
Sodium carbonate solution (*)	646								CAS No		497-19-8					
Sodium chlorate solid and solutions (50% or less)	1244	Inorg	0	0	Inorg	1	NI	1	0	(2)	1	1			D	2
Sodium chlorate solution (50% or less) (amended) (*)	647								CAS No		7775-09-9					
Sodium chloride solution	2521	Inorg	0	0	Inorg	0	0	0	0	0	1	2			D	0
Sodium chloride solution (less than 30%)	4229								CAS No							

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Sodium dichromate solution	487	Inorg	0	0	Inorg	4	1	2	2	4	2	3	CMSsSr		D	3
Sodium dichromate solution (70% or less)	649								CAS No		10588-01-9					
Sodium dodecylpoly(oxyethylene) sulphate solution	2531	(3)	NI	(3)	R	3	NI	(0)	(0)	(3)	(2)	(3)			D	3
Sodium dodecylpoly(oxyethylene) sulphate solution	4240								CAS No							
Sodium dodecyl sulphate (*)	2451	0	NI	0	R	3	1	NI	NI	NI	NI	NI			NI	NI
	3869								CAS No							
Sodium hydrogen sulphide/Ammonium sulphide(mixture)	1253	Inorg	0	0	Inorg	3	NI	(2)	(2)	(3)	(3)	(3)			D	3
Sodium hydrosulphide/Ammonium sulphide solution (*)	653								CAS No							
Sodium hydrogen sulphide (6% or less)/sodium carbonate (3% or less)	2262	0	NI	0	Inorg	1	NI	(0)	(0)	(1)	(1)	(1)			D	1
Sodium hydrogen sulphide (6% or less)/Sodium carbonate (3% or less) solution	650								CAS No							
Sodium hydrogen sulphide,solutions	1252	Inorg	0	0	Inorg	1	NI	2	2	(3)	(3)	3			D	3
Sodium hydrosulphide solution (45% or less) (*)	652								CAS No		16721-80-5					
Sodium hydrogen sulphite,solutions	1251	Inorg	0	0	Inorg	1	NI	0	(0)	(0)	0	0			D	0
Sodium hydrogen sulphite solution (45% or less)	651								CAS No		7631-90-5					
Sodium hydroxide (30% or less)/Sodium aluminate (25% or less) solution (#)	2486	Inorg	(0)	(0)	Inorg	3	1	0	(0)	(3)	3	(3)			D	3
	3914								CAS No							
Sodium hydroxide solution (#)	1254	Inorg	0	0	Inorg	2	NI	1	1	3	3C	3			D	3
Sodium hydroxide solution (*)	654								CAS No		1310-73-2					
Sodium hypochlorite solutions containing 20% and less but more than 2% NaOCl	1256	Inorg	0	0	Inorg	(4)	(1)	0	0	1	3	3			D	3
Sodium hypochlorite solution (15% or less)	2785								CAS No		7681-52-9					
Sodium hypochlorite solutions containing more than 20% NaOCl	1255	Inorg	0	0	Inorg	5	2	0	0	1	3	3			D	3
Sodium hypochlorite solution (Full strength solution)	655								CAS No		7681-52-9					
Sodium methylate (**)	2443	NI	NI	(0)	(R)	(2)	NI	NI	NI	NI	NI	NI	T		DE	NI
Sodium methylate	3822								CAS No							
Sodium Methylate (21-30% in Methanol)	2427	0	NI	0	R	1	NI	2	(2)	(3)	3	3	T		D	3
Sodium methylate 21-30% in methanol	3608								CAS No							
Sodium nitrate	1259	Inorg	0	0	Inorg	0	NI	(0)	(0)	(0)	(1)	(1)			SD	1
Sodium nitrate	656								CAS No		7631-99-4					
Sodium nitrite	340	Inorg	0	0	Inorg	3	0	2	(2)	2	0	1			SD	2
Sodium nitrite solution	658								CAS No		7632-00-0					
Sodium oxalate solution (#)	2518	0	(1)	(1)	R	2	1	1	0	(2)	(2)	2			D	2
Sodium oxalate solution	4199								CAS No							

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Sodium perborate monohydrate	2284	Inorg	NI	NI	Inorg	3	NI	1	0	(3)	2	3			NI	3		
Sodium perborate monohydrate	2948								CAS No									
Sodium petroleum sulphonate	1860	0	NI	0	(NR)	2	NI	0	(0)	(2)	1	2			S	2		
Sodium petroleum sulphonate	660								CAS No									
Sodium polyacrylate solution	1487	0	NI	0	NR	1	0	0	(0)	(1)	1	1			D	1		
Sodium poly(4+)acrylate solutions	826								CAS No									
Sodium silicate (solution)	1262	Inorg	0	0	Inorg	2	NI	1	0	(3)	3	3			D	3		
Sodium silicate solution	661								CAS No			1344-09-8						
Sodium sulphate (solution)	1499	Inorg	0	0	Inorg	0	0	0	(0)	(1)	1	1			SD	1		
Sodium sulphate solutions	662								CAS No			7757-82-6						
Sodium sulphide (solution)	1263	Inorg	0	0	Inorg	3	NI	1	1	(3)	3A	3			D	3		
Sodium sulphide solution (15% or less)	663								CAS No			1313-82-2						
Sodium sulphite (solution)	9	Inorg	0	0	Inorg	2	NI	0	(0)	(1)	0	1			D	1		
Sodium sulphite solution (25% or less)	664								CAS No			7757-83-7						
Sodium tartrate succinate/Sodium tartrate disuccinate mixtures	1771	NI	1	1	NI	1	NI	0	NI	NI	NI	NI			D	NI		
Sodium tartrates/Sodium succinates solution	665								CAS No									
Sodium thiocyanate	1264	Inorg	0	0	Inorg	2	NI	1	(0)	(1)	0	0			D	1		
Sodium thiocyanate solution (56% or less)	667								CAS No			540-72-7						
Sorbitan monooleate	2215	(5)	NI	(5)	R	3	NI	0	NI	NI	0	0			Fp	2		
Sorbitan monooleate	2408								CAS No									
Sorbitan sesquioleate	2532	0	NI	0	NR	0	1	0	(0)	(2)	1	0			Fp	2		
Sorbitan sesquioleate	4241								CAS No									
Sorbitol	1265	0	NI	0	R	0	NI	0	(0)	(0)	(0)	(0)			D	0		
Sorbitol solution	668								CAS No			50-70-4						
Sorbitol, propoxylated	2529	1	NI	1	NR	1	0	0	0	(0)	0	0			D	0		
Sorbitol Propoxylated	4238								CAS No									
Soyabean oil (containing less than 4% free fatty acids)	2320	0	NI	0	R	0	NI	0	(0)	(1)	(0)	1			Fp	2		
Soyabean oil	3050								CAS No									
Soybean oil fatty acids, methyl esters	2431	0	NI	0	R	2	NI	0	0	0	0	0			Fp	2		
Soybean Oil Fatty Acid Methyl Ester	3737								CAS No									
Spent bleaching earth vegetable oil (up to 20% free fatty acids, less than 1% hexane)	2563	(0)	NI	(0)	(R)	(0)	NI	(0)	(0)	(2)	(2)	(2)			Fp	2		
	4321								CAS No									

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Spent bleaching earth vegetable oil fatty acid distillate	2564 4322	(0)	NI	(0)	(R)	(3)	NI	(0)	(0)	(2)	(2)	(2)			Fp	2			
									CAS No										
Styrene (monomer)	1273	3	(2)	3	R	3	NI	1	0	2	2	2	CM		FE	3			
Styrene monomer	669								CAS No								100-42-5		
Styrene butadiene rubber latex	1274	0	NI	0	NR	0	NI	0	0	(1)	0	1			D	1			
Latex: Carboxylated styrene-Butadiene copolymer; Styrene-Butadiene rubber	414								CAS No										
Sulpho hydrocarbon (C3-C88) (LOA)	1972	4	NI	4	NR	2	NI	0	0	0	0	0			Fp	2			
Sulphohydrocarbon (C3-C88)	672								CAS No										
Sulpholane	1277	0	1	1	NR	2	0	1	0	0	1	2			SD	2			
Sulpholane	673								CAS No								126-33-0		
Sulphonated polyacrylate solution	1760	NI	0	0	NI	0	NI	(0)	(0)	(0)	(0)	(0)			D	0			
Sulphonated polyacrylate solution	674								CAS No										
Sulphur	906	Inorg	0	0	Inorg	0	NI	0	0	(1)	1	1			S	1			
Sulphur (molten) (*)	675								CAS No								7704-34-9		
Sulphuric acid	1280	0	NI	0	Inorg	2	NI	0	(0)	3	3C	3	C		D	3			
Sulphuric acid, spent	677								CAS No								7664-93-9		
Sulphuric acid	1280	0	NI	0	Inorg	2	NI	0	(0)	3	3C	3	C		D	3			
Sulphuric acid	676								CAS No								7664-93-9		
Sulphuric acid	1280	0	NI	0	Inorg	2	NI	0	(0)	3	3C	3	C		D	3			
Oleum	549								CAS No								7664-93-9		
Sulphurized fat(C14-C20) (LOA)	1853	0	NI	0	NR	1	NI	0	(0)	(1)	0	(1)			FD	1			
Sulphurized fat (C14-C20)	2257								CAS No										
Sulphurized polyolefinamide alkene(C28-C250)amine (LOA)	1855	0	NI	0	NR	0	NI	0	0	(0)	0	0			FD	0			
Sulphurized polyolefinamide alkene (C28-C250) amine	2258								CAS No										
Sunflower oil	1283	0	NI	0	R	0	NI	(0)	(0)	(1)	(0)	(1)			Fp	2			
Sunflower seed oil	2782								CAS No								8001-21-6		
sym-Dichlorodiethyl ether	588	1	1	1	NR	1	0	2	3	4	1	3		T	SD	3			
Dichloroethyl ether	233								CAS No								111-44-4		
Tall oil acids/linoleic acid dimer/polyalkylenepolyamines/dodecylbenzenesulphonic acid complexes in naphtha/isopropanol	2448	0	NI	0	NR	1	NI	0	0	(0)	0	0	CM		Fp	3			
Tall oil acids/linoleic acid dimer/polyalkylenepolyamines/dodecylbenzenesulphonic acid complexes in naphtha/isopropanol	3866								CAS No										

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Tall oil acids reaction products with diethylenetriamine and acrylic acid in ethylene glycol	2497	3	NI	3	R	2	NI	0	0	(1)	0	1	Ss		D	2
Tall oil acids reaction products with diethylenetriamine and acrylic acid in ethylene glycol	4131								CAS No		85586-18-1					
Tall oil acids reaction products with triethanolamine	2492	4	NI	4	NR	2	NI	0	0	(1)	1	0			Fp	2
Tall oil acids reaction products with triethanolamine	4126								CAS No		67784-78-5					
Tall oil, crude and distilled	1285	(4)	NI	(4)	(R)	(2)	NI	0	0	(0)	0	0	Ss		Fp	2
Tall oil (crude and distilled)	678								CAS No		68187-71-3					
Tall oil, distilled	2283	0	NI	0	R	0	NI	0	(0)	(0)	0	(0)			Fp	2
Tall oil, distilled	2890								CAS No							
Tall oil fatty acid (resin acids less than 20%)	1287	0	0	0	R	0	0	0	0	(1)	1	0			Fp	2
Tall oil fatty acid (resin acids less than 20%)	679								CAS No		61790-12-3					
Tall oil fatty acid, barium salt	1864	NI	NI	NI	NI	NI	NI	(1)	(0)	(2)	1	2			S	2
Tall oil fatty acid, barium salt	680								CAS No							
Tall oil fatty acids reaction products with 2-[(2-aminoethyl)amino]ethanol, di-ethyl sulphate quaternized	2508	(3)	NI	(3)	NR	5	2	NI	NI	NI	(2)	(3)	Ss		D	3
Tall oil fatty acids reaction products with 2-[(2-aminoethyl)amino]ethanol, di-ethyl sulphate quaternized	4160								CAS No		70955-34-9					
Tall-oil fatty acids reaction products with diethylenetriamine	2554	2	NI	2	NR	4	1	0	(0)	(3)	3A	3	Ss		Fp	3
	4295								CAS No							
Tall oil pitch	2323	3	NI	3	NR	0	0	0	0	(0)	0	(0)			Fp	2
Tall oil pitch	3051								CAS No							
Tall oil soap (disproportionated solution)	1286	NI	NI	NI	NI	NI	NI	(1)	(0)	(2)	1	2			D	2
Tall oil soap (disproportionated) solution	681								CAS No							
Tall oil soap, crude	2432	0	NI	0	R	2	0	(0)	(0)	(3)	(3)	(3)	Ss		Fp	3
Tall oil soap, crude	3735								CAS No							
Tallow	1288	0	NI	0	R	0	NI	0	0	(0)	(0)	(0)			Fp	2
Tallow	682								CAS No		61789-21-6					
Tallowamidopropylamine Oxide in propylene glycol (70% or less) (#)	2482	NI	(2)	(2)	(R)	(4)	(2)	(1)	(1)	(3)	(3)	(3)			D	3
	4058								CAS No							
Tallow fatty acid	1289	0	NI	0	R	0	NI	0	(0)	(0)	(0)	(0)			Fp	2
Tallow fatty acid	684								CAS No							
1,1,2,2-Tetrachloroethane	53	2	2	2	NR	3	0	2	0	2	2	2			SD	2
Tetrachloroethane	687								CAS No		79-34-5					

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1,1,2,2-Tetrachloroethylene	1295	3	2	2	NR	(3)	2	0	0	0	2	1	C		S	3
Perchloroethylene	564								CAS No		127-18-4					
Tetrachloromethane	1296	2	2	2	NR	3	0	0	0	0	1	1	CT		S	3
Carbon tetrachloride	178								CAS No		56-23-5					
Tetradecanoic acid (Myristic acid)	1298	5	NI	0	R	0	NI	0	(0)	(1)	(1)	(1)			Fp	2
n-Tetradecanoic acid	491								CAS No		544-63-8					
Tetradecanoic acid (Myristic acid)	1298	5	NI	0	R	0	NI	0	(0)	(1)	(1)	(1)			Fp	2
Fatty acid (saturated C13+)	347								CAS No		544-63-8					
Tetraethylene glycol	1301	0	NI	0	NR	0	NI	0	0	0	1	1			D	1
Tetraethylene glycol	688								CAS No		112-60-7					
Tetraethylene pentamine	1302	0	NI	0	NR	3	NI	0	2	(3)	3	3	Ss		D	3
Tetraethylene pentamine	689								CAS No		112-57-2					
Tetraethyl lead	1303	4	5	5	NR	5	NI	3	2	4	2	2	NR		S	3
Motor fuel anti-knock compound (containing lead alkyls)	464								CAS No		78-00-2					
Tetrahydrofuran	1304	0	NI	0	R	0	NI	0	(0)	0	1	2			DE	2
Tetrahydrofuran	690								CAS No		109-99-9					
Tetrahydronaphthalene	1305	3	3	3	NR	3	NI	0	0	(2)	2	0			F	2
Tetrahydronaphthalene	691								CAS No		119-64-2					
1,2,3,4-Tetramethylbenzene	1307	4	NI	4	NI	4	NI	0	(0)	(1)	1	(1)			F	1
Tetramethylbenzene (all isomers)	692								CAS No		488-23-3					
Tetrapotassium pyrophosphate	2400	Inorg	0	0	Inorg	1	NI	0	NI	NI	NI	NI			D	NI
Tetrapotassium pyrophosphate	3635								CAS No		7320-34-5					
Thioglycolic acid	2496	0	NI	0	R	2	NI	2	2	3	3B	3			D	3
Thioglycolic acid	4130								CAS No		68-11-1					
Thixatrol plus	2210	5	NI	5	R	3	NI	0	0	0	1	1			S	1
Thixatrol Plus	2699								CAS No							
Titanium dioxide slurry	2080	Inorg	1	1	Inorg	1	NI	0	0	0	1	1			S	1
Titanium dioxide slurry	2259								CAS No		13463-67-7					
Toluene	330	2	2	2	R	3	0	0	0	0	2	2	ANR	NT	E	3
Toluene	693								CAS No		108-88-3					
Toluene diisocyanate	1315	(3)	1	1	NR	2	NI	0	(0)	4	3	3	CSsSr		S	3
Toluene diisocyanate	694								CAS No		584-84-9					

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Toluidines	1316	1	1	1	R	4	2	1	0	(2)	2	2	CM		FD	3
o-Toluidine	537	CAS No														
2,4-Tolylenediamine	1317	0	2	2	NR	3	0	2	2	4	2	3	CMSs		Fp	3
Toluenediamine	695	CAS No 95-80-7														
Tolyl triazole	2292	1	NI	1	NR	2	0	1	0	(2)	(1)	2			S	2
Tolyl triazole	696	CAS No														
Tributyl phosphate	1319	4	2	2	R	3	0	1	0	2	2	2			F	2
Tributyl phosphate	697	CAS No 126-73-8														
1,2,3-Trichlorobenzene	2191	4	4	4	NR	4	2	1	0	(2)	2	2			S	2
1,2,3-Trichlorobenzene (molten)	2288	CAS No														
1,2,4-Trichlorobenzene	1323	4	5	5	NR	4	1	1	0	(2)	2	2	M		S	3
1,2,4-Trichlorobenzene	7	CAS No 120-82-1														
1,1,1-Trichloroethane	1326	2	NI	2	NR	2	NI	0	0	0	2	2			SD	2
1,1,1-Trichloroethane	1	CAS No 71-55-6														
1,1,2-Trichloroethane	1327	2	1	1	NR	2	0	1	0	1	2	1			SD	2
1,1,2-Trichloroethane	3	CAS No 79-00-5														
1,1,2-Trichloro-ethylene	329	2	2	2	NR	3	NI	0	0	0	2	2	MC		SD	3
Trichloroethylene	698	CAS No 79-01-6														
Trichloromethane	1328	1	1	1	NR	2	0	2	0	2	1	1	CT		SD	3
Chloroform	186	CAS No 67-66-3														
1,2,3-Trichloropropane	1329	2	2	2	NR	2	0	2	2	2	2	2	C		SD	3
1,2,3-Trichloropropane	6	CAS No 96-18-4														
1,1,2-Trichloro-1,2,2-trifluoroethane	1330	3	2	2	NR	3	0	0	0	0	1	1			S	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	2	CAS No 76-13-1														
Tricresyl phosphate (less than 1% ortho-isomers)	1331	5	(3)	(3)	(R)	(4)	(4)	0	1	0	1	1	N		S	2
Tricresyl phosphate (containing less than 1% ortho-isomer)	700	CAS No 1330-78-5														
Tricresyl phosphate (more than 1% ortho-isomers)	1332	5	3	3	R	4	4	0	1	0	1	1	N		S	2
Tricresyl phosphate (containing 1% or more ortho-isomer)	699	CAS No 1330-78-5														
Tricyanohexane	2530	0	NI	0	NR	1	NI	1	0	(1)	0	0			SD	1
Tricyanohexane	4239	CAS No														
Tridecane	1333	0	NI	0	NI	0	NI	0	0	(1)	1	0			Fp	2
Tridecane	701	CAS No 629-50-5														

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Tridecanoic acid	1334	5	NI	5	(R)	3	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Tridecanoic acid	702								CAS No		638-53-9					
Tridecyl acetate	1768	5	NI	5	NI	0	NI	0	(0)	(2)	2	2			F	2
Tridecyl acetate	703								CAS No		1072-33-9					
Triethanolamine	1338	0	0	0	R	1	NI	0	0	(2)	1	2			D	2
Triethanolamine	704								CAS No		102-71-6					
3-(Triethoxysilyl)propylamine	2445	1	1	1	R	1	NI	1	0	(3)	3B	3	Ss		D	3
3-(Triethoxysilyl)propylamine	3824								CAS No		919-30-2					
Triethylamine	1339	1	0	0	R	3	0	1	2	2	2	3			D	3
Triethylamine	706								CAS No		121-44-8					
1,3,5-Triethylbenzene	1340	5	NI	5	NI	4	NI	0	(0)	(2)	(2)	(1)			F	2
Triethylbenzene	707								CAS No		25340-18-5					
Triethylene glycol	1341	0	NI	0	R	0	0	0	0	0	0	0			D	0
Triethylene glycol	708								CAS No		112-27-6					
Triethylenetetramine	1346	0	NI	0	NR	3	NI	0	2	(3)	3	3	Ss		D	3
Triethylenetetramine	709								CAS No		112-24-3					
Triethylenetetramine/2-piperazine-1-ylethylamine mixtures (#)	2456	0	NI	0	NR	2	NI	0	2	(3)	3	3	Ss		D	3
	3872								CAS No							
Triethyl phosphate	1348	0	0	0	NR	1	0	1	0	0	(2)	(2)			D	2
Triethyl phosphate	705								CAS No		78-40-0					
Triethyl phosphite	1349	0	NI	0	R	1	NI	1	0	2	1	2	Ss		FE	2
Triethyl phosphite	710								CAS No		122-52-1					
Triglycerides, C16-C18 and C18 unsaturated, reclaimed (UCO)	2470	(5)	NI	(5)	R	(0)	(0)	(0)	(0)	(1)	(1)	(1)			Fp	2
Used cooking oil (m)	3974								CAS No		68990-65-8					
Triglycerides, C16-C18 and C18 unsaturated, reclaimed (UCO)	2470	(5)	NI	(5)	R	(0)	(0)	(0)	(0)	(1)	(1)	(1)			Fp	2
Used cooking oil (Triglycerides, C16-C18 and C18 unsaturated) (m) (n)	4023								CAS No		68990-65-8					
Triisopropanolamine	1370	0	0	0	NR	1	0	1	0	0	(2)	3			FD	3
Triisopropanolamine	711								CAS No		122-20-3					
Triisopropylated phenyl phosphates	1375	5	5	5	R	4	NI	0	0	0	0	0			S	0
Triisopropylated phenyl phosphates	712								CAS No		68937-41-7					
Trimethylacetic acid	1350	1	1	1	R	2	NI	1	1	(2)	2	2			Fp	2
Trimethylacetic acid	714								CAS No		75-98-9					

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Trimethylamine	1353	0	NI	0	R	1	NI	1	0	2	3	3			DE	3
Trimethylamine solution (30% or less)	715								CAS No		75-50-3					
1,2,3-Trimethyl benzene	1354	3	3	3	NR	4	0	0	0	1	2	1			FE	2
Trimethylbenzene (all isomers)	716								CAS No		526-73-8					
2,4,4-Trimethyl hexamethylene diamine	1359	1	NI	1	NI	NI	NI	1	0	(3)	2	3	Ss		D	3
Trimethylhexamethylenediamine (2,2,4- and 2,4,4-isomers)	718								CAS No		25620-58-0					
Trimethyl hexamethylene diisocyanate	1360	0	NI	0	NI	3	NI	0	NI	NI	NI	NI	SsSr		NI	2
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-isomers)	717								CAS No		28679-16-5					
Trimethylol propane polyethoxylate	1362	NI	NI	NI	NR	1	NI	0	0	NI	NI	NI			NI	NI
Trimethylolpropane polyethoxylate	719								CAS No							
Trimethylol propane, propoxylated	2274	0	NI	0	(NR)	1	0	0	0	(1)	0	1			SD	1
Trimethylol propane propoxylated	2870								CAS No							
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	1845	4	NI	4	NR	0	NI	0	0	(1)	1	0			F	1
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	26								CAS No							
2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	1364	3	NI	3	NI	2	NI	0	0	(1)	1	1			Fp	2
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate	27								CAS No		25264-77-4					
Trimethyl phosphite	1365	0	NI	0	R	NI	NI	NI	NI	NI	NI	NI			S	NI
Trimethyl phosphite	713								CAS No		121-45-9					
1,3,5-Trioxane	1844	0	NI	0	NI	0	NI	0	0	0	0	1	R		SD	3
1,3,5-Trioxane	10								CAS No		110-88-3					
Tripropylene glycol	1372	0	0	0	R	0	0	0	0	(0)	0	0			D	0
Tripropylene glycol	720								CAS No		24800-44-0					
Trixylenyl phosphate	1377	5	4	4	NR	4	1	(0)	(1)	(0)	(1)	(1)	R		S	3
Trixylyl phosphate	721								CAS No		25155-23-1					
Tung oil	1378	0	NI	0	R	(2)	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
Tung oil	2784								CAS No							
Turpentine (wood)	1379	4	NI	4	NI	4	NI	0	(0)	1	(2)	2	SsA	(T)	D	2
Turpentine	722								CAS No		8006-64-2					
Undecanoic acid	1381	4	NI	4	(R)	3	NI	(0)	(0)	(2)	1	(2)			Fp	2
Undecanoic acid	723								CAS No		112-37-8					
1-Undecanol	1382	4	NI	4	R	4	NI	0	0	(2)	2	(1)			Fp	2
Undecyl alcohol	724								CAS No		112-42-5					

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EHS Name	EHS	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
TRN Name	TRN															
1-Undecene	1383	5	NI	5	NR	4	NI	(0)	(0)	(1)	(2)	(1)	A		F	3
1-Undecene	24								CAS No		821-95-4					
Urea	1384	0	0	0	R	1	NI	0	0	(1)	1	(1)			D	1
Urea solution	726								CAS No		57-13-6					
Urea	1384	0	0	0	R	1	NI	0	0	(1)	1	(1)			D	1
Urea	2627								CAS No		57-13-6					
Urea/Ammonium mono and dihydrogen phosphate/ Potassium chloride solution	1386	0	0	0	R	3	2	NI	NI	NI	NI	NI			NI	NI
Urea/Ammonium mono- and di-hydrogen phosphate/Potassium chloride solution	727								CAS No							
Urea/Ammonium nitrate solution (containing < 1% aq. ammonia)	1387	0	NI	0	R	(2)	(0)	0	0	(1)	(1)	(1)			D	1
Urea/Ammonium nitrate solution	729								CAS No							
Urea-ammonium phosphate solutions	2179	0	0	0	R	3	2	(0)	(0)	(2)	(2)	(2)			D	2
Urea/Ammonium phosphate solution	730								CAS No							
Urea-formaldehyde resin solution	1388	NI	NI	NI	NI	1	NI	1	1	NI	NI	NI	Ss		NI	2
Urea formaldehyde resin solution	725								CAS No							
Vegetable acid oils	2371	0	NI	0	R	0	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Vegetable acid oils (m)	3138								CAS No							
Vegetable oils fatty acid distillates	2369	0	NI	0	R	0	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Vegetable fatty acid distillates (m)	3137								CAS No							
Vegetable protein solution,hydrolyzed	1398	0	NI	0	R	0	NI	(0)	(0)	(0)	(0)	(0)			D	0
Vegetable protein solution (hydrolysed)	734								CAS No							
Vinyl acetate	1400	0	NI	0	R	2	NI	1	0	2	1	1	C		ED	3
Vinyl acetate	735								CAS No		108-05-4					
Vinyl ethyl ether	1405	1	NI	1	NR	1	NI	0	0	0	1	1			E	2
Vinyl ethyl ether	736								CAS No		109-92-2					
Vinylidene chloride	1406	2	1	1	NR	2	NI	2	0	(2)	2	2	M		SD	3
Vinylidene chloride	738								CAS No		75-35-4					
Vinyl neodecanoate	1404	5	NI	5	NR	3	NI	0	0	(3)	3	3			F	3
Vinyl neodecanoate	737								CAS No		45115-34-2					
Vinyl toluenes	1409	3	3	3	NR	3	NI	0	0	2	2	1	NM	(T)	F	3
Vinyltoluene	739								CAS No		25013-15-4					
White spirit, low (15-20%)aromatic	1411	(4)	NI	(4)	(R)	3	NI	(0)	(0)	(2)	(1)	(2)	A		F	3
White spirit, low (15-20%) aromatic	742								CAS No							

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EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Wood lignin with sodium acetate/oxalate	2403	NI	NI	(0)	NR	(0)	NI	0	(0)	(1)	(1)	(1)			D	1
Wood lignin with sodium acetate/oxalate	3638								CAS No							
Xylene (mixed isomers)	1408	3	NI	3	NR	3	0	0	0	0	2	2		(T)	FE	2
Xylenes	743								CAS No 133-20-7							
Xylenes/Ethyl benzene (10% or more) mixture	2269	3	2	2	NR	3	1	(0)	(0)	(2)	(2)	(2)		(T)	FE	2
Xylenes/ethylbenzene (10% or more) mixture	2337								CAS No							
Xylenols (mixtures)	1422	2	NI	2	R	3	NI	1	2	(3)	3	3		(T)	Fp	3
Xylenol	744								CAS No 1300-71-6							
Yeast Extract Solution with Propylene Glycol (25% or less)	2396	NI	0	0	R	0	NI	0	0	(1)	0	1			D	1
Stabilized Yeast Extract Solution	3631								CAS No 8013-01-2							
Zinc alkaryl dithiophosphate (C7-C16) (LOA)	1977	0	NI	0	NR	3	NI	0	0	(0)	(0)	(0)			Fp	2
Zinc alkaryl dithiophosphate (C7-C16)	745								CAS No							
Zinc alkenylcarboxamide (LOA)	2053	NI	0	0	NR	0	NI	0	0	(1)	1	(1)			Fp	2
Zinc alkenyl carboxamide	746								CAS No							
Zinc alkyl dithiophosphate	1428	5	NI	5	NR	3	NI	0	0	0	2	2			S	2
Zinc alkyl dithiophosphate (C3-C14)	747								CAS No							
Zinc bromide solutions	2227	Inorg	4	4	Inorg	3	NI	1	(2)	(3)	3B	3	Ss		D	3
Zinc bromide solutions	2617								CAS No							
Zinc chloride	1425	Inorg	4	4	Inorg	4	1	(1)	(1)	(3)	(3)	(3)			D	3
Zinc chloride	2869								CAS No 7646-85-7							
Zinc chloride	1425	Inorg	4	4	Inorg	4	1	(1)	(1)	(3)	(3)	(3)			D	3
Drilling brines (containing zinc chloride)	307								CAS No 7646-85-7							

ANNEX 5

**PROVISIONAL AGENDA FOR THE SIXTIETH SESSION OF THE
GESAMP/EHS WORKING GROUP**

- 1 Adoption of the agenda
 - 2 Outcome of other bodies
 - 3 Evaluation of new substances
 - 4 Re-evaluation of substances and consideration of issues related to evaluations
 - 5 Classification issues
 - 6 Consolidation of existing data files
 - 7 Communication and publication
 - 8 Any other business
 - 9 Consideration and adoption of the report
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