INTERNATIONAL MARITIME ORGANIZATION

E

WORKING GROUP ON THE EVALUATION OF THE HAZARDS OF HARMFUL SUBSTANCES CARRIED BY SHIPS
48th session
Agenda item 9

EHS 48/9
15 April 2011
Original: ENGLISH

REPORT OF THE FORTY-EIGHTH SESSION

1 INTRODUCTION

1.1 The forty-eighth session of the GESAMP/EHS Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships was held at IMO Headquarters, London, from 11 to 15 April 2011 under the chairmanship of Dr. C.T. Bowmer. The list of members attending the forty-eighth session is shown in annex 1 and the approved agenda is shown in annex 2.

Matters arising from IMO

1.2 The Group noted that the following meetings had taken place since the last session of the GESAMP/EHS Working Group:

.1 the sixteenth intersessional meeting of the Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals (ESPH 16) met from 18 to 22 October 2010;

.2 the Evaluation of Safety and Pollution Hazards (ESPH) Working Group also met from 7 to 10 February 2011 during BLG 15;

.3 the Sub-Committee on Bulk Liquids and Gases held its fifteenth session from 7 to 11 February 2011; and

.4 the Marine Environment Protection Committee met for its sixty-first session from 27 September to 1 October 2010.

Matters discussed at these meetings which are of relevance to the work of GESAMP/EHS are summarized in annex 3.

Actions arising

1.3 From these issues, the Group concurred that the C3 rating for Microsilica slurry had been assigned as 0 and agreed that the NI entry was an error and that the hazard profile should be amended accordingly.

1.4 The Group also noted the comments on product nomenclature as expressed in relation to Calcium long-chain alkaryl sulphonate (C11-C50) and Magnesium lignosulphonate solution and agreed to consider these points further but in the broader context of general nomenclature/editorial inconsistencies between EHS Composite List names and TRN (IBC Code) Product names (see item 7).

1.5 The Group further agreed to check available data with respect to confirming flashpoint values for materials identified as having missing information in column i of their IBC Code entries and to advise the ESPH Working Group accordingly.

Activities of GESAMP

1.6 The Group received a report from Dr. Bowmer (as Chairman of GESAMP) on a number of recent activities and initiatives which had been undertaken by GESAMP. The key points addressed are summarized in annex 4.

1.7 With regard to the EHS Working Group, which has been active since 1974, GESAMP peer reviews and approves any substantive changes to the working methods of the Group but it does not however, approve the hazard profiles assigned.

1.8 GESAMP will meet from 9 to 13 May in Monaco for its 38th session, hosted by the International Atomic Energy Agency. The Chairman of the EHS Working Group will report on the outcome of the EHS' 47th and 48th sessions to GESAMP.

2 EVALUATION OF NEW PRODUCTS

2.1 The Group considered the following new substances which had been submitted for evaluation by industry:

.1 Soybean oil fatty acid methyl ester

.2 Tall oil soap, crude

.3 Piperazine, 68% aqueous

.4 Phosphoric acid, butyl esters

.5 2-propenoic acid polymer with 2,5-furandione

.6 Aziridine polymer with methyloxirane

.7 Di-(2-ethyhexyl) terephthalate.

2.2 The resultant hazard profiles for these products are set out in annex 5.

2.3 In considering the various products, the Group made the following observations and comments:

.1 **Soybean oil fatty acid methyl ester** – the Group noted that new information had been provided for this substance in order to establish a specific hazard profile and to distinguish this therefore from the generic entry in the composite list for Fatty Acid Methyl Esters (FAME). After carefully reviewing the new data, the Group concluded that different ratings as compared to the generic FAME hazard profile should be assigned for columns C2, C3, D1 and D2;

.2 **Tall oil soap, crude** – the Group observed that there was an existing entry in the Composite List for Tall Oil Soap (disproportionate solution) but noted that whilst there were similarities for the fatty acid components in the two products, there were distinct differences for the rosin acids present due to the application of oxidative or reductive stabilization processes to produce the

latter material. Most of the documents supplied for the new product were based on an analogy to crude tall oil. Whilst the Group could base some parts of the evaluation on these data, other parts needed specific data on the soap. As the product is formed in pulping processes via phase separation techniques, impurities could vary which heavily influences its hazardous properties. No criterion to qualify products could be identified that would differentiate between the least and the most dangerous products. Hazard ratings therefore, are based on the corrosive product. Oxidised crude tall oil products also have sensitizing properties and although it is acknowledged that some products are protected against oxidation, not all are protected and all will oxidise once products are discharged into the environment;

.3 **Piperazine, 68% aqueous** – the Group noted that a very comprehensive human health dataset was available for this material. Whilst some differences in the respiratory sensitization status of the product in different regulatory regions had been highlighted in the submission, it was concluded from the review that this material should be classified as a respiratory sensitizer and rated accordingly. The product was also noted to be a neurotoxic material. Reprotoxic effects were judged to be likely but it was recognized that these properties could be confounded by the inherent neurotoxicity of the substance;

.4 **Phosphoric acid, butyl esters** – the Group decided that as this product was essentially a mixture of butyl phosphate and dibutyl phosphate, that the product name should be amended to reflect this accordingly. It was agreed therefore that the entry for the Composite List should be "butyl phosphate/dibutyl phosphate mixture";

.5 **2-propenoic acid polymer with 2,5-furandione** – the Group noted that this substance was a 65% solution in 2-butoxyethanol and agreed that the product name needed to reflect this in the Composite List entry;

.6 **Aziridine polymer with methyloxirane** - the Group noted that this substance was a 78% solution in diethylene glycol monoethyl ether and agreed that the product name needed to reflect this in the Composite List entry;

.7 **Di-(2-ethyhexyl) terephthalate** – the Group concluded that the name for the composite list substance entry should be 1,4-di-(2-ethylhexyl) phthalate.

3 CORRESPONDENCE WITH THE INDUSTRY AND CONSIDERATION OF QUERIES RELATED TO EVALUATIONS

3.1 The GESAMP hazard profiles were completely revised between 1998 and 2006 according to the new 14 column procedure described in GESAMP Reports & Studies No. 64. The GESAMP/EHS Group continually updates its nearly 900 hazard profiles through two processes:

- the chemical industry submits queries regarding hazard profiles to the EHS Working Group at the rate of about ten per session. These may include new data or insights into the hazards of substances and are discussed during the working group meetings. The results are included in the report of the meeting and where appropriate, changes may be made to the hazard profile in question; and

- the Group with the help of its consultant, reviews the files for completeness and consistency on an ongoing basis and draws such matters to the attention of IMO. Since completion of the revision of Annex II in 2006, ca. 30% of the hazard profiles have been reviewed in this way. Often such a review enables the group to locate and evaluate missing data.

In this way, the hazard profiles are maintained in the best condition possible by the Group. This is understood to be the only peer reviewed and regularly maintained hazard evaluation system in international use.

3.2 Discrepancies may appear to arise when a revised GESAMP hazard profile is compared to the BLG reporting form which also contains hazard information. It is the case, however, that GESAMP will have already reviewed this input but will have made its judgment based on all of the information at its disposal – for many chemicals, this may be more extensive than that reported by the manufacturer.

Industry Correspondence

3.3 The Group noted that additional information on the following products had been received with a request that this be taken into account for the evaluation of these substances. The results of this exercise are set out at annex 6.

Dibutyl terephthalate

3.4 The group decided that the appropriate composite list entry for this material should be 1,4-di-n-butyl phthalate. The working group was requested by industry to reconsider the column B1 rating of 4 assigned to this substance. Whilst longer chain dialkyl phthalates may be so insoluble in water as to present no acute toxicity within the limits of their solubility, 1,4-di-n-butyl phthalate was recognized to present a different case. The water solubility was variously measured by the manufacturer as: 0.0045 mg/L (slow stirring), 0.06 mg/L (shake flask) and 0.11 mg/L (slow stirring) and a further value of 0.95 mg/L was given by DeFoe *et al*. (1990). The group felt that, in line with the logKow values for this substance of 4.61 (KowWIN) and 5.53 (measured, Hansch *et al*. 1995), the 0.06 and 0.11 mg/L values best reflected the likely solubility of this material.

3.5 Hydrophobic substances should not show any acute toxicity above their solubility limits in order to be rated as 0 in column B1. It is known that *Daphnia magna* may be physically hampered by test substance micelles/particles in the test water (i.e. not dissolved) and indeed, in the test reported by the manufacturer the highest concentration of 0.41 mg/L did show immobilization. On its own, the group might have chosen to disregard this, however, a fish study for which only a summary was available also reported the LOEC to be 0.058 mg/L, implying effect at higher concentrations. Geiger, D.L., D.J. Call, and L.T. Brooke, (1988) further reported an LC50 for this substance of 0.59 mg/L which, even if above the solubility limit, still caused effect in *Pimephales promelas* (fathead minnow). Finally, in the reported micro-alga test, 14% inhibition was reported at 0.011 mg/L and the group therefore decided to retain the 4 rating in column B1 as reported at the EHS 47 meeting.

Ethanoltriazine (aqueous solution)

3.6 New test study results in relation to inhalation toxicity, skin and eye irritation and sensitization effects for ethanoltriazine (aqueous solution) were provided for evaluation. After full consideration of the new input, the Group concluded that ratings in the GESAMP Hazard Profile should be revised as follows:

C3 amended to 4
D1 amended to 0
D2 amended to 2
D3 amended to S
E3 amended to 3

Acrylic acid/dimethyldiallylammonium chloride copolymer, partial sodium salt (MWt 1500-4000, aqueous solution)

3.7 A new interpretation of the existing data on eye irritation properties based on assessment weighting considerations had been proposed by industry for the Group to evaluate. The Group accordingly fully assessed this proposal and agreed that the rating for column D2 should be revised to 0, together with consequent changes to C3 and E3 ratings.

Acrylic acid/ethenesulfonic acid copolymer with phosphonate groups, sodium salt (aqueous solution)

3.8 A proposal for revising eye irritation effects (D2 ratings) in the hazard profile and consequently, influencing the estimated inhalation toxicity value (C3 rating) which had been assigned was reviewed by the Group. Revision of the D2 rating was accepted by the Group setting D2 = 0 together with consequent changes to C3 and E3 ratings.

Methanol

3.9 Detailed documents including official risk assessment reports were submitted by industry for a re-evaluation of methanol. The toxicity of methanol to humans needs special consideration because of a difference in metabolism between humans and laboratory animals including some primates. The Group evaluated data from cases of severe and fatal poisonings looking at the concentration of methanol in the blood of the victims and primates. From these concentrations, ingested and inhaled doses could be extrapolated that could lead to severe human poisoning. As there were not enough data for the dermal absorption of methanol, the lethal dose was estimated based on inhalation and oral toxicity. Methanol exposure produces optic nerve neuropathy and severe discomfort (e.g., nausea) at exposures below the lethal concentrations in air/oral doses. This specific toxic effect in humans qualifies for a T rating in column D3. However, toxic effects in pregnancy and for the foetus were judged not to be classified reprotoxic ("R" in column D3) as the applied doses were in the range of maternal toxicity. Following a full consideration of the new input, the Group concluded that ratings in the GESAMP Hazard Profile should be revised as follows:

C1 amended to (2)

C2 amended to (2)

C3 amended to (2)

Calcium carbonate slurry

3.10 A new interpretation of the existing study results for eye irritation was proposed to the Group for their evaluation. The Group accordingly fully assessed this proposal and concluded that a rating of 0 for column D2 was appropriate. Corresponding amendments to the ratings for columns C3 (to (0)) and E3 (to 0) were also agreed.

Trixylenyl phosphate

3.11 Following the availability of new information relating to Long-term health effects (column D3), the Group concluded that reprotoxicity effects had been clearly established and that this should accordingly now be reflected in the hazard profile. In turn, this also reflected on

the E3 rating and this was revised to be 3. Additionally, consideration was given to the C3 rating for this substance, initially assigned as (2) utilizing the estimation methodology for inhalation toxicity and it was concluded that this should be revised to a rating of (0) by analogy to the data available for tricresyl phosphate.

Further amendments

3.12 In response to the request made by the ESPH Working Group in relation to Microsilica slurry, the C3 rating was revised to 0 as reflected in the updated Composite List presented in annex 6.

3.13 Following a review of inhalation toxicity ratings (C3 values) as part of the work to develop a publication on the estimation methodology which may be used for C3 (see item 6), three substances were identified where ratings needed to be revised in view of updated experimental data now held on file. These products and the revisions which were agreed by the Group are as follows:

Caprolactam	C3 amended to 2
Sodium carbonate solution	C3 amended to 2
Methylbutynol	C3 amended to 0

These changes have been incorporated into the updated GESAMP/EHS Composite List as presented in annex 6.

3.14 Having reviewed crude tall oil in relation to the soap product described in section 2, the Group noted that the current assignment for column E3 in the hazard profile was incorrect. It was agreed that this rating should be set at 3 (in line with that for the soap) and that the hazard profile should be amended as shown in annex 6.

4 CONSOLIDATION OF DATA

Miscellaneous amendments

4.1 During an ongoing review of the GESAMP/EHS files which had been undertaken by the Secretariat, some issues with specific ratings in hazard profiles (compared to information contained in the files) had been observed for a number of substances. These observations were presented to the Group for their consideration and 53 substances had ratings checked with 31 products requiring additions or amendments to be made to their hazard profiles as indicated below. The changes implemented have been incorporated into the updated GESAMP/EHS Composite List as presented in annex 6.

Cyclopentene (EHS 547)	:	A2=(R)
Decyl acrylate (EHS 559)	:	A2=(R)
Diisobutylamine (EHS 576)	:	A1a=(2), A1=(2), A2=(R), B1=(3)
Alpha-Pinene (EHS 40)	:	A2=R
Beta-Pinene (EHS 41)	:	A2=(R), D3=S
Benzene sulphonyl chloride (EHS 320)	:	B1=3, D3=S
Calcium bromide (solutions) (EHS 427)	:	A1b=NI, B1=0
Diisobutyl phthalate (EHS 581)	:	B1=(4)
Sym-Dichloroethyl ether (EHS 588)	:	D3=blank (M deleted)

2,4-Dichlorophenol (EHS 596) : A2=NR

2,4-Dichlorophenoxyacetic acid, diethanolamine salt (EHS 599) : B1=2

1,2-Dichloropropane (EHS 606) : B2=0

Dichloropropane and dichloropropene, mixtures (EHS 608) : A1a=(2), A1b=(1), A1=(1), A2=(NR), B1=(4), B2=(1)

Di-(2-ethylbutyl) phthalate (EHS 625) : D2=(1)

Diethyl sulphate (EHS 649) : A2=R

Diheptyl phthalate (EHS 655) : D3=blank, (R deleted)

Dimethyl adipate (EHS 659) : A2=(R)

Dimethyl glutarate (EHS 670) : D1=2

Isophorone diisocyanate (EHS 881) : C3=3

o-Chlorotoluene (EHS 480) : C1=0, C3=0, E3=1

m-Chlorotoluene (EHS 481) : C3=(2)

Cresols (mixed isomers) (EHS 527) : C3=4

Diphenyl (EHS 694) : C3=(1), D1=0, E3=1

Diisopropyl ether (EHS 711) : D2=2

Ethylcyclohexane (EHS 751) : D1=(1)

Ethylene glycol monoacetate (EHS 762) : D3=blank, (R deleted)

Ethylene glycol monoethyl ether (EHS 766) : E2=D

Ethylene glycol methyl ether acetate (EHS 773) : C1=0, C3=(0), D1=(1)

2-Ethylhexanoic acid (EHS 776) : D3=blank (R deleted)

Ethylene vinyl acetate copolymer (emulsion) (EHS 779) : E3=2

Linear alkyl (C12-C16) propoxyamine ethoxylate : A1=3

4.2 Although a number of further questions on other substances remain to be checked, these products could not be addressed at this session due to time constraints. Accordingly, these issues will be carried forward to the next meeting as part of the ongoing exercise to consolidate data records and hazard ratings.

5 FLASHPOINT DATA FOR PRODUCTS IN THE IBC CODE WITH MISSING INFORMATION

5.1 In response to the request made by the ESPH Working Group with respect to confirming flashpoint values for materials identified as having this information missing in column i of their IBC Code entries, the Group reviewed the list of materials provided and cross-checked this with EHS database values and other information sources.

5.2 The results of this exercise are presented in annex 7.

6 COMMUNICATION AND PUBLICATION

Acute inhalation toxicity review

6.1 The Group recalled that at an earlier meeting it had agreed to focus publications activity on promoting the methodology developed for the estimation of inhalation toxicity in the context of bulk maritime transport. A scientific paper had been developed in the intersessional period which included details of a validation study undertaken in support of the methodology now used. The paper had been submitted to a journal and feedback had been received from its referees which provided a number of comments of relevance to the work of the Group.

- The Group was encouraged to develop a more mechanistic as opposed to a pragmatic approach. It was not felt, however, that the data on file at IMO could ever support the accurate modelling of toxic mechanisms as it was never designed to do so. The Group noted that the strength of the estimation method is in its simplicity and in the way it covers uncertainty by over-estimating (with manufacturers always having the option to test);

- the estimation method tends to overestimate the inhalation toxicity in a majority of cases. This could be investigated further by the Group and refinement of the methodology considered in order to make it less conservative and more realistic;

- even for non-toxic or low toxicity chemicals, given the cargo sizes involved in the maritime transport of bulk liquid chemicals, inhalation testing may be justified. The group will consider recommending a shortlist of substances for which testing would be desirable in order to replace estimated values – this would generally apply to the more toxic materials; and

- the dataset used for developing the estimation method is considered to be of great interest to the academic world and the Group was encouraged to publish this. Bearing in mind the proprietary nature of much of the data held on file, this could only be accomplished in the form of the hazard profile notation.

Update of GESAMP Reports and Studies No. 64

6.2 The Group recalled its discussions on the need for updating and re-issuing GESAMP Reports and Studies No. 64 (The Revised GESAMP Hazard Evaluation Procedure for Chemical Substances Carried by Ships). The report was now out of print but there was nevertheless ongoing interest in this document. The revised procedure was prepared between 1995 and 1998 ahead of the finalization of the Globally Harmonized System (GHS) which has also now since been revised twice. Whilst it was not the intention to change the basis of the GESAMP hazard profile or the rating procedures, it was recognized that some additional guidance and interpretation would now be beneficial in relation to certain aspects of the GHS.

6.3 In preparing a second edition of Reports & Studies No. 64, it was agreed that the following editorial updates and improvements needed to be addressed:

.1 incorporation of the addenda into R&S No. 64 as a whole;

.2 inclusion of the rationale for the estimation of inhalation toxicity in the text for column C3;

.3 the provision of additional guidance on the interpretation of the long-term toxicity criteria under Column D3, in particular for; carcinogenicity (C), target

organ systemic toxicity (T) as well as sensitization (S), including respiratory sensitization (in the light of recent requests from industry for clarification on this point);

.4 consolidation of the text and Annex VI on Column E2 (floaters & sinkers), including a review of the examples used; and

.5 an update of Annex IV on suitable biodegradation tests in the light of recent developments and publications.

6.4 The group examined in detail the scope of the proposed amendments, allocated various work task assignments amongst the membership and agreed to prepare a draft for consideration and endorsement in 2012.

6.5 With regard to Column D3 on long-term toxic effects, the group noted that the UN Globally Harmonized System for the classification of chemicals had changed since R&S No. 64 was first issued and that some of the criteria would need to be more closely considered.

The following was accordingly proposed by the group with regard to column D3:

- sensitizers will be re-evaluated with a view to separating dermal (skin) sensitizers from respiratory sensitizers. One reason for initiating this is that emergency response crews may be better protected if information is available on whether a substance is a respiratory sensitizer or not. Additionally, the IBC Code does require information on respiratory sensitization for some carriage requirements and it was felt by the Group that an improvement in data transparency and quality may facilitate risk management in the future;

- while this takes place, the S notation would be retained in the hazard profiles and it is expected that this action would have no impact on IMO's assignment of carriage conditions;

- after (re)evaluation and pending confirmation of the IMO databases ability to handle the new notation, they would be allocated the ratings S^d (dermal), S^r (respiratory), or S^{dr} (dermal and respiratory);

- the updated Column D3 profiles would be published following the issue of the second edition of R&S No. 64 (late 2012);

- if there are queries from manufacturers in the meantime on sensitizer classification, this information can be retrieved by the Secretariat from the IMO database in order to provide advice as appropriate;

- the notation Sp (photosensitizer) in Table 12 and the associated paragraph on page 52 would be deleted, as this had never been implemented;

- the rating L for lung injury will be deleted on the grounds that it is covered by the rating T (target organ systemic toxicity) and since it has never been used by the Group in any assignments;

- The rating T under the GHS already includes the N (neurotoxic) and I (immunotoxic) ratings. Since, however, IMO uses both N and I on their own for assigning carriage conditions, the group proposed to redraft the criteria for the T rating without disturbing the N or the I conditions; and

- With respect to the rating C, it was confirmed that only substances with proven carcinogenicity (rather than suspect carcinogens) would be assigned this rating. A similar position would also be adopted for the ratings M and R.

Promotion of column E information (Interference effects)

6.6 The Group was informed that a draft publication dealing with "Hazardous and Noxious Substances (HNS) spills: the behaviour of styrene in sea water" had been prepared by Cedre (Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux). The Group were approached to provide a suitable link in the text to the activities of GESAMP/EHS, specifically in relation to their assignment of E ratings within the hazard profile (describing interference effects). The Group fully endorsed this and agreed that it would be beneficial to reflect the value of GESAMP Hazard profiles when used in incident situations. It was proposed that this might demonstrate not only how to utilize the ratings but could also identify any limitations and possibly highlight any need for new information to be incorporated into the hazard profiles.

7 ANY OTHER BUSINESS

Nomenclature/editorial inconsistencies

7.1 The Group were advised that it had been observed during a data transfer exercise that for a number of products, there were some editorial inconsistencies with respect to EHS and IBC Code product names. It had been noted that, in most cases, it would generally only require a small amendment to be made to create identical names but that for some examples, more significant changes may be needed in order to achieve an alignment.

7.2 In considering this issue, the Group decided that this matter should also be put to the ESPH Working Group for their consideration since if any rationalization was to take place, whilst EHS name changes could be introduced by GESAMP, the Group could not amend Product Names (TRN). It was noted that more recently, Product Names had tended to be aligned with the EHS name whenever substances were formally reviewed but it was recognized that existing anomalies within the system might nevertheless cause some concerns.

7.3 The Group agreed that in the first instance, any tradename references which might be utilized in the EHS name should be removed and that this should form part of the ongoing exercise to review GESAMP/EHS files.

GHS Classification of floating substances

7.4 The Group recalled that it had debated if the classification employed by GESAMP/EHS for defining the characteristics of floating substances should be brought to the attention of the GHS Sub-Committee. This was considered to be important as this approach was now embodied in many national and European regulations. With the planned update for GESAMP Reports and Studies No. 64, however, it was agreed to postpone any decision on this issue pending the development of any text revisions.

Membership issues

7.5 The Group noted that as yet, it had not been possible to recruit a senior toxicologist in order to sustain expertise levels in this field. Attempts were still being made to involve experts from developing countries and it was agreed that this should be pursued further over the coming year. Efforts would be made via GESAMP to attract suitable candidates to register with the GESAMP Pool of Experts.

Funding arrangements

7.6 The Group recalled that charges had now been introduced for the evaluation of new substances in line with the earlier decision taken by MEPC. The mechanism employed treats the evaluation of products to be carried in bulk, products used as a component in a bulk mixture and components used in cleaning additives in an identical manner and is based on a fixed fee/user pays principle. As part of these arrangements, it had been agreed that the fixed fee must be paid each time an evaluation is carried out on a product since this provides a clear incentive to provide the complete range of data necessary for the Working Group to carry out an evaluation in one session. It was noted, however, that the application of further fees was not intended to apply in cases where some follow-up action was needed on a specific issue in order just to clarify study methodology details or question particular test results.

7.7 In the current session, seven product submissions had been processed at the fixed fee rate of US$6,500. The Group were advised that, in accordance with MEPC/BLG guidance, the income available will continue to be used to maintain the expertise levels required for EHS Working Group meetings and to support the activities and objectives of the Group in line with the Terms of Reference set by GESAMP.

8 FUTURE WORK PROGRAMME AND DATE OF THE NEXT SESSION

8.1 The Group agreed to a draft work programme for its next session which is set out in annex 8.

8.2 The Group agreed that the next regular meeting would be tentatively held from 16 to 20 April 2012.

8.3 **Submissions for this session should reach the [*]Technical Secretary of the GESAMP/EHS Working Group not later than Friday, 9 March 2012.**

9 CONSIDERATION AND ADOPTION OF THE REPORT

9.1 The Group adopted the report and, having thanked members for the considerable amount of effort, including extensive preparatory work, *inter alia,* the collection, collation and evaluation of data to generate Hazard Profiles, the Chairman closed the session on Friday, 15 April 2011 at 12.35hrs.

***

[*] Technical Secretary of the GESAMP/EHS Working Group
International Maritime Organization
4 Albert Embankment, London SE1 7SR
United Kingdom
Tel: +44 (0)20 7587 3249
Fax: +44 (0)20 7587 3210
E-mail: kmcdonald@imo.org

ANNEX 1

LIST OF MEMBERS ATTENDING THE FORTY-EIGHTH SESSION OF THE GESAMP/EHS WORKING GROUP

Dr. C.T. Bowmer (Chairman)
TNO triskelion bv
Utrechtseweg 48
3704 HE Zeist
P.O. Box 844
3700 AV, Zeist
The Netherlands
E-mail: tim.bowmer@tno.triskelion.nl
Tel: +31 (0)8 8866 1853

Dr. T. Höfer
Federal Institute for Risk Assessment
Thielallee 88-92
D-14195 Berlin
Germany
E-mail: thomas.hoefer@bfr.bund.de
Tel: +49 30 18 412 3267
Fax: +49 30 18 412 3685

Dr. D. James
Ty Llwyd
Llanwrda
Carmarthenshire
Wales SA19 8AW
E-mail: derek777.james@gmail.com
Tel: +44 1550 779034

Mr. M. Morrissette
Dangerous Goods Advisory Council
Suite 740
1100 H Street, NW
Washington, D.C. 20005
United States
E-mail: mmorrissette@dgac.org
Tel: +1 202 289 4550
Fax: +1 202 289 4074

Dr. S. Le Floch
Cedre
715 rue Alàin Colas
CS 41836
29218 Brest Cedex 2
France
E-mail: Stephane.Le.Floch@cedre.fr
Tel: +33 (0)2 98 33 67 02
Fax: +33 (0)2 98 44 91 38

Dr. W. Jiang
Tianjin Research Institute of
Water Transport Engineering (TRIWTE)
2618#, Xingang Road No.2
Tanggu, Tianjin
China
E-mail: wenxin-jiang@126.com
Tel: +86 22 59812345 269

IMO SECRETARIAT

Dr. K. McDonald
Technical Secretary of the Working Group
International Maritime Organization
Marine Environment Division
4 Albert Embankment
London SE1 7SR
United Kingdom

E-mail: kmcdonald@imo.org
Tel: +44 (0)20 7587 3249
Fax: +44 (0)20 7587 3210

***

ANNEX 2

AGENDA FOR THE FORTY-EIGHTH SESSION OF THE GESAMP/EHS WORKING GROUP

1 Adoption of the agenda

- Matters arising from IMO and other Organizations relevant to the activities of the Working Group

2 Evaluation of new products

- New submissions

3 Correspondence with industry/consideration of issues related to evaluations

- Industry correspondence

4 Consolidation of data files

- Miscellaneous amendments

5 Flashpoint data for products in the IBC Code with missing information

6 Communication and publication

- Acute inhalation toxicity review
- Update of GESAMP Reports and Studies No. 64
- Promotion of GHP column E information (Interference effects)

7 Any other business

- Nomenclature/editorial inconsistencies
- GHS Classification of floating substances
- Membership issues
- Review of funding arrangements

8 Future work programme and date of the following session

9 Consideration and adoption of the report

***

ANNEX 3

MATTERS ARISING FROM IMO

1.1 At the sixteenth intersessional meeting of the Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals, the ESPH Group had:

.1 noted that whilst reviewing Calcium long-chain alkaryl sulphonate (C11-C50), it had been questioned if, in particular, the rating of the product as a sensitizer in column D of the hazard profile was valid for product which may be manufactured by other suppliers if such material did not have sensitization properties. As such material would normally have to be shipped under this prevailing entry, it was proposed that until this was resolved, any future tripartites utilizing this material should not be necessarily bound by this rating. In considering this point, the Group concluded that the principle utilized in evaluating products was that the current GESAMP hazard profile should be employed. If industry required a new entry in the GESAMP composite list in order to differentiate from a given profile based on different product properties, this should be presented to GESAMP/EHS for evaluation in the normal way. It was noted that as the current profile imposes an S rating for column D3, this ensured that any shipments undertaken would be on the safe side until such time as any new developments arose. In terms of revising carriage requirement details, the Group agreed that in the product name, the term "long-chain" should be deleted since the relevant alkyl chain length is already clearly specified;

.2 observed during a review of Microsilica slurry that in the GESAMP hazard profile for this product, the C3 entry was recorded as NI. The Chairman of GESAMP/EHS had advised that this was an oversight in the profile that needed to be corrected but that, in view of the low level of hazard presented by this material, the rating should be read as 0. When assigning the pollution category of the product, the Group recognized that some clarification of the terms set out in rule 13 of Appendix 1 to MARPOL Annex II (defining other substances) was required in relation to the condition "not Fp, F or S (if not organic)". It was confirmed that "if not organic" means "unless inorganic" and that accordingly, in this instance, this condition was satisfied and the substance was consequently rated OS;

.3 agreed when reviewing Magnesium lignosulphonate solution that, for consistency with a similar entry, the product name should be ligninsulphonic acid, magnesium salt solution but that magnesium lignasulphonate solution should be added as a synonym in chapter 19 of the IBC Code;

.4 processed 114 cleaning additives for evaluation through the revised tank cleaning additives guidance note and reporting form as issued under MEPC.1/Circ.590. Of these, only 64 cleaning additives were found to meet the necessary criteria, with a number of products being rejected because they contained more than 1% of either unassessed components or had non-readily biodegradable components of pollution category X;

.5 recalled that the Marine Environment Protection Committee, at its fifty-sixth session, had agreed that cleaning additives in annex 10 of the MEPC.2/Circular, identified as being evaluated only through the old standard

of MEPC/Circ.363 would cease to be valid from 1 August 2010. To maintain such products in annex 10, a re-evaluation of the cleaning additives concerned following the guidelines of MEPC.1/Circ.590 was necessary, as emphasized and reflected in circular BLG.1/Circ.24 (Re-submission of data for cleaning additives for re-evaluation under the revised MARPOL Annex II);

.6 noted that when reviewing MEPC.2/Circular List 2 entries (Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO), a number of the mixtures listed specify substances in the "Contains" name that have Safety Hazards based on their latest GESAMP/EHS profiles. Unless it was clear therefore that the mixture does not have resultant safety concerns, it was proposed that such products may need to be reassigned to List 3 and it was agreed therefore that Administrations should be encouraged to re-visit their submissions and to effect any changes accordingly;

.7 agreed that, since the last set of revisions to the IBC Code had taken effect on 1 January 2009, the need to formalize further revisions should be brought to the attention of the BLG Sub-Committee for their consideration;

.8 considered the report and the outcome of the previous session of the GESAMP/EHS Working Group;

.9 noted from the report that, aside from the assignment of hazard profiles for twenty-one new products, amendments to a number of existing hazard profiles had been introduced and also that generic profiles for diesel and gasoline had been assigned;

.10 noted that GESAMP/EHS is still looking to expand its resource base and is, in particular, pursuing opportunities to involve scientific experts from developing countries in its activities. In this context, it was recognized that the income now available from the evaluation fees charged can be used to support and maintain the expertise requirements of the EHS Working Group team;

.11 further considered options with regard to addressing inconsistencies in carriage requirements noted for a number of entries in the IBC Code. It was recalled that any revision process should not be performed in a piecemeal fashion and that accordingly, any changes which might result from GHP updates should be noted but not acted upon unless a full product review was undertaken. Based on an overview of all of the products listed in the IBC Code using the current GHP profiles, it was proposed that around 18% of the entries may need amendment (with approximately 13% requiring more stringent carriage requirements; and 5% of products needing less onerous conditions). The main reasons for an increase in carriage requirements are due to acute mammalian toxicity (C1, C2 and C3 ratings) and long-term health effects (D3 ratings);

.12 in the context of this issue, it was decided to try to identify more fully the nature of any inconsistencies for products listed in the IBC Code with regards to current carriage requirements and updated requirements based on the latest GESAMP Hazard Profiles. Whilst proposing that the current GESAMP/EHS composite list of products, as contained in BLG.1/Circ.30 should be used for the purpose of identifying carriage requirements, some delegations however, were of the opinion that GESAMP/EHS ratings which had been estimated could be excessively strict and advised that additional

information may therefore need to be obtained. It was also noted that it may become appropriate to re-examine the justification for the current criteria laid down in chapter 21 of the IBC Code for the assignment of certain carriage conditions;

.13 agreed that it would be useful to record and circulate the various interpretations used by the Group when translating GESAMP Hazard Profile ratings into carriage requirements in order to assist with the process of evaluating of new products. This would consolidate, in one document, key decisions previously taken by the Group and could serve then as a basis for regular review by the Group with a view to updating the circular as required;

.14 concurred with proposed ratings for column i (Electrical Equipment) in the IBC Code for substances for which there had been incomplete data but noted that there were still products where information was missing.

1.2 The ESPH Working Group also met during BLG 15 and during this session, the ESPH Group had:

.1 finalized the summary of various interpretations used by the Group when translating GESAMP Hazard Profile ratings into carriage requirements in order to assist with the process of evaluating of new products;

.2 evaluated a further 110 cleaning additives in line with the criteria set out in MEPC.1/Circ.590 with 86 products being approved as meeting the requirements;

.3 noted that for some mixture products, supporting toxicity and ecotoxicity data as provided in the BLG Product Data Reporting Form were not always fully consistent with the GESAMP Hazard profile assigned for the mixture concerned (with the GHP ratings being more constrained). The Group were advised that this might reflect that additional information to that submitted by a company had been employed by GESAMP/EHS in their review or that a more precautionary interpretation of the data made available had been invoked by the EHS Group;

.4 finalized draft guidelines for the carriage of blends of petroleum oil and bio-fuels with a view to submitting these to MEPC 62 for approval to issue them as an MEPC circular;

.5 agreed to attempt to identify flashpoint data for products in the IBC Code where this information was still missing. To this end, it was proposed that GESAMP/EHS should be asked to look at these products, checking their database entries and also identifying additional information sources as appropriate;

.6 developed a timeline for the preparation of draft amendments to chapters 17, 18 and 19 of the IBC Code for approval and adoption by MEPC and MSC. This indicated that the earliest entry into force data for such amendments would be mid-year 2014 following the normal procedures;

.7 considered the results of a re-assessment exercise of a small number of representative products in chapters 17 and 18 of the IBC Code. In debating this work, the Group identified a number of options as possible means of

progressing the issue of inconsistencies including undertaking a full review of the carriage assignments presented in the IBC Code utilizing either current GHP ratings or updated GHP ratings (after allowing a period for industry to provide new data to GESAMP/EHS for evaluation and the revision of profile ratings as appropriate). The delegation of CEFIC had advised that the data available had already been provided for these products for the last review activities and that it was unlikely therefore that there would be much by way of any new data which could be put forward. Further discussions on this topic, noting the potential implications of any actions to the industry, will be held at the next meeting.

1.3 In BLG 15, the Sub-Committee approved the reports of the ESPH Working Group and:

.1 endorsed the proposals made by the Group and concurred with actions taken; and

.2 proposed to invite MSC 89 and MEPC 62 to approve the holding of an intersessional meeting of the ESPH Working Group in 2012.

1.4 The Marine Environment Protection Committee (MEPC) had held its sixty-first session and during this meeting, MEPC had:

.1 approved the report of BLG 14 in general;

.2 approved the work programme for the intersessional meeting of the ESPH Working Group in 2010;

.3 approved, noting MSC 87's concurrent decision, the holding of an intersessional meeting of the ESPH Working Group in 2011; and

.4 considered, in the context of a review of MARPOL Annex V, a proposal that pollution categories and subsequent discharge standards should be developed for solid cargo residues for inclusion in the International Maritime Solid Bulk Cargoes Code (the IMSBC Code). This should address the issue of cleaning additives commonly present in deck washing water and might call upon GESAMP to provide advice in developing an approval scheme for the use of cleaning agents for tank and deck washing of solid bulk cargoes. It was agreed to instruct the DSC Sub-Committee to consider the matter further, including the convenience of using GESAMP or GHS environmental criteria and to report back to the Committee at a future session.

***

ANNEX 4

REVIEW OF GESAMP ACTIVITIES

GESAMP, The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, an interagency body of the UN system, currently has six active working groups on the following topics:

- WG 1: EHS – Evaluation of the hazard of chemical substances carried by ships (IMO)

- WG 34: BWWG – Review of applications for 'Active Substances' to be used in ballast water management systems (IMO)

- WG 37: Metals in the marine environment (mercury, lead and cadmium; UNEP)

- WG 38: Atmospheric deposition of chemicals (nutrients) to the oceans (WMO)

- WG 39: Global trends in pollution of coastal ecosystems: retrospective ecosystem assessment, (radio-chronology; IAEA)

- Standing Task Team: on the UN General Assembly, Regular Process '*for global reporting and assessment of the state of the marine environment, including socio-economic aspects*' as well as the UNEP/IOC/GEF Trans-boundary Waters Assessment Process (TWAP)

Additionally, it's New and Emerging Issues programme is currently preparing reviews on the following topics:

- The impact of (micro-)plastics in the oceans
- The biological effects of hypoxia in the oceans, in particular endocrine disruption
- The biomagnification of persistent toxic substances in top predators, including ecological and human health effects
- The potential impact of disinfection by-products in the marine environment
- Environmental Quality Standards (EQS)

GESAMP held a workshop in Paris in June 2010 hosted by the Inter-Governmental Oceanographic Commission (IOC) of UNESCO, regarding the effects of micro-plastics in the oceans, the report of which has been published as GESAMP R&S 82.

The Ballast Water Working group (BWWG) held its 3rd Stocktaking meeting at IMO in London from the 4th to the 6th of April, 2011 to further develop its 'human exposure scenario' for assessing the risks of exposure of the crew and shore workers to active substances and disinfection by-products on board ships. It also completed its environmental exposure procedures which are embedded in a specially adapted version of the MAMPEC model for estimating the risks of treated ballast water discharges.

WG 38 met in Malta in March 2011 to consider the atmospheric input of Fe to the oceans and its relation to primary production and the potential draw-down of CO_2 from the atmosphere; they will report on P, N, S and Fe inputs in 2011.

WG 39 held its first meeting in Monaco from 4 to 6 April 2011, back to back with IAEA-Environment Laboratories 50th Anniversary Symposium.

***

ANNEX 5 - NEW SUBSTANCES SUBMITTED FOR EVALUATION (GESAMP Hazard Profiles)

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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		**RTECS No**						**CAS No**							
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		**RTECS No**						**CAS No**							
1,4-di-(2-ethylhexyl) phthalate	2437	0	3	3	R	0	0	0	0	(1)	1	1			Fp	2
1,4-di-(2-ethylhexyl) phthalate	3752		**RTECS No**						**CAS No**							
Piperazine, 68% Aqueous	2433	0	NI	0	NR	2	NI	0	0	2	3A	3	SN		SD	3
Piperazine, 68% Aqueous	3748		**RTECS No**						**CAS No**							
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		**RTECS No**						**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 acids, methyl esters	3737		**RTECS No**						**CAS No**							
Tall oil soap, crude	2432	0	NI	0	R	2	0	(0)	(0)	(3)	(3)	(3)	S		Fp	3
Tall oil soap, crude	3735		**RTECS No**						**CAS No**							

***

ANNEX 6

UPDATED COMPOSITE LIST

Notes:

In the Composite List, both EHS and TRN (shipping) names as registered in the database are now shown for each product.

Entries marked * represent cleaning additive components which have had only a partial hazard profile assigned. These profiles cannot be used for mixture calculations in relation to bulk shipments.

ANNEX 6 - 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		**RTECS No**		AF1225000				**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		**RTECS No**		AK1925000				**CAS No**		108-24-7					
Acetochlor (ISO)	2047	3	2	2	NR	4	NI	1	0	(1)	0	0			S	2
Acetochlor	66		**RTECS No**		AB5457000				**CAS No**		34256-82-1					
Acetone	15	0	0	0	R	0	0	0	0	0	1	2		NT	DE	2
Acetone	67		**RTECS No**		AL3150000				**CAS No**		67-64-1					
Acetone cyanohydrin	14	0	0	0	R	4	NI	3	4	3	(3)	(3)			D	3
Acetone cyanohydrin	68		**RTECS No**		OD9275000				**CAS No**		75-86-5					
Acetonitrile	16	0	0	0	R	1	NI	1	1	2	1	2			D	2
Acetonitrile	69		**RTECS No**		AL7700000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Acrylamide	23	0	0	0	R	2	0	2	2	(2)	1	2	CMNS		D	3
Acrylamide solution (50% or less)	70		**RTECS No**		AS3325000				**CAS No**		79-06-1					
Acrylic acid	24	0	0	0	R	4	NI	2	2	2	3C	3			D	3
Acrylic acid	71		**RTECS No**		AS4375000				**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/dadmac polymer	3682		**RTECS No**						**CAS No**							
Acrylic acid/ethenesulfonic 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 / ethenesulfonic acid copolymer containing carboxylate, phosphonate and sulfonate groups, sodium salt.	3693		**RTECS No**						**CAS No**							
Acrylonitrile	25	0	2	2	NR	3	0	2	3	3	2	2	CSM	NT	DE	3
Acrylonitrile	72		**RTECS No**		AT5250000				**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		**RTECS No**						**CAS No**							
ACTACLEAR 1700 Carrier Fluid (TN)	2188	0	NI	0	NR	0	NI	0	0	(2)	2	2			FD	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Alkyl (C9-C15) phenyl propoxylate	2430		**RTECS No**						**CAS No**							
Adiponitrile	26	0	0	0	R	1	NI	3	(3)	3	3	(3)			FD	3
Adiponitrile	74		**RTECS No**		AV2625000				**CAS No**		111-69-3					
Alachlor (ISO)	1488	3	3	3	NI	4	1	1	0	(2)	1	0	CS		S	3
Alachlor technical (90% or more)	75		**RTECS No**		AE1225000				**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alcohol(C12 – C14)poly(2)ethoxylate sulfate, sodium salt*	2419	2	NI	2	R	3	NI	NI	NI	NI	NI	NI			NI	NI
	3695		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alcohols (C12-C13), linear	2294	5	2	2	R	4	(1)	0	0	(1)	1	1			Fp	2
Alcohols (C12-C13), primary, linear and essentially linear	2950		**RTECS No**						**CAS No**							
Alcohols (C14-C18), linear	2293	5	2	2	R	0	1	0	0	(1)	1	1			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Alcohols (C14-C18), primary, linear and essentially linear	2951		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alkanes (C6-C9)	2202	(5)	NI	(5)	(R)	(4)	NI	(0)	(0)	(1)	(2)	(2)	N		FE	2
Alkanes (C6-C9)	88		**RTECS No**						**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		**RTECS No**						**CAS No**							
Iso-and cyclo-alkanes (C12+)	2204	(5)	NI	(5)	NI	(0)	NI	0	0	(1)	NI	NI			NI	1
Iso- and cyclo-alkanes (C12+)	394		**RTECS No**						**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	3562		**RTECS No**						**CAS No**		90622-53-0					
n-Alkanes (C10-C20)	296	(5)	NI	(5)	(R)	(0)	(0)	(0)	(0)	(1)	(1)	(0)	A		F	3
n-Alkanes (C10+)	471		**RTECS No**						**CAS No**							
Alkane (C14-C17) sulphonic acid, sodium salt	334	2	2	2	R	3	1	0	0	(2)	2	2			D	2
Sodium alkyl (C14-C17) sulphonates (60-65% solution)	1153		**RTECS No**						**CAS No**							
Alkaryl polyether (C9-C20) (LOA)	1974	4	NI	4	NR	3	NI	0	0	(3)	2	3			S	2
Alkaryl polyethers (C9-C20)	90		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alkenyl succinic anhydride	298	0	0	0	NR	1	NI	0	0	(2)	2	(2)	S		FD	2
Alkenyl (C16-C20) succinic anhydride	2336		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alkyl amine, alkenyl acid ester, mixture	1433	NI	NI	NI	NI	1	NI	(0)	(0)	NI	NI	NI	S		Fp	3
Alkyl(C8+)amine, Alkenyl (C12+) acid ester mixture	98		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alkyl benzene distillation bottoms	300	0	2	2	NR	0	(3)	0	0	1	1	1			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Alkyl benzene distillation bottoms	3106		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alkylbenzene mixtures (containing at least 50% of toulene)	2303	(2)	(2)	(2)	(R)	(3)	(0)	0	0	(2)	2	2	ACMNR		FE	3
Alkylbenzene mixtures (containing at least 50% of toluene)	2909		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alkyl benzenes, C9-C17 (straight or branched)	1783	0	4	4	NR	1	NI	0	(0)	(1)	(1)	(1)			F	1
Alkyl(C9+)benzenes	100		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**		DB4370000				**CAS No**		42615-29-2					
Alkyl dithiocarbamate (C19-C35)	2236	0	NI	0	NI	1	NI	0	0	(0)	0	0			S	0
Alkyl dithiocarbamate (C19-C35)	2538		**RTECS No**						**CAS No**							
Alkyl dithio thiadiazole (C6-C24) (LOA)	1981	5	NI	5	NR	1	NI	0	0	(0)	0	0			S	2
Alkyldithiothiadiazole (C6-C24)	104		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alkylnaphthalenes, crude (containing less than 1% naphthalene)	2425	4	4	4	R	4	NI	0	0	(1)	1	1	AC		F	3
Alkylnaphthalenes (containing less than 1% naphthalene), crude	3601		**RTECS No**						**CAS No**							
Alkylnaphthalenes, crude (containing naphthalene)	2426	(4)	(4)	(4)	(R)	(4)	NI	0	0	(1)	1	1	AC		F	3
Alkylnaphthalenes (containing naphthalenes), crude	3699		**RTECS No**						**CAS No**							
Alkyl (C7-C9) nitrates	8	4	NI	4	NR	3	NI	0	0	(3)	2	(3)	S		F	3
Alkyl (C7-C9) nitrates	93		**RTECS No**						**CAS No**							
Alkyl(C8-C40)phenol sulphide (LOA)	1985	0	NI	0	NR	0	NI	0	0	(1)	1	1			FD	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Alkyl (C8-C40) phenol sulphide	2253		**RTECS No**						**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		**RTECS No**						**CAS No**							
Alkyl[(C8-C10)/(C12-C14)]:(<40%/>60%)polyglucoside mixture solution (max 55% active material)	2134	3	NI	3	R	3	0	0	0	(3)	2	3			D	3
Alkyl (C8-C10)/(C12-C14):(40% or less/60% or more) polyglucoside solution (55% or less)	2248		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**		110615-47-9					
Alkyl(C12-C14)polyglucoside solution (max 55% active material)	2137	3	NI	3	R	3	0	0	0	(3)	2	3			D	3
Lauryl polyglucose (50% or less)	416		**RTECS No**						**CAS No**		110615-47-9					
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		**RTECS No**						**CAS No**		91082-17-6					
Alkyltoluenes	2374	0	2	2	NR	0	NI	0	(0)	(1)	0	1			Fp	2
Alkyl (C18+) toluenes	3148		**RTECS No**						**CAS No**							
Alkyl(C18-C28)toluenesulfonic acid (>90% in mineral oil)	2429	0	4	4	NR	3	NI	0	0	(3)	2	3	S		Fp	3
Alkyltoluenesulfonic acid (in mineral oil)	3658		**RTECS No**						**CAS No**							
Alkyl(C18-C28)toluenesulfonic acid, calcium salts, borated (up to 70% in mineral oil)	2404	0	4	4	NR	0	NI	(0)	(0)	(1)	(1)	(1)	S		S	2
Alkyl(C18-C28)toluenesulfonic acid, calcium salts, borated (<70% in mineral oil)	3661		**RTECS No**						**CAS No**							
Alkyl(C18-C28)toluenesulfonic acid, calcium salts, high overbase (up to 70% in mineral oil)	2373	(0)	(4)	(4)	(NR)	(0)	NI	0	0	(0)	0	0	S		S	2
Alkyl (C18-C28) toluenesulphonic acid, calcium salts, high overbase	3149		**RTECS No**						**CAS No**							
Alkyl(C18-C28)toluenesulfonic acid, calcium salts, low overbase (up to 60% in mineral oil)	2409	0	4	4	NR	0	NI	0	0	(2)	2	0	S		Fp	3
Alkyl (C18-C28) toluenesulfonic acid, calcium salts, low overbase	3685		**RTECS No**						**CAS No**							
Allyl alcohol	28	0	0	0	R	4	NI	2	3	4	2	3	A		D	3
Allyl alcohol	105		**RTECS No**		BA5075000				**CAS No**		107-18-6					
Aluminium chloride/hydrogen chloride solution	336	Inorg	NI	2	Inorg	3	1	1	(0)	3	(3C)	3			D	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Aluminium chloride (30% or less)/Hydrochloric acid (20% or less) solution	110		**RTECS No**						**CAS No**							
Aluminium sulphate solution	2205	Inorg	Inorg	2	Inorg	3	1	1	(0)	(3)	(2)	(3)			D	3
Aluminium sulphate solution	111		**RTECS No**						**CAS No**							
2-(2-Aminoethoxy) ethanol	75	0	0	0	NR	1	0	0	1	(3)	3	3			D	3
2-(2-Aminoethoxy) ethanol	37		**RTECS No**		KJ6125000				**CAS No**		929-06-6					
Aminoethylethanolamine	68	0	0	0	NR	1	0	0	0	(3)	3B	2	S		D	3
Aminoethyl ethanolamine	112		**RTECS No**		KJ6300000				**CAS No**		111-41-1					
Aminoethylethanolamine/Aminoethyldiethanolamine solution	74	Inorg	0	0	NR	1	0	(2)	(1)	(3)	(3B)	(2)	S		D	3
Aminoethyldiethanolamine/Aminoethylethanolamine solution	113		**RTECS No**						**CAS No**							
N-Aminoethylpiperazine	88	0	0	0	NR	1	NI	0	2	(3)	3	3	S		D	3
N-Aminoethylpiperazine	472		**RTECS No**		TK8050000				**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		**RTECS No**		TY2900000				**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		**RTECS No**		UA5950000				**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		**RTECS No**		BO0875000				**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		**RTECS No**		WT3595000				**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		**RTECS No**		BP4550000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Ammonium polyphosphate solution	1764	Inorg	0	0	Inorg	1	NI	0	0	0	1	0			D	1
Ammonium polyphosphate solution	120		**RTECS No**						**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		**RTECS No**		BS4500000				**CAS No**		7783-20-2					
Ammonium sulphide soln.(45% or less)	310	Inorg	0	0	Inorg	3	NI	1	0	(2)	2	2	N		D	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Ammonium sulphide solution (45% or less)	122		**RTECS No**		BS4900000				**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		**RTECS No**						**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		**RTECS No**		XN6465000				**CAS No**		7783-18-8					
Amyl acetate	255	2	2	2	NR	2	NI	0	(0)	0	1	1	S	NT	FED	2
Amyl acetate (all isomers)	125		**RTECS No**		AJ1925000				**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 (TAEE)	3623		**RTECS No**						**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		**RTECS No**						**CAS No**							
Amyl propionate	1484	2	NI	2	R	2	NI	0	0	(2)	2	1			F	2
n-Pentyl propionate	484		**RTECS No**						**CAS No**		624-54-4					
Aniline	261	0	0	0	R	3	2	2	2	3	1	3	CTS	NT	FD	3
Aniline	127		**RTECS No**		BW6650000				**CAS No**		62-53-3					
Apple juice	275	0	NI	0	R	0	0	0	0	0	0	0			D	0
Apple juice	130		**RTECS No**						**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		**RTECS No**						**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.	3697		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
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		**RTECS No**		CY1400000				**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
3,5-bis(1,1-dimethylethyl)-4-hydroxybenzenepropanoic acid, (C7-C9)-branched alkyl esters	3405		**RTECS No**						**CAS No**							
Benzene sulphonyl chloride	320	1	1	1	R	3	NI	1	(2)	(3)	3	3	S		SD	3
Benzene sulphonyl chloride	134		**RTECS No**		DB8750000				**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		**RTECS No**						**CAS No**							
Benzyl acetate	348	1	NI	1	R	3	1	1	0	2	1	1			SD	2
Benzyl acetate	138		**RTECS No**		AF5075000				**CAS No**		140-11-4					
Benzyl alcohol	349	1	NI	1	R	2	NI	1	1	2	2	2			SD	2
Benzyl alcohol	139		**RTECS No**		DN3150000				**CAS No**		100-51-6					
Benzyl chloride	352	NI	1	1	R	3	1	1	(2)	3	3	3	CSA		S	3
Benzyl chloride	140		**RTECS No**		XS8925000				**CAS No**		100-44-7					
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		**RTECS No**						**CAS No**							
Borax, anhydrous or hydrated, crude or refined	359	Inorg	0	0	Inorg	1	0	0	0	(1)	1	1	R		S	3
Borax	143		**RTECS No**		VZ2275000				**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		**RTECS No**		ED4550000				**CAS No**		10043-35-3					
Bromochloromethane	2084	1	1	1	NR	1	NI	0	0	0	1	0			SD	1
Bromochloromethane	145		**RTECS No**		PA5250000				**CAS No**		74-97-5					
1-Bromopropane	2229	2	NI	2	NI	NI	NI	0	(0)	0	(2)	(2)			SD	2
1-Bromopropane	2696		**RTECS No**						**CAS No**							
Butanol	381	0	(0)	0	R	0	NI	0	0	0	2	3		NT	D	3
Butyl alcohol (all isomers)	2216		**RTECS No**		EO1400000				**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		**RTECS No**		EO1400000				**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		**RTECS No**		EO1750000				**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		**RTECS No**		EO1925000				**CAS No**		75-65-0					
2-Butanone	385	0	NI	0	R	1	0	0	0	1	2	2			DE	2

ANNEX 6 - 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
Methyl ethyl ketone	446		**RTECS No**		EL6475000				**CAS No**		78-93-3					
Butene oligomer	386	0	NI	0	NR	(4)	0	0	0	0	0	1			FE	2
Butene oligomer	146		**RTECS No**						**CAS No**							
Butyl acetate	387	1	NI	1	R	2	NI	0	0	2	0	1			FED	2
Butyl acetate (all isomers)	147		**RTECS No**		AF7350000				**CAS No**		123-86-4					
Butyl acrylate	390	2	NI	2	R	3	NI	1	1	1	2	2	SA		FED	2
Butyl acrylate (all isomers)	148		**RTECS No**		UD3150000				**CAS No**		141-32-2					
Butylamine	392	0	NI	0	R	2	NI	2	2	3	3C	3			DE	3
Butylamine (all isomers)	154		**RTECS No**		EO2975000				**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		**RTECS No**		CY9070000				**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		**RTECS No**		TH9990000				**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		**RTECS No**		ES8120000				**CAS No**		109-21-7					
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture	2295	(5)	NI	(5)	(R)	(3)	NI	0	0	0	2	2	S		FE	2
Butyl/Decyl/Cetyl/Eicosyl methacrylate mixture	153		**RTECS No**						**CAS No**							
Butylene glycol(s)	402	0	NI	0	R	1	NI	1	0	0	0	0			D	1
Butylene glycol	156		**RTECS No**		EK0525000				**CAS No**		110-63-4					
Butylene glycol methyl ether acetate	953	1	1	1	R	3	NI	0	(0)	(1)	1	1			FED	1
3-Methoxybutyl acetate	58		**RTECS No**		EL4725000				**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		**RTECS No**						**CAS No**		2517-43-3					
1,2-Butylene oxide	403	0	NI	0	NR	2	NI	1	1	2	1	1	C		DE	3
1,2-Butylene oxide	8		**RTECS No**		EK3675000				**CAS No**		106-88-7					
Butyl methacrylate	409	2	NI	2	NR	1	NI	0	0	0	2	2	S		FE	2
Butyl methacrylate	151		**RTECS No**		OZ3675000				**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		**RTECS No**						**CAS No**		84-78-6					
Butyl phosphate/dibutyl phosphate mixture	2434	2	NI	2	R	1	0	0	(0)	(3)	2	3			D	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Butyl phosphate/dibutyl phosphate mixture	3749		**RTECS No**						**CAS No**							
Butyl propionate	1483	2	NI	2	R	2	NI	0	0	0	1	1			FED	2
n-Butyl propionate	476		**RTECS No**		UE8245000				**CAS No**		590-01-2					
Butyl stearate	413	0	NI	0	(R)	0	NI	0	NI	NI	2	NI			Fp	2
Butyl stearate	152		**RTECS No**		WI2900000				**CAS No**		123-95-5					
Butyraldehyde	416	1	NI	1	R	2	0	0	1	0	3	3			DE	3
Butyraldehyde (all isomers)	157		**RTECS No**		ES2275000				**CAS No**		123-72-8					
Butyric acid	418	0	NI	0	R	2	0	0	0	0	3A	3			D	3
Butyric acid	158		**RTECS No**		ES5425000				**CAS No**		107-92-6					
Butyrolactone	420	0	NI	0	R	(3)	NI	1	(0)	0	0	1	C		D	3
gamma-Butyrolactone	360		**RTECS No**		LU3500000				**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)	S		Fp	3
Calcium long-chain alkyl salicylate (C13+)	166		**RTECS No**						**CAS No**							
Calcium alkyl phenol sulphide,polyolefin phosphorosulphide mixture (LOA)	1435	NI	NI	NI	NR	4	NI	0	0	(0)	NI	NI			NI	NI
Calcium alkyl (C9) phenol sulphide/Polyolefin phosphorosulphide mixture	160		**RTECS No**						**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		**RTECS No**						**CAS No**							
Calcium bromide (solutions)	427	Inorg	NI	0	Inorg	0	0	(0)	(0)	(2)	(1)	(2)			D	2
Drilling brines, including:calcium bromide solution, calcium chloride solution and sodium chloride solution	308		**RTECS No**		EV9328000				**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		**RTECS No**		FF9335000				**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		**RTECS No**		EW2800000				**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		**RTECS No**		NH3485000				**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		**RTECS No**		NH3485000				**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		**RTECS No**						**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	S		FD	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Calcium alkaryl sulphonate (C11-C50)	169		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Calcium long-chain alkyl (C18-C28) salicylate	2383	0	NI	0	NR	0	NI	0	0	(1)	1	0	S		Fp	3
Calcium long-chain alkyl (C18-C28) salicylate	3426		**RTECS No**						**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		**RTECS No**		EW2985000				**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		**RTECS No**						**CAS No**							
Camphor oil, white	1897	NI	NI	NI	NI	NI	NI	2	NI	(2)	1	NI		(T)	FE	2
Camphor oil	174		**RTECS No**		EX1490000				**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		**RTECS No**		CM3675000				**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		**RTECS No**						**CAS No**							
Carbon disulphide	439	2	1	1	NR	3	NI	2	(3)	4	3A	3	RN		SD	3
Carbon disulphide	177		**RTECS No**		FF6650000				**CAS No**		75-15-0					
Cashew nut shell oil (untreated)	443	0	NI	0	R	0	NI	(0)	(0)	(2)	2	(2)	S		Fp	3
Cashew nut shell oil (untreated)	179		**RTECS No**						**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		**RTECS No**						**CAS No**							
Cesium Formate, drilling brines	2384	0	3	3	Inorg	2	NI	1	0	(2)	2	2			D	2
Cesium formate solution (*)	3421		**RTECS No**						**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		**RTECS No**						**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Chlorinated paraffins (C18+) with any level of chlorine	183		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**		AF8575000				**CAS No**		79-11-8					
Chlorobenzene	456	2	2	2	NR	3	0	1	0	2	2	0			S	2
Chlorobenzene	185		**RTECS No**		CZ0175000				**CAS No**		108-90-7					
Chlorohydrins	463	0	NI	0	R	0	NI	(2)	(2)	(3)	(3A)	3	CS		D	3
Chlorohydrins (crude)	187		**RTECS No**		TY4025000				**CAS No**		96-24-2					
N-(3-Chloro-2-hydroxypropyl) trimethylammonium chloride solution (75% or less)	2286	0	0	0	NR	1	NI	0	0	(2)	0	(2)	SC		D	3
N-(3-Chloro-2-hydroxypropyl)trimethyl ammonium chloride solution (75% or less)	2579		**RTECS No**						**CAS No**							
Chloronitrobenzenes	467	2	2	2	NR	3	NI	2	2	2	1	1			S	2
o-Chloronitrobenzene	533		**RTECS No**		CZ0855000				**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		**RTECS No**						**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		**RTECS No**		UE8570000				**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		**RTECS No**		UC7350000				**CAS No**		107-05-1					
Chlorosulphonic acid	479	Inorg	0	0	Inorg	2	NI	(2)	(3)	4	3C	3			D	3
Chlorosulphonic acid	188		**RTECS No**		FX5730000				**CAS No**		7790-94-5					
m-Chlorotoluene	481	3	NI	3	NR	2	NI	2	0	(2)	1	1			S	2
m-Chlorotoluene	426		**RTECS No**		XS8990000				**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		**RTECS No**		XS9000000				**CAS No**		95-49-8					
o-Chlorotoluene	480	3	3	3	NR	3	1	0	0	0	1	1			S	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
o-Chlorotoluene	534		**RTECS No**		XS9000000				**CAS No**		95-49-8					
p-Chlorotoluene	482	3	3	3	NR	3	0	0	0	2	1	1			S	2
p-Chlorotoluene	551		**RTECS No**		XS9010000				**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		**RTECS No**		KH2975000				**CAS No**		67-48-1					
Citric acid	493	0	NI	0	R	1	0	0	(0)	(3)	1	3			D	3
Citric acid (70% or less)	748		**RTECS No**		GE7350000				**CAS No**		77-92-9					
Citric juices	494	0	0	0	Inorg	0	0	0	0	0	0	0			D	0
Water	740		**RTECS No**						**CAS No**							
Clay	495	Inorg	0	0	Inorg	0	0	0	0	0	0	0			S	0
Clay slurry	191		**RTECS No**						**CAS No**							
Coal slurry	498	Inorg	0	0	Inorg	0	0	0	0	0	0	0			S	0
Coal slurry	192		**RTECS No**						**CAS No**							
Coal tar	499	(4)	4	4	NR	3	1	0	0	0	2	2	CMR	(T)	S	3
Coal tar	193		**RTECS No**		GF8600000				**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		**RTECS No**		DE3030000				**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		**RTECS No**		GF8655000				**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		**RTECS No**						**CAS No**							
Cocoa butter	2342	0	NI	0	R	0	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
Cocoa butter	3096		**RTECS No**						**CAS No**							
Coconut acid oil	2370	0	0	0	R	3	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Coconut acid oil	3139		**RTECS No**						**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		**RTECS No**						**CAS No**							
Coconut oil	503	0	NI	0	R	1	NI	0	(0)	(1)	0	(1)			Fp	2
Coconut oil	2772		**RTECS No**		GG6040000				**CAS No**		8001-31-8					
Coconut oil fatty acid	505	0	0	0	(R)	(3)	NI	0	(0)	(1)	(1)	(1)			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Coconut oil fatty acid	197		**RTECS No**						**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		**RTECS No**						**CAS No**		61788-59-8					
Copper salt of long chain(>C17) alkanoic acid (LOA)	2111	0	NI	0	(R)	2	NI	0	0	(0)	0	0			Fp	2
Copper salt of long chain (C17+) alkanoic acid	2214		**RTECS No**						**CAS No**							
Corn oil	521	0	NI	0	R	(2)	NI	0	(0)	(1)	1	1			Fp	2
Corn Oil	2781		**RTECS No**		GM4800000				**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		**RTECS No**		GN2815000				**CAS No**		8001-29-4					
Creosote (coal tar)	524	(4)	(4)	(4)	NR	4	(2)	1	0	2	2	1	CM	(T)	S	3
Creosote (coal tar)	199		**RTECS No**		GF8615000				**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		**RTECS No**		GO5870000				**CAS No**		8021-39-4					
Cresols (mixed isomers)	527	2	2	2	R	3	0	2	2	4	3A	3		T	SD	3
Cresols (all isomers)	201		**RTECS No**		GO5950000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Crotonaldehyde	528	0	NI	0	NR	4	1	2	4	4	2	3	S		D	3
Crotonaldehyde	204		**RTECS No**		GP9499000				**CAS No**		4170-30-3					
Crude Piperazine	2331	0	NI	0	R	2	NI	(1)	(2)	(3)	3	3	S		D	3
Crude Piperazine	2810		**RTECS No**						**CAS No**							
Crude Tall Oil	2357	4	NI	4	R	2	0	0	0	(0)	0	0	S		Fp	3
Tall oil, crude	3118		**RTECS No**						**CAS No**							
1,5,9-Cyclododecatriene	534	5	5	5	NR	4	NI	0	0	1	2	1	SA		F	3
1,5,9-Cyclododecatriene	17		**RTECS No**		GU2308000				**CAS No**		4904-61-4					
Cycloheptane	535	4	NI	4	(NR)	4	NI	(0)	0	(1)	(0)	(1)			FE	2
Cycloheptane	205		**RTECS No**		GU3140000				**CAS No**		291-64-5					
Cyclohexane	536	3	3	3	NR	3	NI	0	0	1	0	1			E	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Cyclohexane	206		**RTECS No**		GU6300000				**CAS No**		110-82-7					
Cyclohexanol	537	1	NI	1	R	2	NI	0	0	0	2	2			Fp	2
Cyclohexanol	207		**RTECS No**		GV7875000				**CAS No**		108-93-0					
Cyclohexanone	539	0	1	1	R	1	0	1	1	1	2	2			FE	2
Cyclohexanone	208		**RTECS No**		GW1050000				**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		**RTECS No**						**CAS No**							
Cyclohexyl acetate	541	2	NI	2	(R)	(2)	NI	0	0	(2)	2	1			FED	2
Cyclohexyl acetate	210		**RTECS No**		AG5075000				**CAS No**		622-45-7					
Cyclohexylamine	542	1	NI	1	R	2	NI	2	2	3	3	3	S		D	3
Cyclohexylamine	211		**RTECS No**		GX0700000				**CAS No**		108-91-8					
1,3-Cyclopentadiene dimer (molten)	545	3	3	3	NR	3	NI	2	0	3	2	2			Fp	2
1,3-Cyclopentadiene dimer (molten)	11		**RTECS No**		PC1050000				**CAS No**		77-73-6					
Cyclopentane	546	3	NI	3	NR	3	NI	(0)	(0)	0	1	(1)			E	2
Cyclopentane	212		**RTECS No**		GY2390000				**CAS No**		287-92-3					
Cyclopentene	547	2	NI	2	(R)	3	NI	1	1	0	NI	NI			E	2
Cyclopentene	213		**RTECS No**		GY5950000				**CAS No**		142-29-0					
Decahydronaphthalene	551	4	4	4	NR	3	NI	0	0	2	2	1			F	1
Decahydronaphthalene	214		**RTECS No**		QJ3150000				**CAS No**		91-17-8					
Decane	554	5	NI	5	R	0	0	0	0	0	1	0			F	1
Decane	2620		**RTECS No**		HD6550000				**CAS No**		124-18-5					
Decanoic acid	555	4	NI	4	R	4	1	0	0	(2)	2	2			Fp	2
Decanoic acid	215		**RTECS No**		HD9100000				**CAS No**		334-48-5					
1-Decene	558	5	NI	5	R	4	2	0	0	0	2	0	A		F	3
Decene	216		**RTECS No**						**CAS No**		872-05-9					
Decyl acetate	1767	4	NI	4	NI	NI	NI	0	0	(1)	(1)	(1)			F	1
Decyl acetate	217		**RTECS No**						**CAS No**		112-17-4					
Decyl acrylate	559	5	NI	5	(R)	5	NI	0	0	(2)	2	1			Fp	2
Decyl acrylate	218		**RTECS No**		AS7400000				**CAS No**		2156-96-9					
Decyloxytetrahydrothiophene dioxide	1859	3	NI	3	NR	4	NI	0	0	(1)	1	0			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Decyloxytetrahydrothiophene dioxide	220		**RTECS No**						**CAS No**							
Dextrose solution	562	0	0	0	R	0	NI	0	0	0	0	(0)			D	0
Glucose solution	361		**RTECS No**		LZ6600000				**CAS No**		50-99-7					
Dextrose solution	562	0	0	0	R	0	NI	0	0	0	0	(0)			D	0
Dextrose solution	221		**RTECS No**		LZ6600000				**CAS No**		50-99-7					
Diacetone alcohol	563	0	NI	0	R	1	0	0	0	(2)	2	2			D	2
Diacetone alcohol	226		**RTECS No**		SA9100000				**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Diammonium hydrogen phosphate	98	0	0	0	Inorg	1	NI	0	0	(0)	(1)	(1)			D	1
Ammonium hydrogen phosphate solution	117		**RTECS No**						**CAS No**		7783-28-0					
Dibromomethane	574	1	NI	1	NR	(2)	NI	1	0	0	NI	NI			SD	1
Dibromomethane	228		**RTECS No**		PA7350000				**CAS No**		74-95-3					
Di-n-butylamine	577	2	NI	2	R	3	NI	2	2	3	3	3			FD	3
Dibutylamine	231		**RTECS No**		HR7780000				**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		**RTECS No**		EK5425000				**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		**RTECS No**						**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		**RTECS No**		SK8260000				**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		**RTECS No**		SK8265000				**CAS No**		128-39-2					
1,4-di-n-butyl phthalate	2430	5	(3)	(3)	R	4	2	0	0	(0)	0	0			S	0
Dibutyl Terephthalate	3596		**RTECS No**						**CAS No**							
Di-n-butyl phthalate	582	4	4	4	R	4	1	0	0	1	0	1	R		S	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Dibutyl phthalate	230		**RTECS No**		TI0875000				**CAS No**		84-74-2					
Dichlorobenzene (all isomers)	333	3	4	4	NR	3	1	1	0	1	(2)	2	CMR	T	S	3
Dichlorobenzene (all isomers)	232		**RTECS No**						**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		**RTECS No**		EM4740000				**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		**RTECS No**		KI0175000				**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		**RTECS No**		KI0525000				**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		**RTECS No**						**CAS No**		2163-00-0					
Dichloromethane	594	1	2	2	NR	1	0	1	0	0	2	2	C		SD	3
Dichloromethane	234		**RTECS No**		PA8050000				**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		**RTECS No**		SK8575000				**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
1,1-Dichloropropane	605	2	1	1	NR	2	1	0	0	1	1	1			SD	1
1,1-Dichloropropane	5		**RTECS No**		TX9450000				**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		**RTECS No**		TX9625000				**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		**RTECS No**		TX9660000				**CAS No**		142-28-9					
Dichloropropane and dichloropropene, mixture	608	(2)	(1)	(1)	(NR)	(4)	(1)	2	1	2	3	3	CS		SD	3
Dichloropropene/Dichloropropane mixtures	235		**RTECS No**		TX9800000				**CAS No**		8003-19-8					
1,3-Dichloropropene	612	1	NI	1	NR	4	1	2	1	2	3	3	CS		SD	3

ANNEX 6 - 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
1,3-Dichloropropene	13		**RTECS No**		UC8310000				**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		**RTECS No**		UF0690000				**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		**RTECS No**		KN1750000				**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		**RTECS No**						**CAS No**							
Diethanolamine	620	0	NI	0	R	1	0	1	0	0	2	3	T		D	3
Diethanolamine	236		**RTECS No**		KL2975000				**CAS No**		111-42-2					
Diethylamine	621	0	NI	0	R	2	NI	1	2	3	3C	3			DE	3
Diethylamine	240		**RTECS No**		HZ8750000				**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		**RTECS No**		BX3500000				**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		**RTECS No**		CZ5600000				**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		**RTECS No**		TI1100000				**CAS No**		84-75-3					
Diethylene glycol	628	0	NI	0	R	0	0	1	0	2	1	1			D	2
Diethylene glycol	243		**RTECS No**		ID5950000				**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		**RTECS No**		KN0350000				**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		**RTECS No**		KN3160000				**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		**RTECS No**						**CAS No**							
Diethylene glycol initiated polyoxypropylene diamine	2353	0	NI	0	NR	2	NI	0	0	(3)	3B	(3)			D	3
Polyetheramine	2946		**RTECS No**						**CAS No**							
Diethylene glycol phthalate	1438	2	NI	2	NR	1	NI	0	0	(2)	(1)	2			S	2
Diethylene glycol phthalate	247		**RTECS No**						**CAS No**							
Diethylene triamine	638	0	1	1	(R)	2	NI	1	3	3	3A	3	S		FD	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Diethylenetriamine	248		**RTECS No**		IE1225000				**CAS No**		111-40-0					
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		**RTECS No**						**CAS No**							
Diethyl ethanolamine	622	0	NI	0	NR	3	NI	1	1	2	3	3			D	3
Diethylaminoethanol	241		**RTECS No**		KK5075000				**CAS No**		100-37-8					
Diethyl ether	640	0	1	1	NR	0	NI	1	0	0	1	1			DE	2
Diethyl ether	237		**RTECS No**		KI5775000				**CAS No**		60-29-7					
Di-(2-ethylhexyl) adipate	641	0	2	2	R	4	2	0	0	0	1	1	R		Fp	3
Di-(2-ethylhexyl) adipate	222		**RTECS No**		AU9700000				**CAS No**		103-23-1					
Di-(2-ethylhexyl) phosphoric acid	643	(2)	1	1	NR	2	NI	0	1	(2)	2	2			Fp	2
Di-(2-ethylhexyl) phosphoric acid	223		**RTECS No**		TB7875000				**CAS No**		298-07-7					
Di-(2-ethylhexyl) phthalate	642	0	4	4	R	0	0	0	0	1	1	1	R		Fp	3
Di-(2-ethylhexyl) phthalate	2751		**RTECS No**		TI0350000				**CAS No**		117-81-7					
1,4-di-(2-ethylhexyl) phthalate	2437	0	3	3	R	0	0	0	0	(1)	1	1			Fp	2
1,4-di-(2-ethylhexyl) phthalate	3752		**RTECS No**						**CAS No**							
Diethyl phthalate	648	3	3	3	R	2	0	0	0	(1)	1	1			S	1
Diethyl phthalate	238		**RTECS No**		TI1050000				**CAS No**		84-66-2					
Diethyl sulphate	649	1	NI	1	R	(2)	NI	1	2	3	2	3	CM		SD	3
Diethyl sulphate	239		**RTECS No**		WS7875000				**CAS No**		64-67-5					
Diglycidyl ether of Bisphenol A	653	3	NI	3	NR	4	NI	0	0	(2)	1	2	S		S	2
Diglycidyl ether of bisphenol A	250		**RTECS No**		TX3800000				**CAS No**		1675-54-3					
Diglycidyl ether of Bisphenol F	728	0	NI	0	NR	3	NI	0	(0)	(2)	1	(2)	SR		S	3
Diglycidyl ether of bisphenol F	251		**RTECS No**						**CAS No**		55492-52-9					
Diheptyl phthalate	655	0	(4)	(4)	R	0	NI	0	0	(1)	1	1			Fp	3
Diheptyl phthalate	252		**RTECS No**		TI1090000				**CAS No**		3648-21-3					
Di-n-hexyl adipate	656	5	NI	5	(NR)	5	0	0	0	(1)	0	1			FE	1
Di-n-hexyl adipate	224		**RTECS No**		AV1150000				**CAS No**		110-33-8					
Di-hexyl phthalate	2125	5	NI	5	R	0	2	0	0	(1)	1	1	R		Fp	3
Dihexyl phthalate	253		**RTECS No**		TI1100000				**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
1,4-Dihydro-9,10-dihydroxyanthracene, disodium salt solution	15		**RTECS No**						**CAS No**							
Diisobutene	575	4	4	4	NR	3	NI	0	0	0	1	0			FE	2
Diisobutylene	257		**RTECS No**		SB2715000				**CAS No**		11071-47-9					
Diisobutylamine	576	(2)	NI	(2)	(R)	(3)	NI	2	(2)	2	(3)	(3)			FED	3
Diisobutylamine	256		**RTECS No**		TX1750000				**CAS No**		110-96-3					
Diisobutyl ketone	579	3	NI	3	R	2	NI	0	0	2	2	2			F	2
Diisobutyl ketone	254		**RTECS No**		MJ5775000				**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		**RTECS No**		TI1225000				**CAS No**		84-69-5					
Diisodecyl phthalate	619	0	0	0	(R)	0	(0)	0	0	(1)	0	1			Fp	2
Diisodecyl phthalate	3119		**RTECS No**		TI1270000				**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		**RTECS No**						**CAS No**							
Diisononyl adipate	690	0	NI	0	R	0	0	0	0	(1)	1	1			Fp	2
Diisononyl adipate	258		**RTECS No**						**CAS No**		33703-08-1					
Diisononyl phthalate	691	0	0	0	R	0	0	0	0	(0)	0	0			Fp	2
Diisononyl phthalate	3120		**RTECS No**						**CAS No**							
Diisooctyl phthalate	693	0	4	4	(R)	0	0	0	0	(1)	1	0			Fp	2
Diisooctyl phthalate	259		**RTECS No**		TI1300000				**CAS No**		27554-26-3					
Diisopropanolamine	703	0	NI	0	NR	1	NI	0	0	0	2	3			FD	3
Diisopropanolamine	260		**RTECS No**		UB6600000				**CAS No**		110-97-4					
Diisopropylamine	705	1	NI	1	NR	2	0	1	1	2	3	3			ED	3
Diisopropylamine	261		**RTECS No**		IM4025000				**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		**RTECS No**						**CAS No**							
1,3-Diisopropylbenzene	706	5	4	4	NR	4	NI	0	0	2	2	1			F	2
1,3-Diisopropyl benzene	2626		**RTECS No**		CZ6330000				**CAS No**		25321-09-9					
Diisopropyl ether	711	1	NI	1	NR	2	NI	0	0	0	1	2			E	2
Isopropyl ether	406		**RTECS No**		TZ5425000				**CAS No**		108-20-3					
Diisopropylnaphthalene, mixed isomers	712	5	4	4	NR	(3)	NI	0	0	(1)	1	1			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Diisopropylnaphthalene	263		**RTECS No**		QJ1527000				**CAS No**		38640-62-9					
Dimethoxymethane	2405															
Methylal (>=85%)	3662		**RTECS No**						**CAS No**							
Dimethyl acetamide	658	0	NI	0	R	1	NI	0	0	2	1	2			D	2
N,N-Dimethylacetamide	2730		**RTECS No**		AB7700000				**CAS No**		127-19-5					
Dimethyl acetamide	658	0	NI	0	R	1	NI	0	0	2	1	2			D	2
N,N-Dimethylacetamide solution (40% or less)	466		**RTECS No**		AB7700000				**CAS No**		127-19-5					
Dimethyl adipate	659	1	NI	1	(R)	4	NI	0	0	2	1	1			SD	2
Dimethyl adipate	264		**RTECS No**		AV1645000				**CAS No**		627-93-0					
Dimethylamine (40-50% aq.sol.)	661	0	NI	0	R	3	0	2	0	2	3B	3	S	NT	DE	3
Dimethylamine solution (45% or less)	270		**RTECS No**		IP8750000				**CAS No**		124-40-3					
Dimethylamine (40-50% aq.sol.)	661	0	NI	0	R	3	0	2	0	2	3B	3	S	NT	DE	3
Dimethylamine solution (greater than 55% but not greater than 65%)	272		**RTECS No**		IP8750000				**CAS No**		124-40-3					
Dimethylamine (40-50% aq.sol.)	661	0	NI	0	R	3	0	2	0	2	3B	3	S	NT	DE	3
Dimethylamine solution (greater than 45% but not greater than 55%)	271		**RTECS No**		IP8750000				**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		**RTECS No**		GX1198000				**CAS No**		98-94-2					
Dimethyl disulphide	1616	1	NI	1	NR	3	2	2	0	2	1	1			SD	2
Dimethyl disulphide	2504		**RTECS No**		JO1927500				**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		**RTECS No**		JR6600000				**CAS No**		112-18-5					
Dimethylethanolamine	667	0	NI	0	R	2	NI	1	1	2	3	3			D	3
Dimethylethanolamine	273		**RTECS No**		KK6125000				**CAS No**		108-01-0					
Dimethyl formamide	676	0	0	0	R	1	0	0	1	2	1	2	R		D	3
Dimethylformamide	274		**RTECS No**		LQ2100000				**CAS No**		68-12-2					
Dimethyl glutarate	670	0	NI	0	R	3	NI	0	0	2	2	2	A		SD	3
Dimethyl glutarate	265		**RTECS No**						**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		**RTECS No**		SZ7710000				**CAS No**		868-89-9					
2,2-Dimethyloctanoic acid	675	3	NI	3	R	4	1	0	0	(2)	2	2			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Dimethyl octanoic acid	267		**RTECS No**						**CAS No**		29662-90-6					
Dimethyl phthalate	678	2	2	2	R	2	0	0	0	(1)	0	1			SD	1
Dimethyl phthalate	268		**RTECS No**		TI1575000				**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		**RTECS No**		TY5775000				**CAS No**		126-30-7					
Dimethyl succinate	681	0	NI	0	NI	2	NI	0	0	0	0	2			SD	2
Dimethyl succinate	269		**RTECS No**		WM7675000				**CAS No**		106-65-0					
Dinitrotoluene	688	2	2	2	NR	4	2	2	(2)	(2)	1	0	CMR		S	3
Dinitrotoluene (molten)	276		**RTECS No**		XT1300000				**CAS No**		25321-14-6					
Dinonyl phthalate	689	0	NI	0	R	0	0	0	0	(1)	1	1			Fp	2
Dinonyl phthalate	2993		**RTECS No**		TI1800000				**CAS No**		84-76-4					
Di-n-octyl phthalate	692	0	(4)	(4)	(R)	0	0	0	0	(1)	1	(1)			Fp	2
Dioctyl phthalate	277		**RTECS No**		TI1925000				**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		**RTECS No**		JG8225000				**CAS No**		123-91-1					
Dipentene	686	4	NI	4	NR	2	NI	0	0	(2)	2	2	S		F	3
Dipentene	278		**RTECS No**		OS8100000				**CAS No**		138-86-3					
Diphenyl	694	3	4	4	R	4	1	0	0	(1)	0	1			S	1
Diphenyl	279		**RTECS No**		DU8050000				**CAS No**		92-52-4					
Diphenylamine (molten)	2186	3	3	3	NR	3	1	0	0	(1)	1	1			S	1
Diphenylamine (molten)	285		**RTECS No**						**CAS No**							
Diphenylamine, reaction product with 2,4,4-trimethylpentene	1500	NI	1	1	NR	3	NI	0	0	(1)	1	1	S		Fp	3
Diphenylamine, reaction product with 2,2,4-Trimethylpentene	286		**RTECS No**						**CAS No**							
Diphenylamines, alkylated	1770	5	NI	5	NR	(3)	NI	0	0	(1)	(1)	(1)	S		F	3
Diphenylamines, alkylated	287		**RTECS No**						**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		**RTECS No**		DV1500000				**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		**RTECS No**		KN8970000				**CAS No**		101-84-8					
Diphenyl ether/ Biphenyl phenyl ether mixtures	702	5	NI	5	NR	4	NI	0	0	0	1	1		(T)	S	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Diphenyl ether/Diphenyl phenyl ether mixture	282		**RTECS No**						**CAS No**							
Diphenylmethane-4,4'-diisocyanate	700	5	2	2	NR	0	0	0	0	4	2	2	S		S	3
Diphenylmethane diisocyanate	288		**RTECS No**		NQ9350000				**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		**RTECS No**						**CAS No**							
Di-n-propylamine	704	1	NI	1	NR	3	NI	2	2	2	3C	3			FED	3
Di-n-propylamine	225		**RTECS No**		JL9200000				**CAS No**		142-84-7					
Dipropylene glycol	707	0	1	1	NR	0	NI	0	0	0	1	1			D	1
Dipropylene glycol	291		**RTECS No**		UB8785000				**CAS No**		110-98-5					
Dipropylene glycol dibenzoate	708	4	NI	4	R	NI	NI	0	(0)	NI	NI	NI			NI	NI
Dipropylene glycol dibenzoate	2431		**RTECS No**		UB8787500				**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		**RTECS No**		TI1940000				**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		**RTECS No**						**CAS No**							
Dithocarbamate ester (C7-C35)	2185	NI	2	2	NR	4	NI	0	0	(1)	1	1			S	1
Dithiocarbamate ester (C7-C35)	2371		**RTECS No**						**CAS No**							
Ditridecyl adipate	2351	0	NI	0	NR	0	NI	0	0	(2)	2	1	S		Fp	2
Ditridecyl adipate	293		**RTECS No**						**CAS No**							
Ditridecyl phthalate	714	0	(0)	0	NR	0	(0)	0	0	(1)	1	(1)			Fp	2
Ditridecyl phthalate	2994		**RTECS No**		TI1950000				**CAS No**		119-06-2					
Diundecyl phthalate	715	0	(0)	0	NR	0	0	0	0	(1)	1	1			Fp	2
Diundecyl phthalate	294		**RTECS No**		TI1980000				**CAS No**		3648-20-2					
Dodecane	718	5	NI	5	(R)	0	NI	0	0	(1)	(1)	(0)			Fp	2
Dodecane (all isomers)	295		**RTECS No**		JR2125000				**CAS No**		112-40-3					
tert-Dodecanethiol	2233	5	NI	5	NR	4	2	0	0	(2)	2	1	S		F	3
tert-Dodecanethiol	2418		**RTECS No**						**CAS No**							
1-Dodecanol	719	5	2	2	R	4	1	0	0	(1)	1	(1)			Fp	2
Dodecyl alcohol	298		**RTECS No**		JR5775000				**CAS No**		112-53-8					
Dodecene (all isomers)	720	5	NI	5	NR	4	NI	0	0	(2)	2	1	A		F	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Dodecene (all isomers)	296		**RTECS No**		UD1950000				**CAS No**		6842-15-5					
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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Dodecyl benzene	126	0	NI	0	NR	0	3	0	0	(2)	(2)	(1)			F	2
Dodecylbenzene	304		**RTECS No**		CZ9540000				**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		**RTECS No**						**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		**RTECS No**		JR8050000				**CAS No**							
Dodecyl hydroxypropyl sulphide (LOA)	1861	5	NI	5	NI	4	NI	0	0	(0)	0	0			FD	0
Dodecyl hydroxypropyl sulphide	2252		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Dodecyl phenol	725	0	4	4	NI	4	NI	0	0	(3)	3	2			Fp	3
Dodecyl phenol	301		**RTECS No**		SL3675000				**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		**RTECS No**						**CAS No**							
Dodecylxylene	1763	0	NI	0	NI	0	NI	0	0	(1)	1	1			Fp	2
Dodecyl Xylene	306		**RTECS No**						**CAS No**							
Epichlorohydrin	731	0	NI	0	R	3	1	2	2	3	3A	3	CS		D	3
Epichlorohydrin	309		**RTECS No**		TX4900000				**CAS No**		106-89-8					
EPTC (ISO)	2081	3	2	2	NI	3	NI	1	1	2	2	(2)	N		F	3
S-Ethyl dipropylthiocarbamate	2302		**RTECS No**						**CAS No**		759-94-4					
Ethanol	732	0	NI	0	R	0	NI	0	0	0	1	2			D	2
Ethyl alcohol	315		**RTECS No**		KQ6300000				**CAS No**		64-17-5					
Ethanolamine	733	0	NI	0	R	2	0	1	1	3	3A	3			D	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Ethanolamine	311		**RTECS No**		KJ5775000				**CAS No**		141-43-5					
Ethanoltriazine (aqueous solution)	2411	(0)	NI	(0)	R	3	NI	1	0	4	0	2	S		D	3
1,3,5-Hexahydrotriethanol-1,3,5-triazine	3687		**RTECS No**						**CAS No**							
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		**RTECS No**						**CAS No**							
Ethoxylated tallow amine (>95%)	2313	0	NI	0	NR	4	NI	1	(1)	3	2	3	S		Fp	3
Ethoxylated tallow amine (> 95%)	2959		**RTECS No**						**CAS No**							
Ethoxylated tallow amine, glycol mixture	2252	2	NI	2	NR	6	NI	1	0	3	2	3	S		D	3
Ethoxylated tallow amine, glycol mixture	2476		**RTECS No**						**CAS No**							
Ethyl acetate	735	0	2	2	R	1	0	0	0	1	0	1			DE	2
Ethyl acetate	312		**RTECS No**		AH5425000				**CAS No**		141-78-6					
Ethyl acetoacetate	736	0	0	0	R	1	NI	0	0	(1)	1	1			D	1
Ethyl acetoacetate	313		**RTECS No**		AK5250000				**CAS No**		141-97-9					
Ethyl acrylate	734	1	NI	1	R	3	1	1	2	2	2	2	SC	T	ED	3
Ethyl acrylate	314		**RTECS No**		AT0700000				**CAS No**		140-88-5					
Ethylamine	1016	0	NI	0	R	2	NI	2	2	1	3	3			GD	3
Ethylamine	322		**RTECS No**		KH2100000				**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		**RTECS No**						**CAS No**							
Ethyl amyl ketone	1784	2	NI	2	NI	2	NI	0	0	(2)	2	NI			FD	2
Ethyl amyl ketone	316		**RTECS No**		RH1485000				**CAS No**		106-68-3					
Ethylbenzene	740	3	2	2	R	3	1	0	0	0	2	2	C		FE	3
Ethylbenzene	324		**RTECS No**		DA070000				**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		**RTECS No**		EO4880000				**CAS No**		13360-63-9					
Ethyl tert-butyl ether	2085	1	NI	1	NI	2	NI	0	0	2	2	2			E	2
Ethyl tert-butyl ether	320		**RTECS No**		KN4730200				**CAS No**		637-92-3					
Ethyl butyrate	748	1	NI	1	NI	2	NI	0	0	(2)	2	NI			FED	2
Ethyl butyrate	317		**RTECS No**		ET1660000				**CAS No**		105-54-4					
Ethyl cyclohexane	751	4	4	4	NR	3	NI	(0)	(0)	(1)	(1)	(1)			FE	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Ethylcyclohexane	325		**RTECS No**		GV1140000				**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		**RTECS No**		GX1225000				**CAS No**		5459-93-8					
Ethylene carbonate	755	0	NI	0	R	0	NI	0	0	(2)	1	2			SD	2
Ethylene carbonate	326		**RTECS No**		FF9550000				**CAS No**		96-49-1					
Ethylene chlorohydrin	756	0	0	0	R	3	NI	2	3	4	2	3			D	3
Ethylene chlorohydrin	327		**RTECS No**		KK0875000				**CAS No**		107-07-3					
Ethylene cyanohydrin	757	0	0	0	NI	2	NI	1	0	(2)	1	2			D	2
Ethylene cyanohydrin	328		**RTECS No**		MU5250000				**CAS No**		109-78-4					
Ethylene diamine	758	0	1	1	R	3	1	1	2	1	3	3	S		D	3
Ethylenediamine	343		**RTECS No**		KH8575000				**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		**RTECS No**		AH4375000				**CAS No**		#Error					
Ethylene dibromide	760	1	2	2	NR	3	NI	2	2	2	3	3	CRT		SD	3
Ethylene dibromide	329		**RTECS No**		KH9275000				**CAS No**		106-93-4					
Ethylene glycol	761	0	NI	0	R	0	0	1	(1)	(1)	0	0	R		D	3
Ethylene glycol	331		**RTECS No**		KW2975000				**CAS No**		107-21-1					
Ethylene glycol acrylate	869	0	NI	0	R	4	NI	1	3	3	3	3	SM		D	3
2-Hydroxyethyl acrylate	51		**RTECS No**		AT1750000				**CAS No**		818-61-1					
Ethylene glycol butyl ether acetate	764	1	NI	1	R	2	NI	0	1	(1)	1	1			FD	1
Ethylene glycol butyl ether acetate	334		**RTECS No**		KJ8925000				**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		**RTECS No**		KW4025000				**CAS No**		111-55-7					
Ethylene glycol ethyl ether acetate	767	0	NI	0	R	2	0	1	0	1	1	2	R		D	3
2-Ethoxyethyl acetate	41		**RTECS No**		KK8225000				**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		**RTECS No**						**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		**RTECS No**		KL5950000				**CAS No**		110-49-6					
Ethylene glycol monoacetate	762	0	NI	0	R	2	NI	0	0	(3)	NI	(3)			D	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Ethylene glycol acetate	333		**RTECS No**		KW7175000				**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		**RTECS No**						**CAS No**							
Ethylene glycol monoethyl ether	766	0	NI	0	R	0	0	0	0	1	2	2	R		D	3
2-Ethoxyethanol	40		**RTECS No**		KK8050000				**CAS No**		110-80-5					
Ethylene glycol phenyl ether	775	1	NI	1	R	1	0	1	0	(2)	1	2			SD	2
Ethylene glycol phenyl ether	339		**RTECS No**		KM0350000				**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		**RTECS No**						**CAS No**							
Ethylene oxide	77	NI	NI	NI	NI	NI	NI	1	(1)	3	3	3	CMRS		GD	3
Ethylene oxide	2744		**RTECS No**		KX2450000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Ethyl-3-ethoxypropionate	1439	1	NI	1	NR	2	NI	0	0	2	1	1			FD	2
Ethyl-3-ethoxypropionate	321		**RTECS No**		UF3325000				**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		**RTECS No**		MO7700000				**CAS No**		149-57-5					
2-Ethylhexyl acrylate	782	3	NI	3	R	2	NI	0	0	(2)	2	2	S		F	3
2-Ethylhexyl acrylate	46		**RTECS No**		AT0855000				**CAS No**		103-11-7					
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		**RTECS No**						**CAS No**							
5-Ethylidene-2-norbornene	783	3	3	3	NR	3	0	0	0	2	1	2			FE	2
Ethylidene norbornene	345		**RTECS No**		RB9450000				**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		**RTECS No**		MJ7350000				**CAS No**		541-85-5					
Ethyl methacrylate	785	1	NI	1	R	2	NI	0	0	0	(2)	(2)	S		FE	2
Ethyl methacrylate	318		**RTECS No**		OZ4550000				**CAS No**		97-63-2					
N-Ethyl-2-methallylamine	2228	0	NI	0	NR	2	NI	3	2	2	3A	3			D	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
N-Ethylmethylallylamine	2417		**RTECS No**						**CAS No**							
o-Ethyl phenol	788	2	NI	2	NI	(2)	NI	1	NI	NI	NI	NI			S	NI
o-Ethylphenol	535		**RTECS No**		SL4025000				**CAS No**		90-00-6					
Ethyl propionate	790	1	NI	1	NI	2	0	0	(1)	(2)	2	2			ED	2
Ethyl propionate	319		**RTECS No**		UF3675000				**CAS No**		105-37-3					
2-Ethyl-3-propylacrolein	791	2	NI	2	R	3	NI	0	0	1	3	3			FE	3
2-Ethyl-3-propylacrolein	43		**RTECS No**		MP6300000				**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Fatty acids, linear, C8-C18 saturated with C18 unsaturated	2260	(4)	NI	(4)	R	(4)	(1)	(0)	(0)	(1)	(1)	(1)			Fp	3
Fatty acids, (C8-C18)	2779		**RTECS No**						**CAS No**							
Fatty acids, linear C12+ saturated with C12+ unsaturated	2261	5	0	0	(R)	0	NI	(0)	(0)	(1)	(1)	(1)			NI	2
Fatty acids, (C12+)	2780		**RTECS No**						**CAS No**							
Fatty acids saturated, C8-C10	2324	0	NI	0	R	4	NI	0	0	(3)	3C	3			NI	NI
Fatty acids, (C8-C10)	3079		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Fatty alcohols, linear, (C16+)	2327	(5)	(2)	(2)	(R)	(0)	(1)	0	0	(1)	1	1			Fp	2
Alcohols, linear (C16+)	3082		**RTECS No**						**CAS No**							
Ferric chloride	339	Inorg	5	5	Inorg	2	0	1	(0)	(3)	2	3			D	3
Ferric chloride solutions	348		**RTECS No**		LJ9100000				**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Ferric hydroxyethylethylenediaminetriacetic acid, trisodium salt solution	349		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Fluorosilicic acid	806	Inorg	0	0	Inorg	2	NI	2	(2)	4	3	3			D	3
Fluorosilicic acid	2716		**RTECS No**		VV8225000				**CAS No**		16961-83-4					
Fluorosilicic acid (20-30%) in water solution	2240	Inorg	0	0	Inorg	2	NI	(1)	(1)	4	3	3			D	3
Fluorosilicic acid (20-30%) in water solution	353		**RTECS No**						**CAS No**							
Formaldehyde (37%-50% solution)	807	0	NI	0	R	2	NI	2	2	3	3	3	CSM	NT	D	3
Formaldehyde solutions (45% or less)	354		**RTECS No**		LP8925000				**CAS No**		50-00-0					
Formaldehyde, polymer with isobutylenated phenol	2377	NI	NI	NI	NR	NI	NI	NI	NI	NI	NI	NI			Fp	NI
Formaldehyde, polymer with isobutylenated phenol	1203		**RTECS No**						**CAS No**							
Formamide	808	0	NI	0	NR	1	NI	0	0	1	1	2	R		D	3
Formamide	355		**RTECS No**		LQ0525000				**CAS No**		75-12-7					
Formic acid	809	0	NI	0	R	2	NI	1	(1)	2	3C	3			D	3
Formic acid	356		**RTECS No**		LQ4900000				**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		**RTECS No**						**CAS No**							
Fumaric adduct of rosin (water dispersion)	810	0	NI	0	R	3	NI	(0)	NI	NI	NI	NI			NI	NI
Fumaric adduct of rosin, water dispersion	357		**RTECS No**						**CAS No**							
Furfural	812	0	NI	0	R	2	NI	2	(2)	3	2	2	C		D	3
Furfural	358		**RTECS No**		LT7000000				**CAS No**		98-01-1					
Furfuryl alcohol	813	0	NI	0	R	(3)	NI	2	2	3	2	2			D	2
Furfuryl alcohol	359		**RTECS No**		LU9100000				**CAS No**		98-00-0					
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		**RTECS No**						**CAS No**							
Glycerine	814	0	NI	0	R	0	NI	0	0	(1)	0	1			D	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Glycerine	363		**RTECS No**		MA8050000				**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		**RTECS No**						**CAS No**							
Glycerol ethoxylated	2360	0	NI	0	R	0	NI	0	0	(0)	0	0			D	0
Glycerol ethoxylated	3123		**RTECS No**						**CAS No**							
Glycerol monooleate	1898	0	0	0	R	0	NI	0	(0)	(1)	1	1			Fp	2
Glycerol monooleate	365		**RTECS No**		RK1300000				**CAS No**		25496-72-4					
Glycerol propoxylated	2346	0	NI	0	NR	1	NI	1	0	(2)	1	0			D	2
Glycerol propoxylated	3110		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Glyceryl triacetate	816	0	NI	0	R	1	0	1	0	0	0	1			D	1
Glyceryl triacetate	367		**RTECS No**		AK3675000				**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		**RTECS No**						**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		**RTECS No**		MB7600000				**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		**RTECS No**						**CAS No**							
Glyoxal solutions (40% or less)	84	0	NI	0	R	1	NI	0	0	2	2	3	MS		D	3
Glyoxal solution (40% or less)	370		**RTECS No**		MD2700000				**CAS No**		107-22-2					
Glyoxylic acid	1535	0	NI	0	R	2	0	0	0	(3)	0	3	S		D	3
Glyoxylic acid solution (50 % or less)	371		**RTECS No**		MD4550000				**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		**RTECS No**		MC1075000				**CAS No**		1071-83-6					
Groundnut oil	820	0	NI	0	R	(2)	NI	(0)	(0)	(0)	(0)	0			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Groundnut oil	2769		**RTECS No**		RX2830000				**CAS No**		8002-03-7					
[Heavy Oxo Fraction]	2266	5	2	(2)	NR	1	NI	0	0	(1)	1	1			FE	2
Oxygenated aliphatic hydrocarbon mixture	2825		**RTECS No**						**CAS No**							
Heptane	827	4	NI	4	R	4	NI	0	0	0	(1)	1	A		E	2
Heptane (all isomers)	372		**RTECS No**		MI7700000				**CAS No**		142-82-5					
Heptanoic acid	831	2	NI	2	R	1	NI	0	0	(3)	3B	(3)			FD	3
n-Heptanoic acid	479		**RTECS No**		MJ1575000				**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		**RTECS No**						**CAS No**							
1-Heptanol	828	2	NI	2	R	2	NI	1	0	2	(2)	(2)			FD	2
1-Heptanol	2688		**RTECS No**		MK0350000				**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		**RTECS No**						**CAS No**							
1-Heptene	832	3	NI	3	NI	2	NI	(0)	(0)	(0)	(2)	(1)			E	2
1-Heptene	2685		**RTECS No**		MJ8815000				**CAS No**							
Heptyl acetate	833	3	NI	3	NI	(3)	NI	0	0	(2)	1	2			F	2
Heptyl acetate	375		**RTECS No**		AH9901000				**CAS No**		112-06-1					
Hexadecyl naphthalene/dihexadecyl naphthalene mixture	2159	0	NI	0	NR	0	NI	0	0	(1)	1	1			Fp	2
1-Hexadecylnaphthalene / 1,4-bis(hexadecyl)naphthalene mixture	2373		**RTECS No**						**CAS No**							
Hexamethylene diamine	845	0	NI	0	R	2	NI	1	1	(3)	3A	3	SR		D	3
Hexamethylenediamine solution	380		**RTECS No**		MO1180000				**CAS No**		124-09-4					
Hexamethylene diamine	845	0	NI	0	R	2	NI	1	1	(3)	3A	3	SR		D	3
Hexamethylenediamine (molten)	378		**RTECS No**		MO1180000				**CAS No**		124-09-4					
Hexamethylene diamine	845	0	NI	0	R	2	NI	1	1	(3)	3A	3	SR		D	3
Hexamethylenediamine	377		**RTECS No**		MO1180000				**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		**RTECS No**		AV1940000				**CAS No**		3323-53-3					
Hexamethylene diisocyanate	2142	3	0	0	NR	2	NI	1	2	4	3	3	S		S	3
Hexamethylene diisocyanate	18		**RTECS No**						**CAS No**							
Hexamethylene glycol	847	0	NI	0	R	1	NI	0	0	(1)	0	1			D	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Hexamethylene glycol	376		**RTECS No**		MO2100000				**CAS No**		629-11-8					
Hexamethyleneimine	848	1	NI	1	NI	2	NI	3	1	2	NI	NI			FED	2
Hexamethyleneimine	381		**RTECS No**		CM3150000				**CAS No**		111-49-9					
Hexamethylene tetramine (40% solution)	849	0	NI	0	R	0	NI	0	0	(1)	0	1	S		D	2
Hexamethylenetetramine solutions	382		**RTECS No**		MN4725000				**CAS No**		100-97-0					
Hexane	850	3	NI	3	R	4	NI	0	0	0	2	2	NA		E	2
Hexane (all isomers)	383		**RTECS No**		MN9275000				**CAS No**		100-54-3					
Hexane	850	3	NI	3	R	4	NI	0	0	0	2	2	NA		E	2
Hexane	2683		**RTECS No**		MN9275000				**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		**RTECS No**						**CAS No**							
Hexanoic acid	853	2	NI	2	R	2	NI	0	0	(3)	(3)	3			FD	3
Hexanoic acid	384		**RTECS No**		MO5250000				**CAS No**		142-62-1					
1-Hexanol	854	1	0	0	(R)	2	NI	1	0	(3)	1	3			FD	3
Hexanol	385		**RTECS No**		MQ4025000				**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		**RTECS No**						**CAS No**							
1-Hexene	855	3	NI	3	R	3	NI	0	0	0	1	1			E	2
1-Hexene	2681		**RTECS No**		MP6600100				**CAS No**		592-41-6					
2-Hexene (mixed isomers)	856	3	NI	3	R	3	NI	(0)	(0)	(1)	(1)	(1)			E	2
2-Hexene (mixed isomers)	2682		**RTECS No**						**CAS No**							
Hexyl acetate	857	2	NI	2	NI	3	NI	0	0	(1)	1	1			FE	2
Hexyl acetate	387		**RTECS No**		AI0875000				**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		**RTECS No**		SA7525000				**CAS No**		108-84-9					
Hexylene glycol	859	0	NI	0	R	0	0	0	0	(2)	2	2			D	2
Hexylene glycol	388		**RTECS No**		SA0810000				**CAS No**		107-41-5					
Hydrocarbon waxes	2278	0	NI	0	NR	0	0	0	0	2	1	1			Fp	2
Hydrocarbon waxes	2886		**RTECS No**						**CAS No**							
Hydrochloric acid	864	Inorg	0	0	Inorg	1	NI	1	1	3	3C	3			DE	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Hydrochloric acid	389		**RTECS No**		MW4025000				**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		**RTECS No**						**CAS No**							
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		**RTECS No**		MX0900000				**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		**RTECS No**		MX0900000				**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 solutions (over 8% but not over 60% by mass)	391		**RTECS No**						**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, more than 8% but not more than 60%	2690		**RTECS No**						**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		**RTECS No**		MB9185000				**CAS No**		150-30-0					
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		**RTECS No**		ET4761500				**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	2691		**RTECS No**						**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	392		**RTECS No**						**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		**RTECS No**						**CAS No**							
Interesterified Mixed Vegetable Oils	2355	0	NI	0	R	(0)	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Interesterified vegetable oils	3115		**RTECS No**						**CAS No**							
Isobutanol	382	0	NI	0	R	1	0	0	0	1	2	3			D	3
Isobutyl alcohol	397		**RTECS No**		NP9625000				**CAS No**		78-83-1					
Isobutyl formate	405	1	NI	1	NI	1	NI	0	(0)	0	(1)	(2)			E	2
Isobutyl formate	398		**RTECS No**		LQ8650000				**CAS No**		542-55-2					
Isobutyl methacrylate	408	2	NI	2	NR	1	NI	0	0	0	2	2	S		FED	2
Isobutyl methacrylate	2673		**RTECS No**		OZ4900000				**CAS No**		97-86-9					
Isobutyric acid	419	0	NI	0	R	2	NI	2	2	(3)	3	3			E	NI

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Isobutyric acid	2459		**RTECS No**		NQ4375000				**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		**RTECS No**		NR0960000				**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		**RTECS No**		RH1400000				**CAS No**		2430-22-0					
Isononylaldehyde	2300	3	NI	3	NR	(3)	NI	0	0	(2)	2	1			F	2
Isononylaldehyde	2754		**RTECS No**						**CAS No**							
Isooctaldehyde	1071	2	NI	2	NI	3	NI	0	0	(1)	1	1			F	1
Octyl aldehydes	542		**RTECS No**						**CAS No**		63885-09-6					
Isooctanol	1076	3	NI	3	R	2	0	1	0	(2)	2	(2)			F	2
iso-Octanol	2675		**RTECS No**		NS7700000				**CAS No**		26952-21-6					
Isooctylamine	1081	2	NI	2	NI	3	NI	1	1	3	3	3			FD	3
2-Ethylhexylamine	48		**RTECS No**		MQ5250000				**CAS No**		104-75-6					
Isopentene	1113	2	NI	2	NI	2	NI	(0)	(0)	(0)	(0)	(1)			E	2
iso-Pentene	2677		**RTECS No**		EM7600000				**CAS No**		563-45-1					
Isophorone	879	1	1	1	R	2	0	1	1	(2)	1	2			FD	2
Isophorone	399		**RTECS No**		GW7700000				**CAS No**		78-59-1					
Isophorone diamine	880	0	0	0	NR	2	0	1	(1)	(3)	3	3	S		D	3
Isophoronediamine	401		**RTECS No**		GV6129000				**CAS No**		2855-13-2					
Isophorone diisocyanate	881	1	NI	1	NR	4	NI	0	0	3	3	3	SA		S	3
Isophorone diisocyanate	400		**RTECS No**		NQ9370000				**CAS No**		4098-71-9					
Isoprene	882	2	2	2	NR	2	NI	0	0	0	1	2	CM		E	3
Isoprene	402		**RTECS No**		NT4037000				**CAS No**		78-79-5					
Isopropanol	1181	0	NI	0	R	0	0	0	0	0	1	2			D	2
Isopropyl alcohol	405		**RTECS No**		NT8050000				**CAS No**		67-63-0					
Isopropanolamine	1182	0	NI	0	R	2	NI	0	1	0	3	3			D	3
Isopropanolamine	403		**RTECS No**		UA5775000				**CAS No**		78-96-6					
Isopropyl acetate	1192	1	NI	1	R	1	NI	0	0	0	1	2			ED	2
Isopropyl acetate	404		**RTECS No**		AI4930000				**CAS No**		108-21-4					
Isopropylamine	1195	0	NI	0	R	2	NI	2	2	1	3	3			DE	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Isopropylamine	407		**RTECS No**		NT8400000				**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		**RTECS No**						**CAS No**							
Isopropyl benzene	1197	3	2	2	R	3	NI	0	0	0	2	1			FE	2
Isopropylbenzene	2687		**RTECS No**		GR8575000				**CAS No**		98-82-8					
Isopropyl benzene	1197	3	2	2	R	3	NI	0	0	0	2	1			FE	2
Propylbenzene (all isomers)	623		**RTECS No**		GR8575000				**CAS No**		98-82-8					
Isopropyl cyclohexane	1199	4	NI	4	(NR)	(3)	NI	(0)	(0)	(1)	(0)	(1)			FE	2
Isopropylcyclohexane	408		**RTECS No**						**CAS No**		696-29-7					
Isopropyltoluenes	549	4	4	4	(NR)	3	NI	0	(0)	1	2	(1)			FE	2
p-Cymene	552		**RTECS No**		GZ5950000				**CAS No**		99-87-6					
Isovaleraldehyde	1390	1	NI	1	R	3	NI	0	0	0	2	2			D	2
Valeraldehyde (all isomers)	731		**RTECS No**		ES3450000				**CAS No**		590-86-3					
Jatropha oil	2402	0	NI	(0)	(R)	(2)	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Jatropha oil	3637		**RTECS No**						**CAS No**							
[Jeffamine D-230] / Polyoxypropylene diamine	2352	1	NI	1	NR	1	NI	0	0	(3)	3	3			D	3
Polyoxypropylene diamine	3112		**RTECS No**						**CAS No**							
Kaolin slurry	883	Inorg	NI	0	Inorg	0	NI	0	0	0	0	0			S	0
Kaolin slurry	409		**RTECS No**		GF1670500				**CAS No**		1332-58-7					
Lactic acid	886	0	NI	0	R	1	NI	0	0	(3)	2	3			D	3
Lactic acid	410		**RTECS No**		OD2800000				**CAS No**		50-21-5					
Lactonitrile solution (80% or less)	887	0	NI	0	R	4	NI	2	4	(4)	NI	NI			D	3
Lactonitrile solution (80% or less)	411		**RTECS No**		OD8225000				**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		**RTECS No**						**CAS No**							
Latex, ammonia inhibited	889	0	NI	0	R	(2)	NI	0	0	(1)	0	1			D	1
Latex, ammonia (1% or less)- inhibited	413		**RTECS No**						**CAS No**							
Lauric acid	891	4	NI	4	R	4	1	0	(0)	(2)	1	2			Fp	2
Lauric acid	415		**RTECS No**		OE9800000				**CAS No**		143-07-7					
Lauryl methacrylate	893	5	NI	5	NR	0	NI	0	(0)	(1)	1	1			F	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Dodecyl methacrylate	300		RTECS No		OZ4300000				CAS No		142-90-5					
Lecithin (soybeans)	2146	0	NI	0	R	0	NI	0	0	(0)	0	(0)			SD	0
Lecithin	417		RTECS No						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		RTECS No						CAS No							
Linear alkyl (C12-16) propoxyamine ethoxylate	2380	3	0	3	NR	4	NI	1	(1)	(3)	3	(3)	S		D	3
Alkyl(C12-C16) propoxyamine ethoxylate	3423		RTECS No						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		RTECS No						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		RTECS No						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		RTECS No						CAS No							
Long-chain alkylphenate/Phenol sulphide mixture	1754	(0)	NI	(0)	(NR)	0	NI	0	0	(2)	2	2	S		Fp	3
Long-chain alkylphenate/Phenol sulphide mixture	425		RTECS No						CAS No							
Lubrizol polyolefin anhydride	1865	0	NI	0	NR	1	NI	0	0	(2)	1	(2)			Fp	2
Polyolefin anhydride	605		RTECS No						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		RTECS No						CAS No							
Magnesium alkyl (long chain) salicylate (overbased) in mineral oil (LOA)	71	(0)	NI	(0)	NR	(2)	NI	0	0	(1)	(1)	(1)	S		S	2
Magnesium long-chain alkyl salicylate (C11+)	429		RTECS No						CAS No							
Magnesium chloride	915	Inorg	0	0	Inorg	1	0	0	0	(0)	0	0			D	0
Magnesium chloride solution	427		RTECS No		OM2800000				CAS No		7786-30-3					
Magnesium hydroxide slurry	916	Inorg	0	0	Inorg	0	NI	0	0	(1)	(0)	1			S	1
Magnesium hydroxide slurry	428		RTECS No		OM3570000				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		RTECS No						CAS No							
Magnesium long chain alkaryl sulphonate (C11-C50) (LOA)	1967	0	NI	0	NR	0	NI	0	0	(2)	1	2	S		Fp	3
Magnesium long-chain alkaryl sulphonate (C11-C50)	430		RTECS No						CAS No							
Maleic acid/allyl sulfonic acid copolymer with phosphonate groups, partial sodium salt (aqueous solution)	2412	0	NI	0	NR	0	NI	(0)	(0)	(0)	(0)	(0)			D	0

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Maleic acid/allyl sulfonic acid copolymer, containing carboxylate, phosphonate & sulfonate groups, partial sodium salt	3688		**RTECS No**						**CAS No**							
Maleic anhydride	921	1	NI	1	R	2	0	1	2	(3)	3	3	S		D	3
Maleic anhydride	431		**RTECS No**		ON3675000				**CAS No**		108-31-6					
Maleic anhydride - sodium allylsulfonate copolymer(aqueous solution)	2410	0	NI	0	NR	1	NI	0	0	(0)	(0)	0			D	0
Maleic anhydride – sodium allylsulfonate copolymer (aqueous solution)	3686		**RTECS No**						**CAS No**							
Maltitol Syrup	2348	0	NI	0	R	0	NI	0	0	(0)	0	0			D	0
Maltitol solution	3078		**RTECS No**						**CAS No**							
Mango kernal 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		**RTECS No**						**CAS No**							
MCPA-dimethylammonium (ISO)	1536	2	NI	2	NI	2	NI	1	0	2	1	1	S		S	2
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution	62		**RTECS No**						**CAS No**							
2-Mercaptobenzothiazol	925	2	1	1	NR	4	2	0	0	(0)	0	0	S		S	2
Mercaptobenzothiazol, sodium salt solution	432		**RTECS No**		DL6475000				**CAS No**		149-30-4					
Mesityl oxide	946	1	NI	1	R	(1)	NI	1	0	2	2	2			D	2
Mesityl oxide	433		**RTECS No**		SB4200000				**CAS No**		141-79-7					
Metam-sodium (ISO)	202	0	NI	0	NR	4	NI	1	2	(2)	2	1	S		D	2
Metam sodium solution	434		**RTECS No**		FC2100000				**CAS No**		137-42-8					
Methacrylic acid-alkoxypoly (alkylene oxide) methacrylate co-polymer sodium salt (45% or less solution)	2288	NI	0	0	NR	1	NI	0	(0)	(1)	1	0			D	1
Methacrylic acid - alkoxypoly (alkylene oxide) methacrylate copolymer, sodium salt aqueous solution (45% or less)	2819		**RTECS No**						**CAS No**							
Methacrylic acid, inhibited	948	0	NI	0	R	2	0	1	2	2	3	3			D	3
Methacrylic acid	435		**RTECS No**		OZ2975000				**CAS No**		79-41-4					
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		**RTECS No**						**CAS No**							
Methacrylonitrile	949	0	NI	0	R	2	0	3	2	4	1	1	S	NT	ED	3
Methacrylonitrile	437		**RTECS No**		UD1400000				**CAS No**		126-98-7					
Methanol	951	0	NI	0	R	0	0	(2)	(2)	(2)	2	2	T		DE	3
Methyl alcohol	441		**RTECS No**		PC1400000				**CAS No**		67-56-1					
Methyl acetate	954	0	NI	0	R	1	NI	0	0	0	1	2			DE	2
Methyl acetate	438		**RTECS No**		AI9100000				**CAS No**		79-20-9					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Methyl acetoacetate	335	0	NI	0	R	1	NI	0	0	(2)	1	2			D	2
Methyl acetoacetate	439		**RTECS No**		AK5775000				**CAS No**		105-45-3					
Methyl acrylate	955	0	NI	0	R	3	NI	1	1	2	2	3	MS		D	3
Methyl acrylate	440		**RTECS No**		AT2800000				**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		**RTECS No**		PF6300000				**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		**RTECS No**		SA7350000				**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		**RTECS No**		MJ5075000				**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		**RTECS No**		BY4550000				**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		**RTECS No**						**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		**RTECS No**		SC0175000				**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		**RTECS No**		EL5425000				**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		**RTECS No**		EL5425000				**CAS No**		123-51-3					
Methyl butenol	967	0	NI	0	R	2	NI	1	0	(2)	2	2			D	2
Methylbutenol	458		**RTECS No**		EM9472500				**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		**RTECS No**		KN5250000				**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		**RTECS No**		MP1400000				**CAS No**		591-78-6					
Methylbutynol	968	0	NI	0	NR	1	NI	1	1	0	0	2			D	2
Methylbutynol	459		**RTECS No**		ES0810000				**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		**RTECS No**		ES0810000				**CAS No**		115-19-5					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Methyl butyrate	973	1	NI	1	NI	(2)	NI	0	0	2	2	(2)			ED	2
Methyl butyrate	444		**RTECS No**		ET5500000				**CAS No**		623-42-7					
Methyl cyclohexane	976	3	3	3	NR	3	1	0	0	1	1	1	A		E	2
Methylcyclohexane	460		**RTECS No**		GV6125000				**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		**RTECS No**		PC1075000				**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		**RTECS No**						**CAS No**							
N-Methyldiethanolamine	1491	0	NI	0	R	2	NI	1	0	(2)	1	2			D	2
Methyl diethanolamine	445		**RTECS No**		KL7525000				**CAS No**		105-59-9					
Methylene dithiocyanate	2235	2	NI	2	NR	5	NI	2	0	4	NI	NI	S		NI	3
Methylene bisthiocyanate	2693		**RTECS No**						**CAS No**							
2-Methyl-6-ethylaniline	984	2	NI	2	NR	2	NI	1	1	(2)	0	2			FD	2
2-Methyl-6-ethyl aniline	54		**RTECS No**		BY5600000				**CAS No**		24549-06-2					
2-Methyl-5-ethylpyridine	986	2	NI	2	NI	2	NI	1	2	(3)	3	3			FD	3
2-Methyl-5-ethyl pyridine	53		**RTECS No**		TJ6825000				**CAS No**		104-90-5					
Methyl formate	987	0	NI	0	R	1	NI	1	0	2	0	2			DE	2
Methyl formate	447		**RTECS No**		LQ8925000				**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		**RTECS No**		000000000				**CAS No**		6284-40-8					
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		**RTECS No**						**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		**RTECS No**		RA8225000				**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		**RTECS No**		SA9275000				**CAS No**		108-10-1					
Methyl methacrylate	995	1	NI	1	R	2	NI	0	0	0	2	2	S		ED	2
Methyl methacrylate	450		**RTECS No**		OZ5075000				**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		**RTECS No**						**CAS No**							

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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		**RTECS No**						**CAS No**							
Methyl naphthalenes	1999	4	NI	4	(NR)	(4)	NI	1	0	(2)	1	1		T	F	2
Methyl naphthalene (molten)	451		**RTECS No**						**CAS No**							
2-Methyl pentane	1000	3	NI	3	NI	4	NI	(0)	(0)	(2)	(2)	(2)			E	2
2-Methylpentane	2684		**RTECS No**		SA2995000				**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		**RTECS No**						**CAS No**							
Methyl propyl ketone	1003	0	NI	0	R	0	NI	1	0	(2)	1	2			FED	2
Methyl propyl ketone	452		**RTECS No**		SA7875000				**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		**RTECS No**		TJ4900000				**CAS No**		109-06-8					
3-Methylpyridine	1006	1	NI	1	R	1	NI	1	2	2	3	3			D	3
3-Methylpyridine	61		**RTECS No**		TJ5000000				**CAS No**		108-99-6					
4-Methylpyridine	1007	1	NI	1	R	1	NI	1	2	2	3	3			D	3
4-Methylpyridine	63		**RTECS No**		UT5425000				**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		**RTECS No**		UY5790000				**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		**RTECS No**		VO4725000				**CAS No**		119-36-8					
alpha-Methylstyrene	1010	3	3	3	NR	3	NI	0	0	1	2	1	M	(T)	FE	3
alpha-Methylstyrene	107		**RTECS No**		WL5075300				**CAS No**		98-83-9					
3-(Methylthio) propionaldehyde	993	0	NI	0	R	3	1	1	1	2	2	3	NS	T	D	3
3-(methylthio)propionaldehyde	2368		**RTECS No**		UE2285000				**CAS No**		3268-49-3					
Metolachlor (ISO)	113	2	2	2	NR	5	1	1	0	(2)	1	0	S		S	2
N-(2-Methoxy-1-methyl ethyl)-2-ethyl-6-methyl chloroacetanilide	469		**RTECS No**		AN3430000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Mobil syndril E51	2221	0	NI	0	R	1	NI	0	(0)	(0)	1	0			F	1
2-Ethylhexyl esters of fatty acids	2578		**RTECS No**						**CAS No**							
Molasses	1013	0	NI	0	R	0	NI	0	0	0	0	0			D	0
Molasses	462		**RTECS No**						**CAS No**							
Molybdenum polysulfide long chain alkyl dithiocarbamide complex	2344	4	2	2	NR	2	0	0	0	(2)	2	2			Fp	2
Molybdenum polysulfide long chain alkyl dithiocarbamide complex	3108		**RTECS No**						**CAS No**							
Mononitrobenzene	1017	1	1	1	R	3	(4)	(2)	2	2	1	1	CRT		SD	3
Nitrobenzene	501		**RTECS No**		DA6475000				**CAS No**		98-95-3					
Morpholine	1018	0	0	0	R	2	NI	1	2	2	3	3			D	3
Morpholine	463		**RTECS No**		QD6475000				**CAS No**		110-91-8					
Myrcene	1019	4	NI	4	R	4	1	0	0	(2)	2	NI			F	2
Myrcene	465		**RTECS No**		RG5365000				**CAS No**		123-35-3					
[Nalco 5740S Antifoam]	2291	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI			NI	NI
[Nalco 5740S Antifoam]	492		**RTECS No**						**CAS No**							
Naphthalene	1	3	3	3	NR	4	1	1	0	(2)	1	1	C	T	S	3
Naphthalene (molten)	493		**RTECS No**		QJ0525000				**CAS No**		91-20-3					
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		**RTECS No**		EC4850000				**CAS No**		9084-06-4					
Naphthenic acids	1021	NI	NI	NI	NI	3	NI	1	NI	NI	NI	NI		(T)	FD	NI
Naphthenic acids	495		**RTECS No**		QK8750000				**CAS No**		1338-24-5					
Neodecanoic acid	1025	4	NI	4	NR	2	NI	0	0	(2)	0	2			Fp	2
Neodecanoic acid	496		**RTECS No**						**CAS No**		26896-20-8					
Nitric acid (90% or less)	1029	Inorg	NI	0	Inorg	2	NI	(3)	(1)	4	3C	3			D	3
Nitric acid (70% and over)	498		**RTECS No**		QU5775000				**CAS No**		7697-37-2					
Nitric acid (90% or less)	1029	Inorg	NI	0	Inorg	2	NI	(3)	(1)	4	3C	3			D	3
Nitric acid (less than 70%)	499		**RTECS No**		QU5775000				**CAS No**		7697-37-2					
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		**RTECS No**		MB8400000				**CAS No**		5094-31-3					
Nitroethane	1037	0	NI	0	NR	2	NI	1	0	(2)	(0)	(1)			SD	2
Nitroethane	502		**RTECS No**		KI5600000				**CAS No**		79-24-3					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Nitroethane (80%)/Nitropropane (20%)	2245	0	1	1	NR	2	NI	1	1	2	0	1			E	2
Nitroethane(80%)/ Nitropropane(20%)	503		**RTECS No**						**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		**RTECS No**						**CAS No**							
2-Nitrophenol	1041	1	2	2	R	3	(2)	0	0	(1)	1	1			S	1
o-Nitrophenol (molten)	536		**RTECS No**		SM2100000				**CAS No**		88-75-5					
1-Nitropropane	1044	(0)	(1)	(1)	(NR)	(2)	NI	1	0	2	0	1			FED	2
1-Nitropropane	2747		**RTECS No**		TZ5075000				**CAS No**		108-03-2					
1- or 2- Nitropropane	2242	0	1	1	NR	1	NI	2	0	2	0	1	C		FED	3
1- or 2-Nitropropane	20		**RTECS No**						**CAS No**							
2-Nitropropane	1045	(0)	(1)	(1)	(NR)	(2)	NI	2	0	2	0	0	C		FED	3
2-Nitropropane	2748		**RTECS No**		TZ5250000				**CAS No**		79-46-9					
Nitropropane (60%) Nitroethane (40%) (mixture)	1046	0	1	1	NR	2	NI	1	0	2	0	1	C		FED	3
Nitropropane (60%)/Nitroethane (40%) mixture	504		**RTECS No**						**CAS No**							
o-Nitrotoluene	1049	2	2	2	NR	2	(1)	1	0	(2)	0	1	CMR		S	3
o-Nitrotoluene	2745		**RTECS No**		XT3150000				**CAS No**		88-72-2					
p-Nitrotoluene	1051	2	1	1	NR	3	0	1	0	(2)	0	1	R		S	3
p-Nitrotoluene	2746		**RTECS No**		XT3325000				**CAS No**		99-99-0					
o- or p-Nitrotoluenes	2241	2	2	2	NR	3	(1)	1	0	(2)	0	1	CMR		S	3
o- or p-Nitrotoluenes	532		**RTECS No**						**CAS No**							
Nonane	1054	4	NI	4	R	4	NI	0	0	1	0	0	A		FE	2
Nonane (all isomers)	506		**RTECS No**		RA6115000				**CAS No**		111-84-2					
Nonanoic acid	1055	3	NI	3	R	2	NI	0	0	(3)	2	3			F	3
Nonanoic acid (all isomers)	507		**RTECS No**		RA6650000				**CAS No**		112-05-0					
Nonene (all isomers)	2222	4	NI	4	NI	3	NI	0	0	0	1	1	A		FE	2
Nonene (all isomers)	508		**RTECS No**						**CAS No**							
1-Nonene	1060	4	NI	4	NI	3	NI	0	0	0	1	1	A		FE	2
1-Nonene	2680		**RTECS No**						**CAS No**		27215-95-8					
Nonyl acetate	1766	4	NI	4	NI	NI	NI	0	0	NI	NI	NI			F	NI
Nonyl acetate	509		**RTECS No**						**CAS No**		143-13-5					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Nonyl methacrylate monomer	1061	5	NI	5	R	3	NI	(0)	(0)	(1)	(1)	(1)			F	1
Nonyl methacrylate monomer	511		**RTECS No**						**CAS No**		2696-43-7					
Nonyl phenol	1062	5	4	4	NR	5	3	1	0	(3)	3	3			FD	3
Nonylphenol	512		**RTECS No**		SM5600000				**CAS No**		25154-52-3					
Nonyl(C6-C12)phenol poly(4-12)ethoxylate	1063	4	NI	4	NR	3	1	0	0	(2)	2	1			D	2
Alkyl(C7-C11)phenol poly(4-12) ethoxylate	97		**RTECS No**						**CAS No**							
Nonyl(C6-C12)phenol poly(4-12)ethoxylate	1063	4	NI	4	NR	3	1	0	0	(2)	2	1			D	2
Nonylphenol poly(4+)ethoxylate	513		**RTECS No**						**CAS No**							
Octamethylcyclotetrasiloxane	2398	5	5	5	NR	0	3	0	0	0	0	0			F	1
Octamethylcyclotetrasiloxane	3633		**RTECS No**						**CAS No**							
Octane	1072	5	NI	5	(R)	4	NI	(0)	(0)	0	0	0	A		FE	2
Octane (all isomers)	538		**RTECS No**		RG8400000				**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		**RTECS No**		RH0175000				**CAS No**		134-07-2					
1-Octanol	1075	3	NI	3	R	2	0	1	0	(2)	2	2			Fp	2
Octanol (all isomers)	540		**RTECS No**		RH6550000				**CAS No**		111-87-5					
1-Octanol	1075	3	NI	3	R	2	0	1	0	(2)	2	2			Fp	2
1-Octanol	2676		**RTECS No**		RH6550000				**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		**RTECS No**						**CAS No**							
Octyl acetate	1080	3	NI	3	R	2	NI	0	0	(1)	1	NI			FD	1
n-Octyl acetate	483		**RTECS No**		AJ1400000				**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		**RTECS No**						**CAS No**		110-29-2					
OGA 480 OGA 492 (Polyether amine)	1457	NI	NI	NI	NR	2	NI	0	0	(2)	2	2			Fp	2
Long-chain polyetheramine in alkyl (C2-C4) benzenes	422		**RTECS No**						**CAS No**							
OGA 480 OGA 492 (Polyether amine)	1457	NI	NI	NI	NR	2	NI	0	0	(2)	2	2			Fp	2
Long-chain polyetheramine in aromatic solvent	423		**RTECS No**						**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		**RTECS No**						**CAS No**							

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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, stabilised	3548		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Oleic acid	1089	0	NI	0	R	0	NI	0	1	(2)	1	1			Fp	2
Oleic acid	548		**RTECS No**		RG2275000				**CAS No**		112-80-1					
Oleylamine	1862	0	NI	0	NR	4	NI	1	(1)	(3)	3B	3			Fp	3
Oleylamine	550		**RTECS No**						**CAS No**							
Olive oil	1090	0	NI	0	R	(2)	NI	(0)	(0)	(1)	1	1			Fp	2
Olive oil	2771		**RTECS No**		RK4300000				**CAS No**		8001-25-0					
[OLOA 17503]	2376	5	(3)	(3)	R	2	NI	0	0	(2)	2	0			Fp	2
Alkenoic acid ester, borated	3153		**RTECS No**						**CAS No**							
[OLOA 224]	1728	NI	NI	NI	NR	0	NI	0	0	(1)	1	(1)			Fp	2
Calcium long-chain alkyl phenolic amine (C8-C40)	171		**RTECS No**						**CAS No**							
Orange juice	2375	0	0	0	R	0	0	0	0	(0)	0	0			D	0
Orange juice	3151		**RTECS No**						**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		**RTECS No**						**CAS No**							
Oxatetra-azahydroxyalkanoic acid, substituted with acetic acid / acetoxyethanolamine	2413	1	NI	1	R	1	NI	0	0	0	0	0			D	0
Oxatetra-azahydroxyalkanoic acid, substituted with acetic acid / acetoxyethanolamine	3689		**RTECS No**						**CAS No**							
Palm acid oil	2307	(0)	NI	(0)	(R)	(0)	NI	0	(0)	(1)	0	1			Fp	2
Palm acid oil	3037		**RTECS No**						**CAS No**							
Palm fatty acid distillate	2310	NI	NI	(0)	(R)	(0)	NI	0	(0)	(1)	0	1			Fp	2
Palm fatty acid distillate	3040		**RTECS No**						**CAS No**							

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Palm Mid Fraction	2363	(0)	NI	(0)	(R)	(0)	NI	0	0	(0)	(0)	(0)			Fp	2
Palm mid-fraction	3126		**RTECS No**						**CAS No**							
Palm nut oil	1094	0	NI	0	R	1	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
Palm kernel oil	2766		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Palm olein	2250	0	NI	0	R	0	NI	0	(0)	(0)	0	0			Fp	2
Palm olein	2765		**RTECS No**						**CAS No**							
Palm stearin	2251	0	NI	0	R	0	NI	0	(0)	(0)	0	0			Fp	2
Palm stearin	555		**RTECS No**						**CAS No**							
Paraffin wax	1086	0	NI	0	R	0	NI	(0)	(0)	(1)	1	1			Fp	2
Paraffin wax	556		**RTECS No**		RV0350000				**CAS No**		8002-74-2					
Paraldehyde	1098	0	0	0	NR	0	NI	1	0	0	1	3			D	3
Paraldehyde	557		**RTECS No**		YK0525000				**CAS No**		123-63-7					
Pentachloroethane	1099	3	2	2	NI	3	1	1	(1)	1	(1)	(1)	CT		S	3
Pentachloroethane	558		**RTECS No**		KI6300000				**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		**RTECS No**		RZ2464000				**CAS No**		504-60-9					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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		**RTECS No**						**CAS No**							
Pentaethylene hexamine	1103	0	NI	0	NI	4	NI	1	(2)	(3)	3	(3)	S		D	3
Pentaethylenehexamine	560		**RTECS No**		RZ2680000				**CAS No**		4067-16-7					
Pentane	1105	3	NI	3	R	3	NI	0	0	0	1	1			E	2
Pentane (all isomers)	561		**RTECS No**		RZ9450000				**CAS No**		109-66-0					
1,5-Pentanedial solution, (5-50%)	1107	0	NI	0	R	3	0	1	0	4	3	3	S		D	3
Glutaraldehyde solutions (50% or less)	362		**RTECS No**		MA2450000				**CAS No**		111-30-8					
Pentanoic acid	1109	1	NI	1	NI	2	NI	1	2	(3)	3	3			FD	3
Pentanoic acid	562		**RTECS No**		YV6100000				**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		**RTECS No**						**CAS No**							
1-Pentanol	1110	1	1	1	(R)	1	0	1	0	(3)	2	3			FED	3
n-Amyl alcohol	473		**RTECS No**		SB9800000				**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		**RTECS No**		SA4900000				**CAS No**		6032-29-7					
Pentasodium triphosphate*	2418	Inorg	0	0	Inorg	1	NI	NI	NI	NI	NI	NI			NI	NI
	3694		**RTECS No**						**CAS No**							
Pentene (all isomers)	1992	2	NI	2	NI	(2)	NI	(0)	(0)	(0)	(0)	(1)			E	2
Pentene (all isomers)	563		**RTECS No**						**CAS No**							
1-Pentene	1114	2	NI	2	NI	(2)	NI	(0)	(0)	0	(0)	(1)			E	2
1-Pentene	2679		**RTECS No**						**CAS No**		109-67-1					
2-Pentene	1115	2	NI	2	NI	2	NI	(0)	(0)	(0)	(0)	(1)			E	2
2-Pentene	2678		**RTECS No**						**CAS No**		109-68-2					
Petrolatum	2244	0	NI	0	NR	0	NI	0	0	2	1	1			Fp	2
Petrolatum	565		**RTECS No**						**CAS No**							
Petroleum wax	1122	0	NI	0	NR	0	NI	0	0	(0)	0	0			Fp	2
Waxes	741		**RTECS No**		RV0350000				**CAS No**		8002-74-2					
Phenol	1124	1	2	2	R	3	0	2	2	(3)	3	3		NT	S	3
Phenol	566		**RTECS No**		SJ3325000				**CAS No**		108-95-2					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Phenylxylylethane	1135	5	4	4	NR	(2)	NI	1	0	(1)	(0)	0			F	1
1-Phenyl-1-xylyl ethane	23		**RTECS No**		CZ7300000				**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		**RTECS No**						**CAS No**							
Phosphoric acid	1138	0	NI	0	Inorg	1	NI	(3)	(3)	3	3	3			D	3
Phosphoric acid	567		**RTECS No**		TB6300000				**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		**RTECS No**		TH3500000				**CAS No**		7732-14-0					
Phthalic anhydride (molten)	1146	1	NI	1	R	2	0	1	0	(3)	1	3	S		S	3
Phthalic anhydride (molten)	569		**RTECS No**		TI3150000				**CAS No**		85-44-9					
alpha-Pinene	40	4	NI	4	R	4	NI	0	0	0	1	(1)	S	T	F	3
alpha-Pinene	109		**RTECS No**		DT7000000				**CAS No**		80-56-8					
beta-Pinene	41	4	NI	4	(R)	4	NI	0	0	0	1	(1)	S	NT	F	3
beta-Pinene	141		**RTECS No**		DT5078500				**CAS No**		1330-16-1					
Pine oil	1148	4	NI	4	NR	4	NI	0	0	(1)	(1)	(1)	S	(T)	Fp	3
Pine oil	570		**RTECS No**		TK5100000				**CAS No**		8002-09-3					
Piperazine, 68% Aqueous	2433	0	NI	0	NR	2	NI	0	0	2	3A	3	SN		SD	3
Piperazine, 68% Aqueous	3748		**RTECS No**						**CAS No**							
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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Polyalkylalkenaminesuccinimide, molybdenum oxysulphide	2379	NI	0	0	NR	0	NI	0	0	(0)	0	0			Fp	2
Polyalkylalkenaminesuccinimide, molybdenum oxysulphide	3422		**RTECS No**						**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		**RTECS No**						**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate	575		**RTECS No**						**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		**RTECS No**						**CAS No**							
Poly alkyl(C10-C18) methacrylate/ethylene-propylene copolymeer 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		**RTECS No**						**CAS No**							
Polyaluminium chloride (sol.)	1136	Inorg	0	0	Inorg	0	NI	(0)	(0)	(1)	(0)	(1)			D	1
Polyaluminium chloride solution	584		**RTECS No**		BD0549500				**CAS No**		1327-41-9					
Polybutene	1154	0	NI	0	(NR)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			Fp	2
Polybutene	585		**RTECS No**		EM9032000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Polyether, borated	1863	0	NI	0	NR	3	1	0	(0)	(1)	1	0			D	1
Polyether, borated	572		**RTECS No**						**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		**RTECS No**						**CAS No**							
Polyethylene amines / paraffin mixtures	1991	(5)	NI	(5)	NR	3	0	0	(1)	(3)	(2)	(3)	S		Fp	0
Polyethylene polyamines (more than 50% C5 -C20 paraffin oil)	591		**RTECS No**						**CAS No**							
Polyethylene glycol	1157	0	NI	0	NR	0	NI	0	0	0	1	1			D	1
Polyethylene glycol	589		**RTECS No**		TQ3500000				**CAS No**		25322-68-3					
Polyethylene glycol dimethyl ether	1158	0	NI	0	NR	0	NI	0	0	(1)	1	(1)			D	1
Polyethylene glycol dimethyl ether	590		**RTECS No**		MC9630000				**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		**RTECS No**						**CAS No**							
Polyethylene polyamines	2367	0	NI	0	NR	3	0	1	0	(3)	2	(3)	S		D	0
Polyethylene polyamines	3131		**RTECS No**						**CAS No**							
Polyferric sulphate solution	338	Inorg	0	0	Inorg	(2)	NI	1	(1)	(3)	3	(3)			D	3
Polyferric sulphate solution	592		**RTECS No**						**CAS No**							
Polyglycerine, sodium salt, solution	1874	0	NI	0	R	0	NI	0	0	(3)	(2)	3			D	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Polyglycerin, sodium salt solution (containing less than 3% sodium hydroxide)	593		**RTECS No**						**CAS No**							
Polyglycerol	1511	NI	NI	NI	NI	NI	NI	0	(0)	(0)	(0)	(0)			D	0
Polyglycerol	594		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Polyisobutenyl anhydride adduct	2127	0	NI	0	NR	0	NI	0	0	(1)	0	1			FD	1
Polyisobutenyl anhydride adduct	2256		**RTECS No**						**CAS No**							
Poly(4+)isobutylene	2264	0	NI	0	NR	0	NI	(0)	(0)	(0)	(0)	(0)			Fp	2
Poly(4+)isobutylene	578		**RTECS No**						**CAS No**							
Polymethylene polyphenyl isocyanate	1153	NI	(2)	(2)	NR	0	0	0	0	(2)	2	2	S		S	2
Polymethylene polyphenyl isocyanate	595		**RTECS No**		TR0350000				**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Polyolefin amide alkeneamine borate (C28-C250) (LOA)	1970	0	NI	0	NR	0	NI	0	0	(0)	0	(0)			Fp	2
Polyolefin amide alkeneamine borate (C28-C250)	600		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**		98761-78-5					
Polyolefinamine (C28-C250) (LOA)	2107	0	NI	0	NR	2	NI	0	(0)	(2)	2	(1)			Fp	2
Polyolefinamine in aromatic solvent	611		**RTECS No**						**CAS No**							
Polyolefinamine (C28-C250) (LOA)	2107	0	NI	0	NR	2	NI	0	(0)	(2)	2	(1)			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Polyolefinamine (C28-C250)	609		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Polyoxyethylene sorbitan monooleate	1442	3	NI	3	NI	(3)	NI	0	(0)	(1)	0	1			D	1
Poly(20)oxyethylene sorbitan monooleate	577		**RTECS No**		WG2932500				**CAS No**		9005-65-6					
Polypropylene	1512	0	NI	0	NR	(0)	NI	(0)	(0)	(0)	(0)	(0)			F	1
Poly(5+)propylene	579		**RTECS No**		UD1842000				**CAS No**		9003-07-0					
Polypropylene glycol	1159	0	NI	0	(NR)	1	NI	1	0	(1)	1	1			D	1
Polypropylene glycol	612		**RTECS No**		TR6125000				**CAS No**		25322-69-4					
Polysiloxane	1161	NI	4	4	NI	2	NI	0	(0)	(0)	0	0			F	1
Dimethylpolysiloxane	275		**RTECS No**						**CAS No**							
Polysiloxane	1161	NI	4	4	NI	2	NI	0	(0)	(0)	0	0			F	1
Polysiloxane	613		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Potassium chloride solution	1513	0	0	0	Inorg	1	0	0	(0)	(0)	0	0			D	0
Potassium chloride solution	614		**RTECS No**		TS8050000				**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Potassium formate solutions	615		**RTECS No**		LQ9625000				**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		**RTECS No**		TT2100000				**CAS No**		1310-58-3					
Potassium oleate	1497	3	NI	3	R	4	NI	(0)	(0)	(1)	1	1			FD	1
Potassium oleate	617		**RTECS No**		RK1150000				**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		**RTECS No**						**CAS No**							
Propanol	1180	0	NI	0	R	0	NI	1	0	0	1	2	R		D	3
n-Propyl alcohol	488		**RTECS No**		UH8225000				**CAS No**		71-23-8					
Propanolamine	1183	0	NI	0	R	2	NI	0	1	(3)	3	3			D	3
n-Propanolamine	485		**RTECS No**		UA5600000				**CAS No**		156-87-6					
2-Propene-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer (aqueous solution)	2420	0	NI	0	R	2	0	0	(0)	(1)	0	1			D	1
2-Propene-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer	3696		**RTECS No**						**CAS No**							
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		**RTECS No**						**CAS No**							
beta-Propiolactone	1184	0	NI	0	R	(2)	NI	2	(2)	4	3B	3	CM		D	3
beta-Propiolactone	142		**RTECS No**		RQ7350000				**CAS No**		57-57-8					
Propionaldehyde	1185	0	NI	0	R	2	NI	1	0	1	2	2			DE	2
Propionaldehyde	619		**RTECS No**		UE0350000				**CAS No**		123-38-6					
Propionic acid	1186	0	NI	0	R	2	NI	0	0	(3)	3B	3			D	3
Propionic acid	620		**RTECS No**		UE5950000				**CAS No**		79-09-4					
Propionic anhydride	1187	0	NI	0	R	2	NI	0	0	(3)	2	3			FD	3
Propionic anhydride	621		**RTECS No**		UF9100000				**CAS No**		123-62-6					
Propionitrile	1188	0	NI	0	NI	0	NI	3	3	4	1	2	R		D	3
Propionitrile	622		**RTECS No**		UF9625000				**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		**RTECS No**		AJ3675000				**CAS No**		109-60-4					
Propylamine	1194	0	NI	0	NI	1	NI	2	2	3	3	3			DE	3
n-Propylamine	490		**RTECS No**		UH9100000				**CAS No**		107-10-8					
Propyl benzene	1196	NI	NI	NI	NI	3	NI	NI	NI	NI	NI	NI		(T)	FE	NI

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Propylbenzene	2686		RTECS No		DA8750000				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		RTECS No		TX4400000				CAS No		540-54-5					
Propylene carbonate	2056	0	NI	0	R	0	NI	0	0	(3)	2	3			D	3
Propylene carbonate	624		RTECS No		FF9650000				CAS No		108-32-7					
Propylene dimer	1201	3	NI	3	R	3	NI	NI	NI	NI	NI	NI			E	2
Propylene dimer	625		RTECS No						CAS No							
1,2-Propylene glycol	1202	0	NI	0	R	0	0	0	0	(1)	0	1			D	1
Propylene glycol	626		RTECS No		TY2000000				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		RTECS No		AI8925000				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		RTECS No						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		RTECS No		UB8886000				CAS No		4169-04-4					
Propylene oxide	76	0	NI	0	R	2	NI	1	1	2	2	3	CMR		DE	3
Propylene oxide	630		RTECS No		TZ2975000				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		RTECS No						CAS No							
Propylene tetramer	2255	NI	4	4	NR	(4)	NI	(0)	(0)	(1)	(1)	(1)			F	1
Propylene tetramer	631		RTECS No						CAS No							
Propylene trimer	1207	5	4	4	NR	3	2	(0)	(0)	(1)	(1)	(1)			FE	2
Propylene trimer	632		RTECS No		UD2794000				CAS No		13987-01-4					
Pyridine	1213	0	NI	0	R	3	0	1	1	2	1	3		NT	D	3
Pyridine	634		RTECS No		UR8400000				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		RTECS No						CAS No							
Pyrolysis gasoline	2271	(4)	(3)	(3)	(R)	(3)	(1)	1	0	(2)	2	2	TCM		FE	3
Pyrolysis gasoline (containing benzene)	1990		RTECS No						CAS No							
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Rapeseed oil	3045		**RTECS No**						**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		**RTECS No**						**CAS No**							
Rape seed oil fatty acid, methyl ester	2209	0	0	0	R	0	NI	0	(0)	(1)	1	1			Fp	2
Rape seed oil fatty acid methyl esters	2576		**RTECS No**						**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		**RTECS No**						**CAS No**							
Rosin	1219	3	NI	3	NR	3	NI	0	0	2	(1)	1	S		S	2
Rosin	635		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**		VN2230000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Silica slurry	1514	Inorg	0	0	Inorg	0	0	(0)	(0)	0	(0)	(0)			S	0
Microsilica slurry	2507		**RTECS No**						**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		**RTECS No**		AJ4375000				**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		**RTECS No**		BD1600000				**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		**RTECS No**						**CAS No**		1344-00-9					
Sodium benzoate	1475	0	NI	0	R	1	NI	0	(0)	(1)	0	1			D	1
Sodium benzoate	644		**RTECS No**		DH6650000				**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		**RTECS No**						**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Sodium borohydride (15% or less)/Sodium hydroxide solution	645		**RTECS No**						**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		**RTECS No**		VZ 315000				**CAS No**		7647-15-6					
Sodium carbonate	1243	Inorg	0	0	Inorg	1	NI	0	0	2	1	2			SD	2
Sodium carbonate solution	646		**RTECS No**		VZ4050000				**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	S		D	2
Sodium chlorate solution (50% or less)	647		**RTECS No**		FO0525000				**CAS No**		7775-09-9					
Sodium dichromate solution	487	Inorg	0	0	Inorg	4	1	2	2	4	2	3	CMS		D	3
Sodium dichromate solution (70% or less)	649		**RTECS No**		HX7700000				**CAS No**		10588-01-9					
Sodium hydrogen sulphide/Ammonium sulphide(mixture)	1253	Inorg	0	0	Inorg	3	NI	1	1	0	2	2			D	2
Sodium hydrosulphide/Ammonium sulphide solution	653		**RTECS No**						**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		**RTECS No**						**CAS No**							
Sodium hydrogen sulphide,solutions	1252	Inorg	0	0	Inorg	1	NI	1	1	1	2	2			D	2
Sodium hydrosulphide solution (45% or less)	652		**RTECS No**		WE1900000				**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		**RTECS No**		VZ2000000				**CAS No**		7631-90-5					
Sodium hydroxide	1254	Inorg	0	0	Inorg	2	NI	1	1	(3)	3C	3			D	3
Sodium hydroxide solution	654		**RTECS No**		WB4900000				**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	S		D	3
Sodium hypochlorite solution (15% or less)	2785		**RTECS No**		NH3486300				**CAS No**		7681-52-9					
Sodium hypochlorite solutions containing more than 20% Na0Cl	1255	Inorg	0	0	Inorg	5	2	0	0	1	3	3	S		D	3
Sodium hypochlorite solution (Full strength solution)	655		**RTECS No**		NH3486300				**CAS No**		7681-52-9					
Sodium Methylate (21-30% in Methanol)	2427	0	NI	0	R	1	NI	2	(2)	(3)	3	3	T		D	3
Sodium Methylate Solution 21-30% in Methanol	3608		**RTECS No**						**CAS No**							
Sodium nitrate	1259	Inorg	0	0	Inorg	0	NI	(0)	(0)	(0)	(1)	(1)			SD	1
Sodium nitrate	656		**RTECS No**		WC5600000				**CAS No**		7631-99-4					
Sodium nitrite	340	Inorg	0	0	Inorg	3	0	2	(2)	2	0	1			SD	2
Sodium nitrite solution	658		**RTECS No**		RA1225000				**CAS No**		7632-00-0					
Sodium perborate monohydrate	2284	Inorg	NI	NI	Inorg	3	NI	1	0	(3)	2	3			NI	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Sodium perborate monohydrate	2948		**RTECS No**						**CAS No**							
Sodium petroleum sulphonate	1860	0	NI	0	(NR)	2	NI	0	(0)	(2)	1	2	S		S	2
Sodium petroleum sulphonate	660		**RTECS No**						**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		**RTECS No**						**CAS No**							
Sodium silicate (solution)	1262	Inorg	0	0	Inorg	2	NI	1	0	(3)	3	3			D	3
Sodium silicate solution	661		**RTECS No**						**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		**RTECS No**		WE1650000				**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		**RTECS No**		WE1905000				**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		**RTECS No**		WE2150000				**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		**RTECS No**						**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		**RTECS No**		XL2275000				**CAS No**		540-72-7					
Sorbitan monooleate	2215	(5)	NI	(5)	R	3	NI	0	NI	NI	0	0			Fp	2
Sorbitan monooleate	2408		**RTECS No**						**CAS No**							
Sorbitol	1265	0	NI	0	R	0	NI	0	(0)	(0)	(0)	(0)			D	0
Sorbitol solution	668		**RTECS No**		LZ4290000				**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		**RTECS No**						**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 acids, methyl esters	3737		**RTECS No**						**CAS No**							
Styrene (monomer)	1273	3	(2)	3	R	3	NI	1	0	2	2	2	CM		FE	3
Styrene monomer	669		**RTECS No**		WL3675000				**CAS No**		100-42-5					
Styrene butadiene rubber latex	1274	0	NI	0	NR	0	NI	0	0	(1)	0	1			D	1
Latex: Carboxylated styrene-Butadiene copolymer; Styrene-Butadiene rubber	414		**RTECS No**						**CAS No**							
Sulfurized fat(C14-C20) (LOA)	1853	0	NI	0	NR	1	NI	0	(0)	(1)	0	(1)			FD	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Sulphurized fat (C14-C20)	2257		**RTECS No**						**CAS No**							
Sulfurized 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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Sulpholane	1277	0	1	1	NR	2	0	1	0	0	1	2			SD	2
Sulpholane	673		**RTECS No**		XN0700000				**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		**RTECS No**						**CAS No**							
Sulphur	906	Inorg	0	0	Inorg	0	NI	0	0	(1)	1	1			S	1
Sulphur (molten)	675		**RTECS No**		WS4250000				**CAS No**		7704-34-9					
Sulphuric acid	1280	0	NI	0	Inorg	2	NI	(3)	(3)	4	3C	3	C		D	3
Sulphuric acid	676		**RTECS No**		WS5600000				**CAS No**		7664-93-9					
Sulphuric acid	1280	0	NI	0	Inorg	2	NI	(3)	(3)	4	3C	3	C		D	3
Oleum	549		**RTECS No**		WS5600000				**CAS No**		7664-93-9					
Sulphuric acid	1280	0	NI	0	Inorg	2	NI	(3)	(3)	4	3C	3	C		D	3
Sulphuric acid, spent	677		**RTECS No**		WS5600000				**CAS No**		7664-93-9					
Sunflower oil	1283	0	NI	0	R	0	NI	(0)	(0)	(1)	(0)	(1)			Fp	2
Sunflower seed oil	2782		**RTECS No**						**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		**RTECS No**		KN0875000				**CAS No**		111-44-4					
Tall oil, crude and distilled	1285	(4)	NI	(4)	(R)	(2)	NI	0	0	(0)	0	0	S		Fp	2
Tall oil (crude and distilled)	678		**RTECS No**						**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		**RTECS No**						**CAS No**							
Tall oil fatty acid (resin acids less than 2%)	1287	0	0	0	R	0	0	0	0	(1)	1	0			Fp	2
Tall oil fatty acid (resin acids less than 20%)	679		**RTECS No**						**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		**RTECS No**						**CAS No**							
Tall oil pitch	2323	3	NI	3	NR	0	0	0	0	(0)	0	(0)			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Tall oil pitch	3051		**RTECS No**						**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		**RTECS No**						**CAS No**							
Tall oil soap, crude	2432	0	NI	0	R	2	0	(0)	(0)	(3)	(3)	(3)	S		Fp	3
Tall oil soap, crude	3735		**RTECS No**						**CAS No**							
Tallow	1288	0	NI	0	R	0	NI	0	0	(0)	(0)	(0)			Fp	2
Tallow	682		**RTECS No**						**CAS No**		61789-21-6					
Tallow fatty acid	1289	0	NI	0	R	0	NI	0	(0)	(0)	(0)	(0)			Fp	2
Tallow fatty acid	684		**RTECS No**						**CAS No**							
1,1,2,2-Tetrachloroethane	53	2	2	2	NR	3	0	2	0	2	2	2			SD	2
Tetrachloroethane	687		**RTECS No**		KI8575000				**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		**RTECS No**		KX3850000				**CAS No**		127-18-4					
Tetrachloromethane	1296	2	2	2	NR	3	0	0	0	0	1	1	CT		S	3
Carbon tetrachloride	178		**RTECS No**		FG4900000				**CAS No**		56-23-5					
Tetradecanoic acid (Myristic acid)	1298	5	NI	0	R	0	NI	0	(0)	(1)	(1)	(1)			Fp	2
n-Tetradecanoic acid	491		**RTECS No**		QH4375000				**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		**RTECS No**		QH4375000				**CAS No**		544-63-8					
Tetraethylene glycol	1301	0	NI	0	NR	0	NI	0	0	0	1	1			D	1
Tetraethylene glycol	688		**RTECS No**		XC2100000				**CAS No**		112-60-7					
Tetraethylene pentamine	1302	0	NI	0	NR	3	NI	0	2	(3)	3	3	S		D	3
Tetraethylene pentamine	689		**RTECS No**		KH8585000				**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		**RTECS No**		TP4550000				**CAS No**		78-00-2					
Tetrahydrofuran	1304	0	NI	0	R	0	NI	0	(0)	0	1	2			DE	2
Tetrahydrofuran	690		**RTECS No**		LU5950000				**CAS No**		109-99-9					
Tetrahydronaphthalene	1305	3	3	3	NR	3	NI	0	0	(2)	2	0			F	2
Tetrahydronaphthalene	691		**RTECS No**		QK3850000				**CAS No**		119-64-2					
1,2,3,4-Tetramethylbenzene	1307	4	NI	4	NI	4	NI	0	(0)	(1)	1	(1)			F	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Tetramethylbenzene (all isomers)	692		**RTECS No**		DC0465000				**CAS No**		488-23-3					
Tetrapotassium pyrophosphate	2400	Inorg	0	0	Inorg	1	NI	0	NI	NI	NI	NI			D	NI
Tetrapotassium pyrophosphate	3635		**RTECS No**						**CAS No**		7320-34-5					
Thixatrol plus	2210	5	NI	5	R	3	NI	0	0	0	1	1			S	1
Thixatrol Plus	2699		**RTECS No**						**CAS No**							
Titanium dioxide (64 - 77% solution in water)	2080	Inorg	1	1	Inorg	1	NI	0	0	0	1	1			NI	1
Titanium dioxide slurry	2259		**RTECS No**						**CAS No**		13463-67-7					
Toluene	330	2	2	2	R	3	0	0	0	0	2	2	ANR	NT	E	3
Toluene	693		**RTECS No**		XS5250000				**CAS No**		108-88-3					
Toluene diisocyanate	1315	(3)	1	1	NR	2	NI	0	(0)	4	3	3	SCL		S	3
Toluene diisocyanate	694		**RTECS No**		CZ6300000				**CAS No**		584-84-9					
Toluidines	1316	1	1	1	R	4	2	1	0	(2)	2	2	CM		FD	3
o-Toluidine	537		**RTECS No**						**CAS No**							
2,4-Tolylenediamine	1317	0	2	2	NR	3	0	2	2	4	1	2	CMS		Fp	3
Toluenediamine	695		**RTECS No**		XS9625000				**CAS No**		96-80-7					
Tolyl triazole	2292	1	NI	1	NR	2	0	1	0	(2)	(1)	2			S	2
Tolyl triazole	696		**RTECS No**						**CAS No**							
Tributyl phosphate	1319	4	2	2	R	3	0	1	0	2	2	2	S		F	3
Tributyl phosphate	697		**RTECS No**		TC7700000				**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		**RTECS No**						**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		**RTECS No**		DC2100000				**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		**RTECS No**		KJ2975000				**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		**RTECS No**		KJ3150000				**CAS No**		70-00-5					
1,1,2-Trichloro-ethylene	329	2	2	2	NR	3	NI	0	0	0	2	2	MC		SD	3
Trichloroethylene	698		**RTECS No**		KX4550000				**CAS No**		79-01-6					
Trichloromethane	1328	1	1	1	NR	2	0	2	0	2	1	1	CT		SD	3

EHS Name / TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Chloroform	186		RTECS No		FS9100000				CAS No		67-66-3					
1,2,3-Trichloropropane	1329	2	2	2	NR	2	0	2	2	3	2	2	C		SD	3
1,2,3-Trichloropropane	6		RTECS No		TZ9275000				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		RTECS No		KJ4000000				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		RTECS No		TD0175000				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		RTECS No		TD0175000				CAS No		1330-78-5					
Tridecane	1333	0	NI	0	NI	0	NI	0	0	(1)	1	0			Fp	2
Tridecane	701		RTECS No		YD3025000				CAS No		629-50-5					
Tridecanoic acid	1334	5	NI	5	(R)	3	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Tridecanoic acid	702		RTECS No		YD3850000				CAS No		638-53-9					
Tridecyl acetate	1768	5	NI	5	NI	0	NI	0	(0)	(2)	2	2			F	2
Tridecyl acetate	703		RTECS No						CAS No		1072-33-9					
Triethanolamine	1338	0	0	0	R	1	NI	0	0	(2)	1	2			D	2
Triethanolamine	704		RTECS No		KL9275000				CAS No		102-71-6					
Triethylamine	1339	1	0	0	R	3	0	1	2	2	2	3			D	3
Triethylamine	706		RTECS No		YE0175000				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		RTECS No		DC2490000				CAS No		25340-18-5					
Triethylene glycol	1341	0	NI	0	R	0	0	0	0	(1)	1	1			D	1
Triethylene glycol	708		RTECS No		YE4550000				CAS No		112-27-6					
Triethylenetetramine	1346	0	NI	0	NR	3	NI	0	2	(3)	3	3	S		D	3
Triethylenetetramine	709		RTECS No		YE6650000				CAS No		112-24-3					
Triethyl phosphate	1348	0	0	0	NR	1	0	1	0	0	(2)	(2)			D	2
Triethyl phosphate	705		RTECS No		TC7900000				CAS No		78-40-0					
Triethyl phosphite	1349	0	NI	0	R	1	NI	1	0	2	1	2	S		FE	2
Triethyl phosphite	710		RTECS No		TH1130000				CAS No		122-52-1					
Triisopropanolamine	1370	0	0	0	NR	1	0	1	0	0	(2)	3			FD	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Triisopropanolamine	711		**RTECS No**		UB8750000				**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		**RTECS No**						**CAS No**		68937-41-7					
Trimethylacetic acid	1350	1	1	1	R	2	NI	1	1	(2)	2	2			Fp	2
Trimethylacetic acid	714		**RTECS No**		TO7700000				**CAS No**		75-98-9					
Trimethylamine	1353	0	NI	0	R	1	NI	1	0	2	3	3			DE	3
Trimethylamine solution (30% or less)	715		**RTECS No**		PA0350000				**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		**RTECS No**		DC3300000				**CAS No**		526-73-8					
2,4,4-Trimethyl hexamethylene diamine	1359	1	NI	1	NI	NI	NI	1	0	(3)	2	3	S		D	3
Trimethylhexamethylenediamine (2,2,4- and 2,4,4-isomers)	718		**RTECS No**		MO1451000				**CAS No**		26520-58-0					
Trimethyl hexamethylene diisocyanate	1360	0	NI	0	NI	3	NI	0	NI	NI	NI	NI	S		NI	2
Trimethylhexamethylene diisocyanate (2,2,4- and 2,4,4-isomers)	717		**RTECS No**		MO1760000				**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		**RTECS No**						**CAS No**							
Trimethylol propane, propoxylated	2274	0	NI	0	(NR)	1	0	0	0	(1)	0	1			SD	1
Trimethylol propane propoxylated	2870		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**		UF6000000				**CAS No**		25264-77-4					
Trimethyl phosphite	1365	0	NI	0	R	NI	NI	NI	NI	NI	NI	NI			S	NI
Trimethyl phosphite	713		**RTECS No**		TH1400000				**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		**RTECS No**		YK0350000				**CAS No**		110-88-3					
Tripropylene glycol	1372	0	0	0	NR	0	NI	0	0	(0)	0	0			D	0
Tripropylene glycol	720		**RTECS No**		YK6825000				**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		**RTECS No**		ZE8320000				**CAS No**		25155-23-1					
Tung oil	1378	0	NI	0	R	(2)	NI	(0)	(0)	(1)	(0)	(1)			Fp	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Tung oil	2784		**RTECS No**						**CAS No**							
Turpentine (wood)	1379	4	NI	4	NI	4	NI	0	(0)	1	(2)	2	AS	(T)	D	2
Turpentine	722		**RTECS No**		YO8400000				**CAS No**		8006-64-2					
Undecanoic acid	1381	4	NI	4	(R)	3	NI	(0)	(0)	(2)	1	(2)			Fp	2
Undecanoic acid	723		**RTECS No**		YQ2275000				**CAS No**		112-37-8					
1-Undecanol	1382	4	NI	4	R	4	NI	0	0	(2)	2	(1)			Fp	2
Undecyl alcohol	724		**RTECS No**		YQ3155000				**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		**RTECS No**						**CAS No**		821-95-4					
Urea	1384	0	0	0	R	1	NI	0	0	(1)	1	(1)			D	1
Urea solution	726		**RTECS No**		YR6250000				**CAS No**		57-13-6					
Urea	1384	0	0	0	R	1	NI	0	0	(1)	1	(1)			D	1
Urea	2627		**RTECS No**		YR6250000				**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		**RTECS No**						**CAS No**							
Urea/Ammonium nitrate solution (> 1% aq. ammonia)	2322	0	NI	0	R	3	NI	0	0	(2)	1	2			D	2
Urea/Ammonium nitrate solution	728		**RTECS No**						**CAS No**							
Urea/Ammonium nitrate solution (containing < 1% aq. ammonia)	1387	0	NI	0	R	1	2	0	0	(2)	1	2			D	2
Urea/Ammonium nitrate solution (containing less than 1% free ammonia)	729		**RTECS No**						**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		**RTECS No**						**CAS No**							
Urea-formaldehyde resin solution	1388	NI	NI	NI	NI	1	NI	1	1	NI	NI	NI	S		NI	2
Urea formaldehyde resin solution	725		**RTECS No**						**CAS No**							
Vegetable acid oils	2371	0	NI	0	R	0	NI	(0)	(0)	(1)	(1)	(1)			Fp	2
Vegetable acid oils (m)	3138		**RTECS No**						**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Vinyl acetate	1400	0	NI	0	R	2	NI	1	0	2	1	1	C		ED	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Vinyl acetate	735		**RTECS No**		AK0875000				**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		**RTECS No**		KO0710000				**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		**RTECS No**		KV9275000				**CAS No**		75-35-4					
Vinyl neodecanoate	1404	5	NI	5	NR	3	NI	0	0	(3)	3	3			F	3
Vinyl neodecanoate	737		**RTECS No**						**CAS No**		45115-34-2					
Vinyl toluenes	1409	3	3	3	NR	3	NI	0	0	2	2	1	NM	(T)	F	3
Vinyltoluene	739		**RTECS No**		WL5075000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Xylene (mixed isomers)	1408	3	NI	3	NR	3	0	0	0	0	2	2		(T)	FE	2
Xylenes	743		**RTECS No**		ZE2275000				**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		**RTECS No**						**CAS No**							
Xylenols (mixtures)	1422	2	NI	2	R	3	NI	1	2	(3)	3	3		(T)	Fp	3
Xylenol	744		**RTECS No**		ZE5425000				**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		**RTECS No**						**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		**RTECS No**						**CAS No**							
Zinc alkenylcarboxamide (LOA)	2053	NI	0	0	NR	0	NI	0	0	(1)	1	(1)			Fp	2
Zinc alkenyl carboxamide	746		**RTECS No**						**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		**RTECS No**						**CAS No**							
Zinc bromide solutions	2227	Inorg	4	4	Inorg	3	NI	1	(2)	(3)	3B	3	S		D	3
Zinc bromide solutions	2617		**RTECS No**						**CAS No**							
Zinc chloride	1425	Inorg	4	4	Inorg	4	1	(1)	(1)	(3)	(3)	(3)			D	3

ANNEX 6 - 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
Zinc chloride	2869		**RTECS No**		ZH1400000				**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 salts)	307		**RTECS No**		ZH1400000				**CAS No**		7646-85-7					

***

ANNEX 7

FLASHPOINT DATA FOR SUBSTANCES IDENTIFIED AS HAVING MISSING INFORMATION IN THE IBC CODE

Product name	Flash point (deg. °C)
Alkyl acrylate-vinylpyridine copolymer in toluene	10
Alkyl (C3-C4) benzenes	35 to 60
Alkyl(C8-C9) phenylamine in aromatic solvents	40
Ammonium sulphide solution (45% or less)	20
Aviation alkylates (C8 paraffins and iso-paraffins BPT 95-120º)	-12 to 13
Butylbenzene (all isomers)	34 to 60
m-Chlorotoluene	48
Chlorotoluenes (mixed isomers)	50
Cycloheptane	6
Cyclohexyl acetate	57
1,6-Dichlorohexane	73
1,1-Dichloropropane	21
Dodecane (all isomers)	74
Diisobutylamine	24
N,N-Dimethylcyclohexylamine	43
Ethyl butyrate	24
Ethylcyclohexane	35
Ethyl toluene	36
Heptene (all isomers)	< -3
Hexamethyleneimine	18
Isobutyl formate	21
Isopropylcyclohexane	35
Liquid chemical wastes	Varies
Methylbutenol	13
Methylbutynol	25
Methyl butyrate	14
Methylcyclopentadiene dimer	27
Nitropropane(60%)/Nitroethane(40%) mixture	30
Nonane (all isomers)	31
Octyl aldehydes	52
alpha-Olefins(C6-C18) mixtures	63 (1-Undecene)
Paraldehyde-ammonia reaction product	29
n-Pentyl propionate	40
beta-Pinene	47
Polyalkyl (C18-C22)acrylate in Xylene	25 (xylene)
Polyolefinamine in alkyl(C2-C4)benzenes	21 (ethyl benzene)
Polyolefinamine in aromatic solvent	21 (ethyl benzene)
Polysiloxane	≥ 58
Sodium hydrosulphide/Ammonium sulphide solution	22

Note: when a substance is in parenthesis, the flash point indicated is for that substance.

***

ANNEX 8

DRAFT WORK PROGRAMME FOR THE FORTY-NINTH SESSION OF THE GESAMP/EHS WORKING GROUP

1 Adoption of the agenda

2 Matters arising from IMO and other Organizations relevant to the activities of the Working Group

3 Evaluation of new substances

4 Correspondence with industry

5 Consolidation of data files

6 Communication and publication

- Acute inhalation toxicity review
- Promotion of GHP column E information
- Update of GESAMP Reports and Studies No. 64

7 Any other business