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PPR.1/Circ.5
25 May 2018

HAZARD EVALUATION OF SUBSTANCES TRANSPORTED BY SHIPS

Report of the fifty-fifth session of the GESAMP/EHS Working Group on the Evaluation of the hazards of harmful substances carried by ships

The report of the fifty-fifth session of the GESAMP/EHS Working Group on the Evaluation of the hazards of harmful substances carried by ships, held from 30 April to 4 May 2018, 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
55th session
Agenda item 9

EHS 55/9
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1 INTRODUCTION

1.1 The fifty-fifth session of the GESAMP/EHS Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships was held at IMO in London, the United Kingdom, from 30 April to 4 May 2018, chaired by Dr. Thomas Höfer. The list of experts attending 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-fourth session of the GESAMP/EHS Working Group:

- .1 the twenty-third intersessional meeting of the Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals (ESPH 23), which took place from 16 to 20 October 2017 (PPR 5/3); and
- .2 the Working Group on the Evaluation of Safety and Pollution Hazards (ESPH), which met during the fifth session of the PPR Sub-Committee from 5 to 9 February 2018 (PPR 5/WP.3);

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, as summarized in annex 2, and agreed to take action under the relevant agenda items, as appropriate.

Outcome of GESAMP 44

2.3 The Group noted the report by the Chair on the outcome of the forty-fourth session of GESAMP, which took place from 4 to 7 September 2017 in Geneva, Switzerland, hosted by the World Meteorological Organization (WMO). A summary of the outcome of the meeting is set out in annex 3.

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, was 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 end-point 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 | Alkyl(branched C10-C18, C12 rich)phenols | EHS 2504 |
| .2 | Alkanes (C4-C12) linear, branched and cyclic | EHS 2510 |
| .3 | Alkanes (C9-C24) linear, branched and cyclic | EHS 2511 |

.4	Imidazolium compounds, 1-benzyl-4,5-dihydro-1-(hydroxyethyl)-2-norcoco alkyl, chlorides	EHS 2505
.5	Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, phosphate	EHS 2506
.6	Pyridinium, 1-(phenylmethyl)-, ethyl methyl derivs., chlorides	EHS 2507
.7	Tall oil fatty acids reaction products with 2-[(2-aminoethyl)amino]ethanol, di-ethyl sulphate quaternized	EHS 2508
.8	[[[(phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]] tetrakisphosphonic acid, ammonium salt solution (60% or less)]	EHS 2509
.9	Poly alkyl(C18-C22)methacrylates/lauryl acrylate/vinyl acetate (40% in naphtha)	EHS 2512
.10	Amides, coco, N-[3-(dibutylamino) propyl], acrylates	EHS 2513
.11	Creosote (coal tar) C8-C22, MW 116-278	EHS 2514

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 4.

EHS 2504 Alkyl(branched C10-C18, C12 rich)phenols

3.4 The Group noted that a comprehensive set of test data had been submitted for this substance and assigned a GESAMP Hazard Profile accordingly. Having also noted that the data submitted for Alkyl(branched C10-C18, C12 rich)phenols are partly based on studies on Alkyl(branched C12)phenol, the Group agreed that they could be used to re-evaluate the B2 and D3 ratings of Dodecyl phenol (EHS 725). Subsequently, the Group agreed that a review was warranted and agreed to consider this matter under agenda item 4.

<i>Rating</i>	A1a=0	A1b=4	A1=4	A2= NR	B1= 5	B2= 3
	C1= 0	C2= 0	C3= (3)	D1= 3	D2= 3	D3= R
	E2= Fp	E3= 3				

EHS 2510 Alkanes (C4-C12) linear, branched and cyclic (containing benzene up to 1%),

Submitted as: Alkanes (C4-C12) linear, branched and cyclic

3.5 In considering the submission, the Group noted that a full set of data had been provided for the product and assigned a GESAMP Hazard Profile accordingly.

<i>Rating</i>	A1a= (4)	A1b= (4)	A1= (4)	A2=R	B1=(3)	B2=(2)
	C1=0	C2=0	C3=0	D1=2	D2=(1)	D3=CMA
	E2 = F	E3 =3				

3.6 With regard to the E2 rating, the Group noted that the rating of F corresponds to the predominant behaviour of the product once the volatile components have evaporated. In addition, the Group considered the name of the product in the context of the D3 rating of CM, which had been assigned due to the presence of benzene in the product. Subsequently, the Group agreed that a more appropriate name for the Composite List entry was Alkanes (C4-C12) linear, branched and cyclic (containing benzene up to 1%), in order to differentiate it from pure alkanes, which are not carcinogens nor mutagens.

EHS 2511 Alkanes (C9-C24) linear, branched and cyclic

3.7 In considering the submission, the Group noted that a full set of data had been provided for the product and assigned the GESAMP Hazard Profile accordingly set out below.

<i>Rating</i>	A1a= (5)	A1b= (4)	A1= (4)	A2=NR	B1=(2)	B2=(1)
	C1=0	C2=(0)	C3=0	D1=(2)	D2=0	D3=A
	E2 = F	E3 =3				

3.8 Having noted that the flash point of the product could be lower or greater than 60°C, depending on the distribution of shorter-length and longer-length alkanes, the Group recognized that the GHP profile could apply to batches of the product with a flashpoint >60°C or ≤ 60°C.

EHS 2505 Imidazolium compounds, 1-benzyl-4,5-dihydro-1-(hydroxyethyl)-2-norcoco alkyl, chlorides

3.9 The Group noted that this product had been submitted for a partial profile for eventual inclusion in list 5 of the IMO MEPC.2/Circular. Having considered the full complement of data available to it, the Group assigned the GESAMP Hazard Profile set out below.

<i>Rating</i>	A1a=(0)	A1b=NI	A1=(0)	A2=NR	B1=4	B2=NI
	C1=NI	C2=NI	C3=NI	D1=(2)	D2=(3)	D3=blank
	E2=Fp	E3 =3				

EHS 2506 Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, phosphate

3.10 The Group noted that this product had been submitted for a partial profile for eventual inclusion in list 5 of the IMO MEPC.2/Circular. Nonetheless, the Group noted that a complete complement of data was available and assigned a full GESAMP Hazard Profile, as set out below.

<i>Rating</i>	A1a=(4)	A1b=(3)	A1=(3)	A2=NR	B1=3	B2=(1)
	C1=(1)	C2=(1)	C3=(3)	D1=(2)	D2=(3)	D3= blank
	E2=S	E3=3				

EHS 2507 Pyridinium, 1-(phenylmethyl)-, ethyl methyl derivs., chlorides

3.11 The Group noted that this product had been submitted for a partial profile for eventual inclusion in list 5 of the IMO MEPC.2/Circular and assigned the GESAMP Hazard Profile set out below, having considered the full complement of data available to the Group.

<i>Rating</i>	A1a=3	A1b=NI	A1=3	A2=NR	B1=4	B2=2
	C1=NI	C2=NI	C3=NI	D1=(3B)	D2=(3)	D3= blank
	E2=D	E3=3				

EHS 2508 Tall oil fatty acids reaction products with 2-[(2-aminoethyl)amino]ethanol, di-ethyl sulphate quaternized

3.12 The Group noted that this product had been submitted for a partial profile for eventual inclusion in list 5 of the IMO MEPC.2/Circular and assigned the GESAMP Hazard Profile set out below, having considered the full complement of data available to the Group.

<i>Rating</i>	A1a=(3)	A1b=NI	A1=(3)	A2=NR	B1=5	B2=2
	C1=NI	C2=NI	C3=NI	D1=(2)	D2=(3)	D3= Ss
	E2=D	E3=3				

EHS 2509 **[[[(phosphonomethyl)imino]bis[ethylenenitrilobis(methylene)]]
tetrakisphosphonic acid, ammonium salt solution (60% or less)**

3.13 The Group noted that this product had been submitted for a partial profile for eventual inclusion in list 5 of the IMO MEPC.2/Circular and assigned the GESAMP Hazard Profile set out below, having considered the full complement of data available to the Group.

<i>Rating</i>	A1a=0	A1b=NI	A1=0	A2=NR	B1=2	B2=(0)
	C1=(0)	C2=(0)	C3=(1)	D1=(1)	D2=(1)	D3= blank
	E2=D	E3=1				

EHS 2512 **Poly alkyl(C18-C22)methacrylates/lauryl acrylate/vinyl acetate (40% in naphtha)**

3.14 Having considered the submission and having noted that a comprehensive set of data had been provided, the Group assigned a GESAMP Hazard Profile accordingly.

<i>Rating</i>	A1a=(5)	A1b=(5)	A1=(5)	A2=NR	B1=0	B2=NI
	C1=0	C2=0	C3=(1)	D1=1	D2=(1)	D3= blank
	E2=Fp	E3=2				

EHS 2513 **Amides, coco, N-[3-(dibutylamino) propyl], acrylates**

3.15 Having considered the submission and having noted that a comprehensive set of data had been provided, the Group assigned a GESAMP Hazard Profile accordingly.

<i>Rating</i>	A1a=(4)	A1b=NI	A1=(4)	A2=NR	B1=4	B2=NI
	C1=0	C2=0	C3=(2)	D1=2	D2=2	D3= blank
	E2=Fp	E3=2				

EHS 2514 **Creosote (coal tar) C8-C22, MW 116-278**

3.16 Having considered the submission and having noted that a full set of data had been provided, the Group assigned a GESAMP Hazard Profile accordingly. Having noted that the data submitted for Creosote (coal tar) C8-C22, MW 116-278 may have relevance for the ratings for Creosote (coal tar) (EHS 524), the Group agreed that a review of this product was warranted and agreed to consider this matter under agenda item 4.

<i>Rating</i>	A1a=NI	A1b=(3)	A1=(3)	A2=(NR)	B1=4	B2=1
	C1=1	C2=0	C3=(2)	D1=2	D2=1	D3=CMRSs
	E2=S	E3=3				

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 to 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 to the attention of the IMO (i.e. the ESPH Working Group of the PPR Sub-Committee).

4.3 The Group considered a request to undertake a review of the hazard profile for Sodium hydrogen sulphide, solutions (EHS 1252). In this context, the Group also agreed to re-evaluate Sodium hydrogen sulphide/Ammonium sulphide (mixture) (1253).

4.4 The Group further agreed to review two additional substances during the session, based on discussions emanating from the review of the new substances, as follows: Dodecyl phenol (EHS 725) and Creosote (coal tar) (EHS 524).

EHS 1252 Sodium hydrogen sulphide, solutions

4.5 The Group considered a request for a re-evaluation of this material. In reviewing the data available, the Group amended a number of ratings, as set out below.

Amended rating C1=2 C2=2 C3=(3) D1=(3) D2=3 E3=3

EHS 1253 Sodium hydrogen sulphide/Ammonium sulphide (mixture)

4.6 Having reviewed Sodium hydrogen sulphide, solutions (EHS 1252), the Group also re-evaluated Sodium hydrogen sulphide/Ammonium sulphide (mixture) (EHS 1253), taking into account that similar considerations could apply. Subsequently, the Group amended a number of ratings, as set out below.

Amended rating C1=(2) C2=(2) C3=(3) D1=(3) D2=(3) E3=3

EHS 725 Dodecyl phenol

4.7 During its review of the data submitted in connection with the new product submission for Alkyl(branched C10-C18, C12 rich)phenols (EHS 2504), and having cross-referenced this information with that on file for Dodecyl phenol (EHS 725), the Group agreed that a review of the B2 and D3 ratings was warranted. Following consideration, the Group agreed that the B2 rating should be modified from NI to (3) and a D3 rating of R should be added.

Amended rating B2=(3) D3=R

EHS 524 Creosote (coal tar)

4.8 During its review of the data submitted in connection with the new product submission for Creosote (coal tar) C8-C22, MW 116-278 (EHS 2514) the Group noted that the data may have relevance for Creosote (coal tar) (EHS 524). Consequently, the Group reviewed the ratings for Creosote (coal tar) and agreed that the D3 rating should be modified from CM to CMRSs.

Amended rating D3=CMRSs

Products submitted by industry to GESAMP/EHS 54 for review of the C3 rating

4.9 The Group recalled that GESAMP/EHS 54, having received a request from industry to review the C3 ratings for a number of products, had noted that further information would be needed for it to consider these products.

4.10 The Group also recalled that at EHS 54, it had agreed the properties and information that would be required, and had noted that submissions should be made on an individual chemical basis, rather than as a consolidated list or table.

4.11 As no submissions had been received at this session, the Group agreed to suspend any further consideration of these products until such time as the information specified by EHS 54 had been submitted.

5 CLASSIFICATION ISSUES

Introduction of new column E1 on flammability

5.1 The Group recalled that at EHS 54 it had agreed to remove all tainting information currently included in column E1 and had also agreed to re-assign column E1 for the purposes of capturing the flash point and flammability hazards of chemicals (refer to PPR.1/Circ.4, annexes 4 and 5).

5.2 In this context, the Group noted the request by PPR 5 for the Group to take into account the comments and reservations of the ESPH Working Group that met during PPR 5, in relation to the proposed flammability ratings and their proposed inclusion in the GESAMP Hazard profiles listed in the GESAMP/EHS Composite list.

5.3 Having considered and discussed the relevant outcome of the ESPH Working Group, the Group took all arguments into consideration and agreed to suitable new ratings of the flammability hazard, as shown in annex 6.

5.4 Having agreed to the above ratings for flammability, the Group agreed to incorporate the table set out in annex 6 in the revised draft Reports & Studies No.64 (see also agenda item 7).

5.5 The Group continued its review of flashpoint information for products, extracted from the GISIS database, and agreed to continue the review intersessionally, with a view to completing the work at EHS 56 for incorporation in the Composite List once the revised Reports & Studies No.64 had been published.

Cut-off values to be used when assessing mixtures containing components with a long-term health effect

5.6 The Group noted the request by PPR 5 to consider the proposal in document PPR 5/3/3 (Norway) and to advise the ESPH Working Group with regard to recommended cut-off values to be used when assessing mixtures containing components with a long-term health effect.

5.7 Due to time constraints, the Group was unable to finalize the requested advice. However, the Group noted that, as part of its revision of Reports & Studies No.64, it was in the process of developing text describing the procedure used by the EHS Working Group for assigning ratings to mixtures for all columns, including column D3. The Group agreed that the relevant text from the revised Reports and Studies No.64 would form the basis for developing a simplified recommendation, at EHS 56, for consideration by the ESPH Working Group.

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, the Group agreed to defer consideration of this item to its next session.

7 REVISION OF REPORTS AND STUDIES NO.64

7.1 The Group considered the draft revision of Reports & Studies No. 64 that had been prepared intersessionally by the EHS sub-groups under the coordination of the Chair.

7.2 Having recalled the agreed timeline for completion of the revision of Reports and Studies No.64 for finalization and publication in time for the 50th anniversary of GESAMP in 2019, the Group comprehensively reviewed the draft that had been prepared intersessionally and concluded that all technical and scientific matters had been considered sufficiently and to the satisfaction of the Group.

7.3 The Group, inter alia, further developed the draft text that had been developed intersessionally, describing the procedure used by the EHS Working Group for assigning ratings to mixtures for all columns. Due to time constraints, the Group was not able to create a final version of the draft text pertaining to mixtures and agreed to further refine the already comprehensive draft during the four weeks immediately following EHS 55. The Group managed to finalize all other parts of the draft revision of Reports and Studies No.64, and requested the Secretariat to effect editorial correction and to incorporate the text pertaining to the assignments of ratings to mixtures.

7.4 It was agreed that, as the draft revision was the result of a comprehensive review by the Group, it might be subject to a formal review by GESAMP and the Group invited GESAMP to consider assigning a new number to the Reports and Studies once approved.

7.5 Subsequently, the Group invited the Secretariat to take the appropriate action for the draft revision of Reports and Studies No.64 to be published in time for the 50th anniversary of GESAMP in 2019 and preferably before EHS 56.

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 7, and that its next meeting would be held from 8 to 12 April 2019, at IMO headquarters in London.

9 CONSIDERATION AND ADOPTION OF THE REPORT

9.1 The Group adopted its report, noting that it would be circulated as PPR.1/Circ.5.

ANNEX 1

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

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ANNEX 2

OUTCOME OF ESPH 23 AND PPR 5 ON MATTERS PERTAINING TO GESAMP/EHS 55

Evaluation of chemicals

1 The ESPH Working Group, at ESPH 23 and PPR 5, evaluated a number of new products, cleaning additives and trade-named products for their consequential inclusion in the MEPC.2/Circular.

Drilling brines

2 Having considered the outcome of GESAMP/EHS 54 with regard to the GESAMP Composite List linked to the entries for drilling brines contained in the IBC Code, ESPH 23 agreed to introduce two entries in list 1 of the MEPC.2/Circular, one for "Drilling brines (containing calcium bromide)" with the same carriage requirements as the existing chapter 17 entry for "Drilling brines, including: calcium bromide solution, calcium chloride solution and sodium chloride solution (TRN 308)", and another for "Drilling brines (containing zinc chloride)" with the same carriage requirements as the existing chapter 17 entry for "Drilling brines (containing zinc salts) (TRN 307)". The entries for drilling brines in the draft revised chapter 17 of the IBC Code were also renamed accordingly.

3 The Group recognized that the new renamed entries for drilling brines were more restrictive than the existing entries for drilling brines in chapter 17 of the IBC Code, since they covered drilling brines containing calcium bromide or zinc chloride only. In this regard, the Group confirmed that, once the revised chapter 17 entered into force (expected to be 1 January 2021), the carriage of drilling brines containing calcium chloride, sodium chloride or zinc salts other than zinc chloride would not be permitted, unless new entries addressing them were included in the revised chapter 17 of the IBC Code or in list 1 of the MEPC.2/Circular.

4 Consequently, ESPH 23 invited industry and relevant stakeholders to submit data to GESAMP/EHS for drilling brines containing calcium chloride, sodium chloride or zinc salts other than zinc chloride, as appropriate. In this regard, the Group noted that the GESAMP/EHS fees for evaluation of new substances would be waived, should submissions for the aforementioned types of drilling brines be made prior to the entry into force of the revised chapter 17 of the IBC Code.

Paraffins

5 Based on the the outcome of GESAMP/EHS 54 with regard to paraffins, the Group agreed for the following four entries to be introduced in list 1 of the MEPC.2/Circular:

- .1 "n-Alkanes (C10 – C20)", corresponding to the chapter 17 entry "n-Alkanes (C10+)";
- .2 "Paraffin wax, highly-refined", corresponding to the chapter 17 entry "Paraffin wax";
- .3 "Paraffin wax, semi-refined", corresponding to the chapter 17 entry "Petrolatum"; and
- .4 "Hydrocarbon wax", corresponding to the chapter 17 entry "Waxes".

6 The carriage requirements of the renamed entries were also amended based on proposals contained in document ESPH 23/3/2 (Germany) and the revised entries were reflected in the draft revised chapter 17 of the IBC Code. Having noted that the renamed entries would also need to be reflected in chapter 19 of the IBC Code, the Group agreed consequential draft amendments to chapter 19 of the IBC Code.

Carriage requirements for Methyl alcohol

7 ESPH 23 agreed, on the basis of expert judgement, taking into account industry experience and the information presented in document ESPH 23/6/1 (Liberia et al.), not to include special requirement 15.12.3.1 in column o of the carriage requirements assigned for Methyl alcohol in the draft revised chapter 17 of the IBC Code. Additionally, an asterisk footnote (*) was added to the product name, recalling that this footnote "indicates that with reference to chapter 21 of the IBC Code (paragraph 21.1.3), deviations from the normal assignment criteria used for some carriage requirements have been implemented."

8 Having noted that paragraph 21.1.3 of the IBC Code requires that "where deviations from the criteria have been recognized, they shall be properly recorded with justifications", the Group agreed to record the following justification in the next revision of the circular on *Decisions with regard to the categorization and classification of products* (BLG.1/Circ.33):

"During the review of chapters 17 and 18 of the IBC Code, it was agreed the requirements in paragraph 15.12.3.1 of the IBC Code would not to be applied from the revised carriage requirements, on the basis of experience and expert judgement. All other requirements of 15.12 would apply in addition to all other applicable carriage requirements."

9 ESPH 23 further noted that a full review of section 15.12.3 of the IBC Code may be needed in the future and invited proposals to the PPR Sub-Committee.

Rating for flammability in the GESAMP Hazard Profile

10 With regard to the the reassignment of column E1 for the purposes of capturing the new flammability ratings ESPH 23 noted the view expressed by some delegations, that the descriptions of the flammability ratings, as proposed by the GESAMP/EHS Working Group, in combination with the flashpoint ranges used to assign the flammability ratings, had the potential to cause confusion when evaluating products under the IBC Code.

11 The ESPH Working Group at PPR 5 considered this matter further, having been instructed to consider document PPR 5/3/1 (Secretariat), which had been submitted on behalf of the Chair of the GESAMP/EHS Working Group and provided background information regarding the flammability ratings proposed by GESAMP/EHS 53 and the relevant comments by ESPH 23.

13 Subsequently, PPR 5, based on the recommendation of the ESPH Working Group, requested GESAMP/EHS 55 to take into account the comments and reservations of the Group, as set out in paragraph 7.4 of document PPR 5/WP.4, relating to the proposed flammability ratings in the GESAMP Hazard Profiles.

Cut-off values to be used when assessing mixtures

14 The ESPH Working Group at PPR 5 considered document PPR 5/3/3 (Norway), proposing the development of recommended cut-off values to be used when assessing mixtures containing components with a long-term health effect (e.g. a carcinogenic component). The Group was of the view that the development of recommended cut-off values would be welcome but also recognized that it may take time given the complexity of the matter.

15 Subsequently, PPR 5, based on the recommendation of the Group, requested the GESAMP/EHS Working Group to consider the proposal in document PPR 5/3/3 and to advise the ESPH Working Group with regard to recommended cut-off values to be used when assessing mixtures containing components with a long-term health effect. In this regard, the Group recognized that the annex to document PPR 5/3/3 had been included as an example and should not restrict the deliberations of the GESAMP/EHS Working Group.

Guidance for assessing and classifying products under annexes I and II of MARPOL

Energy-rich fuels

16 ESPH 23 and the ESPH Working Group at PPR 5, prepared a draft MEPC circular on Guidelines for the carriage of energy-rich fuels and their blends, which was subsequently agreed by PPR 5 for submission to MEPC 73 with a view to approval (PPR 5/24, annex 3).

17 PPR 5 also agreed, subject to approval of the above-mentioned draft MEPC circular, to the inclusion of a new annex 12 to the MEPC.2/Circular for the purpose of listing substances that, following assessment by the ESPH Working Group, are deemed to be subject to MARPOL Annex I.

General guidance for the assessment of products under MARPOL Annex I or II

18 ESPH 23 and the ESPH Working Group at PPR 5, owing to time constraints, were unable to make progress on the development of general guidance for determining whether products, including products that are not energy-rich fuels (e.g. petroleum-derived products), should be covered by MARPOL Annex I or II and, consequently, agreed to further consider the matter at future sessions.

Draft Amendments to MARPOL Annex II and consequential amendments to the IBC Code to address issues related to the discharge of persistent floating substances with a high viscosity and/or high melting point

19 ESPH 23 and the ESPH Working Group at PPR 5 prepared draft amendments to Annex II of MARPOL and the consequential amendments to the IBC and BCH Codes to address issues related to the discharge of persistent floating substances with a high viscosity and/or high melting point (see PPR 5/24, annexes 4, 1 and 2, respectively). PPR 5 agreed to the draft amendments for submission to MEPC 73 for approval and subsequent adoption.

Revision of chapters 17, 18, 19 and 21 of the IBC Code

20 The Group completed the comprehensive review of chapters 17, 18 and 19 of the IBC Code based on the draft revised chapter 21 that had been approved in principle by MSC 98 and MEPC 70. The draft revised chapters (PPR 5/24/Add.1, annex 1) were agreed to by PPR 5 for submission to MEPC 73 and MSC 100, with a view to approval and subsequent adoption.

ANNEX 3

OUTCOME OF GESAMP 44

1 The 44th session of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) was held in Geneva, Switzerland, from 4 to 7 September 2017. It was hosted by the World Meteorological Organization (WMO) and chaired by Dr. Peter Kershaw.

GENERAL ACTIVITIES

2 GESAMP acknowledged the continuing support of the GESAMP Office, including the contribution of the GESAMP Administrative Coordinator. This year marked the retirement of Mr. Edward Kleverlaan as Technical Secretary for IMO. His contribution was warmly acknowledged by GESAMP and we wish him a happy retirement. Mr. Fredrik Haag has taken over this position.

3 A notable achievement has been the launch of the new website, including a new design, new features and updated information about the working groups (see <http://www.gesamp.org/work/groups/1>). The reports of the GESAMP/EHS sessions have been uploaded after finalization (see <http://www.gesamp.org/work/groups/1/sessions-reports>).

4 The status of the Pool of Experts, and efforts to maintain and improve communication with those experts who have shown an interest in GESAMP, have been discussed at recent GESAMP sessions but without resolution.

5 The nine Sponsoring Organisations committed to supporting the activities of GESAMP in 2017-2018. In 2019, GESAMP will be celebrating 50 years since its establishment in 1969. In this context the GESAMP Office is seeking further suggestions on ways to commemorate GESAMP's 50th anniversary.

WORKING GROUP 1

5 The Chairman of Working Group 1 reported on progress made during GESAMP/EHS 54. GESAMP noted:

- .1 that 13 new substances were evaluated and full GESAMP Hazard Profiles (GHPs) assigned, the GHPs for 9 substances were either modified or reconfirmed, based on consideration of new data, and information about inhalation toxicity for 24 chemicals was submitted, but in most cases was insufficient for any final assessment (data on 48 substances evaluated in total);
- .2 the WG's progress in revising the existing hazard evaluation procedure;
- .3 the WG's intention to finalize a new GESAMP Reports and Studies publication in time for GESAMP's 50th anniversary in 2019;
- .4 that the IMO ESPH Working Group and the PPR Sub-Committee requested the GESAMP/EHS Working Group to amend the methodology concerning vapour inhalation hazard as a matter of priority – noting the timeline of the revision of the IBC Code by IMO; and
- .5 the concerns regarding the membership and funding issues.

6 GESAMP further noted that GESAMP/EHS finalized draft texts and rationales during the 54th session in 2017. The future procedure will include a more detailed evaluation of the vapour inhalation hazard, the flammability hazard will eliminate the rating for tainting (which is now considered obsolete) and will revise the procedure for the assessment of hazards for inorganic substances.

7 GESAMP recalled that the funding of Working Group 1 is based on a fixed fee, which is charged for each new product evaluation. It was noted, however, that to date no fees were applied for cases where requests from industry for a revised hazard evaluation were submitted. As reported following discussions at GESAMP 42, GESAMP noted that the level of effort involved in these re-evaluations was considerable and, as a consequence, consideration should be given to the introduction of a fee for this service, as is done for the full assessments. The responsible IMO bodies agreed to request the GESAMP/EHS Working Group to continue monitoring this issue and report back, as appropriate.

OTHER WORK

Review of applications for "active substances" to be used in Ballast Water Management systems (WG 34)

8 Concerning Working Group 34, the "GESAMP Ballast Water Working Group", GESAMP noted that the Ballast Water Management Convention entered into force on 8 September 2017. The task of WG 34 is to evaluate the risks for the crew, the ships' safety, the risk for the public at large of the Ballast Water Management Systems as well as their environmental safety. The evaluation *Methodology* of WG 34 has been defined by the Working Group as a living document. However, at the request of GESAMP, the WG had initiated the drafting of a Reports & Studies report on the whole subject including the *Methodology*, which was, however, still a rather premature draft at GESAMP 44. It was agreed to produce a final draft manuscript for the publication in time for the next annual session of GESAMP in 2018, in order to have the report peer reviewed and printed before 50th anniversary of GESAMP in 2019.

Atmospheric input of chemicals to the ocean (WG 38)

9 Working Group 38 on "Atmospheric input of chemicals to the ocean" held one meeting in 2017 and presented its scientific results at a number of high-level meetings and scientific conferences. The success of this WG in delivering high-level assessment and peer-reviewed publications on the atmospheric input of chemicals to the ocean has contributed to the advancement of knowledge and increasing recognition of these impacts. WG 38 has prepared a synthesis of the results from the scientific papers in a draft report which was reviewed by GESAMP and published in early 2018 as Reports & Studies No. 97.

Establishment of trends in global pollution in coastal environments (WG 39)

10 Working Group 39 on "Establishment of trends in global pollution in coastal environments" is to provide a retrospective analysis using dated environmental archives and time-series data from peer-reviewed published research. Of the over 1,000 papers that were initially screened, 327 were included in the final database with data from 49 Large Marine Ecosystems. The Working Group was requested to complete the final draft report by August 2018, for review first by GESAMP members, followed by external reviewers in the latter half of 2018.

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

11 "Sources, fate and effects of plastics and micro-plastics and in the environment" are dealt with in Working Group 40. The objectives for 2017-2018 are to develop guidelines covering terminology and methodologies for the sampling and analysis of marine macroplastics and microplastics, more specifically: the size and shape definitions of particles; sampling protocols for the whole spectrum of particle/object sizes in surface and sub-surface seawater, seabed sediments, shorelines and biota; and methodologies for physical and chemical identification and analysis of polymers and associated chemicals requirements for monitoring and assessment. The next report will be made available in a joint publication by GESAMP, IOC and UN Environment, with a target date of December 2018.

Marine geoengineering (WG 41)

12 The "Working Group on Marine Geoengineering" (WG 41) had decided to select an illustrative approach across each of eight distinct geoengineering categories: ocean iron fertilization; CO₂ storage on the seabed; foams to increase ocean albedo; direct addition of alkaline material; marine cloud brightening; artificial upwelling; macroalgal cultivation; fertilization for fish stock enhancement. A full draft report of the year-two work is expected to be finalized in the first quarter of 2018, followed by a peer review, which would be needed prior to publication.

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

13 In 2016, GESAMP established Working Group 42 on "Impacts of wastes and other matter in the marine environment from mining operations, including deep-sea mining". GESAMP discussed the relationship of GESAMP with the International Seabed Authority (ISA) with relation to deep sea mining and WG 42. It was noted that it would be an advantage to have the ISA as a formal co-sponsor of the Working Group as this would encourage a flow of information from ISA to WG 42 and vice versa. In addition, engagement would also give the opportunity to discuss/identify transboundary issues related to deep-sea mining from territorial waters to high seas and cumulative effects from more than one mining site in an area.

Scoping activities

Relevance of inputs of disinfection byproducts (DBPs) into the marine environment

14 A report was given on the scoping activity on the relevance of inputs of disinfection byproducts (DBPs) into the marine environment. GESAMP noted that there were several challenges with estimating the contribution of the various sources to a global overview of DBPs, as well as regional and local variations. GESAMP agreed to convene a workshop in Germany in 2018.

Main sources of pollution in the marine environment

15 UNDP, through the GESAMP members, noted the frequently cited figure of 80% of ocean pollution is land-based (often quoted in various media, publications and other materials), the other 20% being from ships and marine infrastructure. It is believed that this figure is derived from a study, probably by UN Environment, from some time in the 80s. Since that time, the ocean pollution landscape has changed dramatically. GESAMP agreed to establish a correspondence group to prepare a scoping paper during the intersessional period on possible

options for updating the overview of main sources of pollution in the marine environment. The paper will be presented and discussed at the next annual session of GESAMP.

Impact of pharmaceuticals and other novel chemicals on wastewater

16 GESAMP considered a scoping paper on the impact of pharmaceuticals and other novel chemicals on wastewater. GESAMP noted that the scope, as presented, was too broad for involvement by GESAMP, and that a more narrow focus would be of interest to some of the Sponsoring Organizations. It was proposed that a clearer focus on the marine environment, and environmentally persistent pharmaceuticals, would be beneficial. It was further noted that it was essential to specify the chemicals of concern, and do an extended literature review, including studies available on estuarine and coastal environments. Subsequently, GESAMP agreed to revise the scoping paper in the intersessional period, with the revised, more clearly defined focus on the marine environment. It was also agreed to pursue the possibility of convening a workshop under the lead of UN Environment, based on the revised scoping paper.

GESAMP Side event

17 In the afternoon of Wednesday, 6 September, WMO and GESAMP held a special side event titled "CO₂ in the Atmosphere-Ocean System: Impacts and Feedbacks". Globally averaged atmospheric CO₂ has increased by ~40% since pre-industrial times (before 1750). The largest CO₂ sinks are the land biosphere and the oceans, with the latter absorbing ~26% of the emitted anthropogenic CO₂.

18 A direct consequence of the excess CO₂ absorbed by the oceans is ocean acidification. Since the beginning of the industrial revolution, the ocean has become ~27% more acidic and ocean acidity could increase by 150% by 2050. Other impacts on the oceans related to increases in atmospheric GHGs include warming and deoxygenation, as >90% of the heat energy accumulated in the climate system is stored in the ocean. There is a potential that the ocean sink might become saturated and respond by increasing the fraction of naturally emitted CO₂ and other GHGs thus accelerating their atmospheric growth rate. Understanding and quantifying the magnitude and impacts of this feedback are of urgent interest.

19 The side event was intended to provide an overview of existing scientific knowledge on this topic and to discuss how this ties in with GESAMP's existing and/or future work.

ANNEX 4

**GESAMP HAZARD PROFILES FOR NEW SUBSTANCES SUBMITTED FOR
EVALUATION TO GESAMP/EHS 55**

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 4 - GESAMP HAZARD PROFILES FOR NEW SUBSTANCES SUBMITTED FOR EVALUATION TO GESAMP/EHS 55

4 May 2018
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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
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														
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														
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														
Creosote (coal tar) C8-C22, MW 116-278	2514	NI	(3)	(3)	(NR)	4	1	1	0	(2)	2	1	CMRSs		S	3
	4163	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
	4157	CAS No 61791-52-4														
[[[(phosphonomethyl)imino]bis[ethylenenitrolobis(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[ethylenenitrolobis(methylene)]]]tetrakisphosphonic acid, ammonium salt solution (34% or less)	4077	CAS No 70714-66-8														
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														
Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, phosphate	2506	(4)	(3)	(3)	NR	3	(1)	(1)	(1)	(3)	(2)	(3)			S	3
	4158	CAS No 51811-79-1														
Pyridinium, 1-(phenylmethyl)-, ethyl methyl derivs., chlorides	2507	3	NI	3	NR	4	2	NI	NI	NI	(3B)	(3)			D	3
	4159	CAS No 68909-18-2														
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
	4160	CAS No 70955-34-9														

ANNEX 5

UPDATED GESAMP 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 5 - GESAMP/EHS COMPOSITE LIST
GESAMP Hazard Profiles

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					
Acrylic acid	24	0	0	0	R	4	NI	2	2	2	3C	3			D	3
Acrylic acid	71								CAS No		79-10-7					
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							

**ANNEX 5 - 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
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							
Alcohol(C12-C14)poly(2)ethoxylate sulphate, sodium salt (*)	2419	2	NI	2	R	3	NI	NI	NI	NI	NI	NI			NI	NI
	3695								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, C10-C16 ethoxylated propoxylated (*)	2450	0	NI	0	R	3	NI	NI	NI	NI	NI	NI			NI	NI
	3868								CAS No							

ANNEX 5 - 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
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)	3562									CAS No	90622-53-0					
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						
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						

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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						
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						

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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	AC		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	AC		F	3		
Alkylbenzenes mixture (containing naphthalene)	3698								CAS No									
Alkylbenzenes mixtures (containing naphthalene)	2424	(3)	(3)	(3)	(NR)	(4)	NI	0	0	(1)	1	1	AC		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(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 thiaziazole (C6-C24) (LOA)	1981	5	NI	5	NR	1	NI	0	0	(0)	0	0			S	2		
Alkyl dithiothiaziazole (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									
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									

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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						
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						

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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							
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					

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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							
Benzaldehyde	2498	1	NI	1	R	3	NI	1	(1)	2	2	2			FD	2
Benzaldehyde	4132								CAS No		100-52-7					

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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					
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							

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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							
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					

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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
1-Butylpyrrolidin-2-one	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 phosphorusulphide mixture (LOA)	1435	NI	NI	NI	NR	4	NI	0	0	(0)	NI	NI			NI	NI
Calcium alkyl (C9) phenol sulphide/Polyolefin phosphorusulphide 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 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					

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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														
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
Chlorotoluenes (mixed isomers)	189	CAS No										95-49-8				
o-Chlorotoluene	480	3	3	3	NR	3	1	0	0	0	1	1			S	1
o-Chlorotoluene	534	CAS No										95-49-8				
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				
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														

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Clay	495	Inorg	0	0	Inorg	0	0	0	0	0	0	0			S	0		
Clay slurry	191								CAS No									
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	
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)	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
	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							

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Cyclohexanol	537	1	NI	1	R	2	NI	0	0	0	2	2			Fp	2
Cyclohexanol	207								CAS No		108-93-0					
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							

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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					
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					

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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	
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, 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	

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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					
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
Diethylene glycol initiated polyoxypropylene diamine	3113								CAS No							
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 phthalate	1438	2	NI	2	NR	1	NI	0	0	(2)	(1)	2			S	2
Diethylene glycol phthalate	247								CAS No							

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Diethylene triamine	638	0	1	1	(R)	2	NI	1	3	3	3A	3	Ss		FD	3
Diethylenetriamine	248								CAS No							
Diethylenetriamine pentaacetic acid, pentapotassium salt solution (40%) (**)	2466	1	NI	1	NR	2	NI	NI	NI	NI	NI	NI			D	NI
	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
	3930								CAS No							
Diethyl ethanolamine	622	0	NI	0	NR	3	NI	1	1	2	3	3			D	3
Diethylaminoethanol	241								CAS No							
Diethyl ether	640	0	1	1	NR	0	NI	1	0	0	1	1			DE	2
Diethyl ether	237								CAS No							
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							
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							
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							
Diethyl phthalate	648	3	3	3	R	2	0	0	0	(1)	1	1			S	1
Diethyl phthalate	238								CAS No							
Diethyl sulphate	649	1	NI	1	R	(2)	NI	1	2	3	2	3	CM		SD	3
Diethyl sulphate	239								CAS No							
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							
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							
Diheptyl phthalate	655	0	(4)	(4)	R	0	NI	0	0	(1)	1	1			Fp	3
Diheptyl phthalate	252								CAS No							
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							

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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					
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							
Diisoctyl phthalate	693	0	4	4	(R)	0	0	0	0	(1)	1	0			Fp	2
Diisoctyl 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					

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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					
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					

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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					
Dinonyl phthalate	689	0	NI	0	R	0	0	0	0	(1)	1	1			Fp	2
Dinonyl phthalate	2993								CAS No		84-76-4					
Di-n-octyl phthalate	692	0	(4)	(4)	(R)	0	0	0	0	(1)	1	(1)			Fp	2
Diocetyl 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					

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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				
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				

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Dodecene (all isomers)	720	5	NI	5	NR	4	NI	0	0	(2)	2	1	A		F	3			
Dodecene (all isomers)	296								CAS No										
1-Dodecene	2473	5	NI	5	R	0	NI	0	0	1	2	1	A		F	3			
1-Dodecene	3990								CAS No								112-41-4		
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										
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		

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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	3687								CAS No		4719-04-4					
Ethanoltriazine (aqueous solution)	2411	(0)	NI	(0)	R	3	NI	1	0	4	0	2	Ss		D	3
	4022								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					
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	C		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					

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Ethyl tert-butyl ether	2085	1	NI	1	NI	2	NI	0	0	2	2	2			E	2
Ethyl tert-butyl ether	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					
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					

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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 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							
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					

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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-methylallylamine	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							
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 acid (C8-C16) ethyl hexyl esters	2759								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, 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							

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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 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)			F	1
	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							
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)			F	1
	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					

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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 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		
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										

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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	NI	NI	NI	NI	NI	NI			NI	NI
Glycerol/sorbitol blend, propoxylated and ethoxylated	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					
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					

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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-Hexadecyl naphthalene / 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
	4123								CAS No		108-74-7					
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	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 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					
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					

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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							
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							

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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 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 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					
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
	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							
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					

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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					
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					

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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					
Lauroamidopropyl betaine solution (#)	2479	(4)	(2)	(2)	R	(4)	(1)	(0)	(0)	(3)	(1)	(3)			D	3
	4055								CAS No		4292-10-8					

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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
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/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 - alkoxy poly (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														
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					
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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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					

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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					
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) (#)(l)	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 (less than 70%)	499								CAS No		7697-37-2					

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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							
Nitrilotriacetic acid, trisodium salt	1030	0	NI	0	R	1	0	1	(0)	0	1	1	CMR		D	3
Nitrilotriacetic acid, trisodium salt solution	500								CAS No							
Nitroethane	1037	0	NI	0	NR	2	NI	1	0	(2)	(0)	(1)			SD	2
Nitroethane	502								CAS No							
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							
1-Nitropropane	1044	0	1	1	NR	1	NI	1	0	2	0	1			FED	2
1-Nitropropane	2747								CAS No							
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							
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							
p-Nitrotoluene	1051	2	1	1	NR	3	0	1	0	(2)	0	1	R		S	3
p-Nitrotoluene	2746								CAS No							
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							
Nonanoic acid	1055	3	NI	3	R	2	NI	0	0	(3)	2	3			F	3
Nonanoic acid (all isomers)	507								CAS No							

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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				
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
Nonylphenol poly(4+)ethoxylate	513								CAS No							
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							
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
1-Octanol	2676								CAS No			111-87-5				
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				
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				

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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	
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	(0)	0	0			Fp	2		
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									
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									
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									

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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							
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 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			

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Phenylxylylethane	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					
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 (34% 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 (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							

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Polyalkylalkenaminesuccinimide, molybdenum oxysulphide	2379	NI	0	0	NR	0	NI	0	0	(0)	0	0			Fp	2
Polyalkylalkenaminesuccinimide, molybdenum oxysulphide	3422									CAS No						
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					

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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							
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							

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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							
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 (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							
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							
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
	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							

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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					
Polysiloxane	1161	NI	4	4	NI	2	NI	0	(0)	(0)	0	0			F	1
Dimethylpolysiloxane	275								CAS No							
Polysiloxane	1161	NI	4	4	NI	2	NI	0	(0)	(0)	0	0			F	1
Polysiloxane	613								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 brine (less than 26%)	2345	0	0	0	Inorg	0	0	0	(0)	(0)	0	0			D	0
Potassium chloride solution (less than 26%)	3109								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 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					

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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						
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									

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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					
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)-, ethyl methyl derivs., chlorides	2507	3	NI	3	NR	4	2	NI	NI	NI	(3B)	(3)			D	3
	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-C12-14 (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							

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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							
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	NI	NI	(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	0	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					

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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)	647								CAS No		7775-09-9					
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 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	(4)	0	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					

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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 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							
Sorbitol	1265	0	NI	0	R	0	NI	0	(0)	(0)	(0)	(0)			D	0
Sorbitol solution	668								CAS No		50-70-4					
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							
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					

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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	676								CAS No								7664-93-9	
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		
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									
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	

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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 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
Tallowamidopropylamine Oxide in propylene glycol (70% or less) (#)	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					
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					

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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			
Toluidines	1316	1	1	1	R	4	2	1	0	(2)	2	2	CM		FD	3
o-Toluidine	537								CAS No							

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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					
Tridecane	1333	0	NI	0	NI	0	NI	0	0	(1)	1	0			Fp	2
Tridecane	701								CAS No		629-50-5					
Tridecanoic acid	1334	5	NI	5	(R)	3	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Tridecanoic acid	702								CAS No		638-53-9					

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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 (Triglycerides, C16-C18 and C18 unsaturated)** (m)	4023								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 (m)	3974								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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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					

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1-Undecanol	1382	4	NI	4	R	4	NI	0	0	(2)	2	(1)			Fp	2
Undecyl alcohol	724								CAS No			112-42-5				
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	2627								CAS No			57-13-6				
Urea	1384	0	0	0	R	1	NI	0	0	(1)	1	(1)			D	1
Urea solution	726								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				

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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							
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 6

PROPOSED GESAMP/EHS RATING SYSTEM FOR FLAMMABILITY

NOTE: The table shown below reflects the revised rating structure to replace the first draft shown in table 3 of annex 5 to the GESAMP/EHS 54 report (PPR.1/Circ.4).

Rating*	Description	Flashpoint temperature range (°C)	
0	Not Flammable (does not burn)	-	
1	Low Flammability Potential	>93	
2	Combustible	>60	≤93
3	Flammable	≥23	≤60
4	Highly Flammable	<23	

* NI indicates that insufficient flashpoint data were available to allow a rating

ANNEX 7

**PROVISIONAL AGENDA FOR THE FIFTY-SIXTH 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
-