INTERNATIONAL MARITIME ORGANIZATION

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

E

BLG.1/Circ.34
16 July 2012

HAZARD EVALUATION OF SUBSTANCES TRANSPORTED BY SHIPS

Report of the forty-ninth session of the GESAMP/EHS Working Group on the evaluation of the hazards of harmful substances carried by ships

The report of the forty-ninth session of the GESAMP/EHS Working Group on the evaluation of the hazards of harmful substances carried by ships, held from 25 to 29 June 2012 (EHS 49/8), is attached for information.

Any comments would be welcome and should be addressed to:

Technical Secretary of the GESAMP/EHS Working Group
Marine Environment Division
International Maritime Organization
4 Albert Embankment
London SE1 7SR
United Kingdom

***

INTERNATIONAL MARITIME ORGANIZATION

E

WORKING GROUP ON THE EVALUATION OF THE HAZARDS OF HARMFUL SUBSTANCES CARRIED BY SHIPS
49th session
Agenda item 8

EHS 49/8
29 June 2012
Original: ENGLISH

REPORT OF THE FORTY-NINTH SESSION

1 INTRODUCTION

1.1 The forty-ninth 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 25 to 29 June 2012 under the chairmanship of Dr. C.T. Bowmer. The list of members attending the forty-ninth 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 seventeenth intersessional meeting of the Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals (ESPH 17) met from 24 to 28 October 2011;

.2 the Evaluation of Safety and Pollution Hazards (ESPH) Working Group also met from 30 January to 1 February 2012 during BLG 16;

.3 the Sub-Committee on Bulk Liquids and Gases held its sixteenth session from 30 January to 3 February 2012;

.4 the Marine Environment Protection Committee met for its sixty-second session from 11 to 15 July 2011; and

.5 the Marine Environment Protection Committee had also met for its sixty-third session from 27 February to 2 March 2012.

Matters discussed at these meetings which are of relevance to the work of GESAMP/EHS are summarized in annex 3. The Group noted these issues and took action on specific points, as required, under the appropriate agenda item of the session.

Activities of GESAMP

1.3 The Group received a report from Dr. Bowmer (as the 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.

1.4 With regard to the EHS Working Group, which has been active since 1974, it was noted that 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.

1.5 GESAMP will next meet from 9 to 13 September 2013 in Vienna for its 40th session, hosted by UNIDO. The Chairman of the EHS Working Group will as usual report on the outcome of the latest session of the Working Group to GESAMP.

2 EVALUATION OF NEW SUBSTANCES

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

.1 Aluminium hydroxide, sodium hydroxide, sodium carbonate mixture

.2 Grape seed oil

.3 Camelina Oil

.4 Polyoxyalkylene polyol blend

.5 Sodium methoxide

.6 Bis(triethoxysilyl) propylamine

.7 3-Aminopropyltriethoxysilane

.8 2-Butoxyethanol/Hyperbranched polyesteramide mixture

.9 Pentylol

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 **Aluminium hydroxide, Sodium hydroxide, sodium carbonate mixture**: the Group recognized that hazard profiles already existed for two of the key components of the mixture but noted that a comprehensive dataset for the mixture product itself had been made available. As the product is actually an aqueous solution, it was agreed that the EHS name should be qualified accordingly, reflecting additionally an upper limit of 40% for the solid components;

.2 **Grape seed oil**: the Group observed that this substance was comparable to sunflower seed oil and that support information for this material could accordingly be utilised as read-across data;

.3 **Camelina Oil**: the group noted the comparability of this material to rapeseed and sunflower seed oils based on fatty acid composition and the product's high level of unsaturated components. In reviewing the data supplied, the Group accordingly drew upon suitable analogies with these substances as required;

.4 **Polyoxyalkylene polyol blend**: the Group observed that this product was a complex material but that comprehensive supporting data should be available for all of its key components. Whilst adequate information was provided to review physical properties and ecotoxicity, the Group concluded that there was insufficient data available to assign toxicity ratings for columns C and D and that until this position was resolved only NI (representing no information) could be recorded. With respect to a product name for the Composite List entry, it was agreed that this should be amended to Glucitol/glycerol blend propoxylated (containing 10% or more amines);

.5 **Sodium methoxide**: the Group noted that, in this instance, a short version of the hazard profile had been requested in order to facilitate mixture calculations for products containing this component. As the sodium methoxide was not associated with methanol in these products, it was agreed to process this substance as a new entry (in contrast to the existing sodium methylate Composite List entry), and to generate a limited hazard profile accordingly. With respect to the EHS product name, it was agreed that this should simply be Sodium methylate and that the product should be suitably highlighted to indicate that it had been assigned a short profile only;

.6 **Bis(triethoxysilyl)propylamine**: the Group concluded the name for the Composite List substance entry should be Bis [3-(triethoxysilyl)propyl]amine;

.7 **3-Aminopropyltriethoxysilane**: the Group noted that a very comprehensive dataset had been provided for this material which greatly facilitated the review process. With respect to a product name for the Composite List entry, it was decided that this should be amended to 3-(triethoxysilyl)propylamine;

.8 **2-Butoxyethanol/Hyperbranched polyesteramide mixture**: the Group concurred with the proposal that the hyperbranched polymer present in this product could be regarded as a non-hazardous component and the hazard assignment was consequently based on the 2-butoxyethanol solvent contained in the mixture; and

.9 **Pentylol**: the Group observed that this product was a complex material but that GESAMP Hazard profiles were already available for many of the main alcohol components present. This information was further enhanced by a number of comprehensive reports provided for the product drawing upon additional data sources to generate an overview of the key endpoints under consideration.

2.4 Whilst reviewing the new submissions, the Group highlighted as a general point the importance of fully addressing all of the information requirements set out in the GESAMP EHS Product Data Reporting Form. Failure to provide the necessary data or adequate supporting arguments where estimates are involved can only result in no rating being assigned for the end-point concerned or, in a worst case, no hazard profile being issued for the chemical under review.

3 CORRESPONDENCE WITH THE INDUSTRY AND CONSIDERATION OF ISSUES 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, however, continually updates its dataset of over 900 hazard profiles through two processes:

- the chemical industry submits queries regarding hazard profiles to the EHS Working Group. These may include new data or insights into the hazards of substances and any proposals 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 MARPOL Annex II in 2006, over 50% of the hazard profiles have been reviewed in this way. Often such a review enables the group to locate and evaluate missing data.

As a consequence of these activities, 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 7.

2-Propenoic acid polymer with furandione (65% in 2-butoxyethanol)

3.4 Following a review of the data now held for this substance relating to aquatic toxicity, the rating for chronic toxicity (column B2) was reassigned as 0.

1,4-Di-(2-ethylhexyl) phthalate

3.5 The Group noted that the EHS name assigned for this product at the previous meeting was incorrect. It was highlighted that by using the term “1,4-di-(2-ethylhexyl) phthalate”, there was an association to “phthalates” which are generally taken to indicate ortho-phthalate materials. As the substance concerned is a terephthalate which is structurally and toxicologically different from the latter product class, it was agreed that the EHS name for the Composite List should be amended to bis(2-ethylhexyl) terephthalate.

1,4-Di-n-butyl phthalate

3.6 In a similar context to the above, the Group agreed that the EHS name for this substance in the Composite List should be amended to dibutyl terephthalate.

2-Propene-1-amminium, N,N-dimethyl-N-2-propenyl-, chloride, homopolymer (aqueous solution)

3.7 Following a review of the data held for columns C3, D2 and E3 of the hazard profile and noting that initially ratings had been based around monomer information which now needed to be re-interpreted, the Group agreed to amend the profile of this substance as follows:

C3 = (0), D2 = (0), E3 = 0

Methacrylonitrile

3.8 The Group considered a request to revise the ratings for columns C1 (oral toxicity) and C3 (inhalation toxicity) based on information provided in the corresponding OECD SIAR and that utilized for the REACH process. Following a full evaluation of the proposal, the Group agreed to amend the profile of this substance as follows:

C1 = 2, C3 = 3

Nitric acid

3.9 The Group noted that a request had been made to review the rating assigned for column C3 (inhalation toxicity) in relation to two entries for nitric acid (covering concentrations above and below 70%). After considering the information presented, the Group concluded that each product should be amended as follows:

C3 = 3

Sulphuric acid

3.10 The Group reviewed proposals to revise the C1, C2 and C3 ratings for this substance (noting that its hazard profile provided the basis for assigning three IBC Code product entries). After considering fully the information provided, the Group decided that some of the data presented, which was based on information assembled for REACH, could be supported and that the hazard profile should be amended as follows:

C1 = 0, C2 = (0)

With respect to the C3 rating, the Group concluded that a study on mice showing an LC50 value of 1.2 mg/l (calculated for 4 hours exposure) and thus resulting in a proposed C3 rating of 3 could not be taken as the main reference for classification as different, well published studies show LC50 values in a range of C3 ratings from 3 to 4. These included:

.1 Runkle BK & Hahn FF (1976) The toxicity of H2SO4 aerosols to CD-1 mice and Fischer-344 rats. OECD 403 (minor variation): LC50 rat mouse 0.375 mg/l (4 h);

.2 Treon JF, Dutra FR, Cappel J, Sigmon H, &Younker W (1950) Toxicity of Sulfuric Acid Mist: LC100 rat 1.47 mg/L air (3.5 h);

.3 Wolff RK, Silbaugh SA, Brownstein DG & Mauderly JL (1979) Toxicity of 0.4 micron and 0.8 micron sulfuric acid aerosols in guinea pigs: LC50 guinea pig 0.03 mg/l (8 h); and

.4 ATSDR (1998) Toxicological Profile for Sulfur Trioxide and Sulfuric Acid: LC50 rats 0.018 mg/l (8 h).

The Group therefore decided, using a weight of evidence approach and taking into consideration the standardisation of the tests to keep a rating of 4 for column C3. It was noted that, when using this rating for taking decisions on risk management measures on board tankers, it should be understood that this hazard rating is based on intrinsic toxicity (hazard) only and does not incorporate any risk evaluation considerations, including volatility aspects.

Diphenylmethane-4, 4-diisocyanate

3.11 The Group noted that new REACH information on this substance in relation to physical properties, bioaccumulation behaviour and some health effects had been submitted with a request to review the hazard profile of this substance taking account of this additional data.

3.12 Industry had presented new toxicological data on this chemical and a proposal for lowering the rating for acute inhalation. Following a re-evaluation of the data on acute inhalation toxicity, taking into consideration the new arguments submitted, the Group confirmed a rating of 4 as according to the GESAMP Hazard Evaluation Procedure, any LC50 value below 0.5 mg/l (4 h exposure) will trigger this rating for column C3. The study results submitted confirmed such toxicity values and in consequence, the rating was justified. It was highlighted that different evaluation or risk assessment procedures as used in regional settings are not necessarily valid within this evaluation methodology. This is particularly relevant for any risk orientated approaches like those taking into consideration volatility for the specific risk evaluation of aerosol/vapour exposures on board ships or the assignment of risk management phrases.

3.13 With respect to other toxicological data submitted, the rating as a sensitizer under column D3 was confirmed but for carcinogenicity, the Group recalled that according to their guidelines, substances suspected of causing cancer are not rated as C under column D3.

3.14 Following a review of the information relating to bioaccumulation, the Group concluded that no change for column A1 was justified and the rating was maintained as a 2.

Ethylene glycol

3.15 The Group considered a request to remove the R rating in column D3 for this substance and noted the proposal that evidence of reproductive effects is limited to studies with rodent species only, which are sensitive to the metabolite glycolic acid. Primates, including humans, are not so adversely affected. Examining the new data presented and the rationale for this specificity, the Group concluded that this argument was valid and that there were sufficient grounds now to remove the R rating for column D3. As a consequence of this change, it was also noted that the rating for column E3 should be reassigned to a value of 1.

Dipropylene glycol dibenzoate

3.16 The Group noted that a request had been made to complete the GESAMP Hazard profile for this substance as in the existing Composite List entry there was missing information for a number of key end-points. A comprehensive dataset, utilising REACH and EPA HPV data, had been provided by Industry and accordingly, the full profile was reviewed and updated in line with the information now available.

Further amendments

3.17 As a consequence of a review of inhalation toxicity ratings (C3 values) undertaken as part of the work to develop a publication on the estimation methodology which may be used to assign a rating for column C3 (see item 5), a number of 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 summarised below:

Butyl acetate	C3 amended to 0
p-Chlorotoluene	C3 amended to 0
1,3-Cyclopentadiene dimer	C3 amended to 2
Dibromomethane	D1 and D2 amended to (2)
Dimethyl adipate	C3 amended to (0)
Ethyl 3-ethoxypropionate	C3 amended to 0
Hexamethyleneimine	D1 and D2 amended to 2
Hydrocarbon waxes	C3 amended to (0)
Methylene dithiocyanate	D1 and D2 amended to 3
Nonane	D1 and D2 amended to 1
2,4-Tolylenediamine	D1 amended to 2 D2 amended to 3
1,2,3-Trichloropropane	C3 amended to 2

Further information on these changes together with other updates relating to assigned CAS numbers for a number of substances is given in annex 6. These changes have been incorporated into the updated GESAMP/EHS Composite List as presented in annex 7.

4 CONSOLIDATION OF DATA FILES

Miscellaneous amendments

4.1 During an ongoing review of the GESAMP/EHS files which is being undertaken by the Secretariat, some issues with specific ratings in hazard profiles (compared to information contained in the files) have been observed for a number of substances. These observations were presented to the Group for their consideration and 40 substances had ratings checked with 18 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 7.

Alpha-Pinene (EHS 40)	:	D3 = blank
Aminoethyldiethanolamine/Aminoethylethanolamine (EHS 74)	:	C1 = (0), C2 = (0)
Dimethyl glutarate (EHS 670)	:	D1 = 3
Isophorone diisocyanate (EHS 881)	:	B1 = 3
Ferric nitrate/Nitric acid solution (EHS 337)	:	A1b = (5), A1 =(5), B1 = (2), B2 = (0)
Diisopropylnaphthalene, mixed isomers (EHS 712)	:	B1 = 3
Dipropyl phthalate (EHS 713)	:	C1 = (0), C2 = (0), D1 = (1), D2 = (1)
Epichlorohydrin (EHS 731)	:	A1b = 0 B1 = 2, B2 = NI
Ethylbenzene (EHS 740)	:	B2 = (1)
Ethylene glycol (EHS 761)	:	B2 = NI
Ethylene glycol monoethyl ether (EHS 766)	:	D3 = Blank
Ethyl methacrylate (EHS 785)	:	B2 = 0
Fumaric adduct of rosin(water dispersion) (EHS 810)	:	CAS No. 65997-04-8
Furfural (EHS 812)	:	B2 = 1
Glycerine (EHS 814)	:	B2 = 0
2-Hexene (mixed isomers) (EHS 856)	:	C3 = 0
Hexylene glycol (EHS 859)	:	C3 = (3), D2 = 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.

Use of Trade names

4.3 As noted during the last GESAMP/EHS meeting (EHS 48), it was agreed that where trade-name references have occasionally been utilized as the EHS name in the Composite List, these should be removed and substituted with the corresponding Product Name (TRN) or a detailed chemical description as appropriate. Ten cases had been identified where this action was required and the following amendments for these products were consequently introduced into the Composite List as presented in Annex 7.

Former EHS name (EHS No.)	**New name**
ACTACLEAR 1700 Carrier Fluid (TN) (EHS 2188)	Alkyl (C9-C15) phenyl propoxylate
EPTC (ISO) (EHS 2081)	S-Ethyl dipropylthiocarbamate
[Heavy Oxo Fraction] (EHS 2266)	Oxygenated aliphatic hydrocarbon mixture
[Jeffamine D-230]/Polyoxypropylene diamine (EHS 2352)	Polyoxypropylene diamine
MCPA-dimethylammonium (IS0) (EHS 1536)	4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution
Mobil syndril E51 (EHS 2221)	2-Ethylhexyl esters of fatty acids
OGA 480 OGA 492 (polyether amine) (EHS 1457)	Long-chain polyetheramine in alkyl (C2-C4) benzenes
[OLOA 17503] (EHS 2376)	Alkenoic acid ester, borated
[OLOA 224] (EHS 1728)	Calcium long-chain alkyl phenolic amine (C8-C40)

In the case of [Nalco 5740S Antifoam] (EHS 2291), this product was deleted from the Composite List as no supporting information for this material was held in the database or on file.

5 COMMUNICATION AND PUBLICATION

Acute inhalation toxicity

5.1 The Group were advised that a scientific paper describing the methodology developed for the estimation of inhalation toxicity (Column C3), which included details of a validation study undertaken in support of this approach, had now been finalized. This had been published in the journal of Alternatives to Laboratory Animals (ref: ATLA 39, 541-556, 2011).

Promotion of column E information (Interference effects)

5.2 The Group was informed that a paper on “Offshore experiments on styrene spillage in marine waters for risk assessment” had been prepared and accepted for publication as a Marine Pollution Bulletin (ref: MPB-D-11-00775R1). This had introduced a link to the activities of GESAMP/EHS, specifically in relation to the assignment of E ratings within the hazard profile (describing interference effects) and reflected the value of GESAMP Hazard profiles when used in incident situations.

Update of GESAMP Reports and Studies No. 64

5.3 The Group recalled its decision to update and re-issue 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 continuing interest in this document. It was noted that the revised procedure was prepared between 1995 and 1998 based on but ahead of the finalization of the Globally Harmonized System (GHS) which itself had also now been subject to various revisions. Whilst it was not the intention to change the principles 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.

5.4 In preparing a second edition of Reports & Studies No. 64, it had been 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.

5.5 With regard to column D3 on long-term toxic effects, the group had recognised that the UN Globally Harmonized System for the classification of chemicals had been refined since R&S No.64 was first prepared and that some of the criteria would consequently need to be more closely considered.

The group therefore decided that with regard to column D3:

- sensitizers should be re-evaluated with a view to separating skin sensitizers from respiratory sensitizers;
- after evaluation they would be allocated as Ss (skin) and/or Sr (respiratory);
- updated column D3 profiles reflecting the new sensitization ratings would be published following the release of the second edition of R&S No. 64;
- the notation Sp (photosensitizer) and its associated text would be deleted as this rating had never been utilized;
- the rating L for lung injury would be deleted since it is covered by the rating T (target organ systemic toxicity) and it also has never been used by the Group in any assignments;
- N (neurotoxic) and I (immunotoxic) ratings, although included within the rating T under GHS, would be retained as specific entries since IMO uses both N and I on their own for assigning carriage conditions; and
- for the end-points C, M, R, the existing approach would continue whereby only substances with proven effects (rather than suspect properties) would be assigned these ratings.

5.6 It was noted that whilst introducing the above actions would enhance the GESAMP hazard profile and the evaluation procedure, there would be no impact on IMO's classification criteria for assigning carriage requirements for bulk liquid shipments.

5.7 Taking account of the above issues, the Group developed revised text for the relevant sections of GESAMP Reports and Studies No. 64 with a view to re-issuing this guidance document over the coming year. It was agreed that as the update was effectively a second edition of the publication, it should be proposed to the main GESAMP body that there was no requirement to undertake a formal review of this document again.

Future publications

5.8 The Group assessed further possibilities for publications to promote the work of the GESAMP/EHS Working Group and decided that an appropriate topic for consideration would be "Read across in chemical hazard evaluation". It was agreed that a draft text outlining possible topics and ideas would be prepared for further discussion and development at the next meeting.

5.9 Additionally, it was agreed that new opportunities for promoting the activities of the EHS Group at appropriate conferences should also be investigated (similar to the participation which took place at the Interspill 2009/HNS R & D Forum) and all members were requested to consider this point accordingly.

6 ANY OTHER BUSINESS

Membership issues

6.1 The Group welcomed Dr. Olufunsho Awodele of the Department of Pharmacology, University of Lagos (Nigeria) to the meeting as an additional expert to support the toxicology resource within the team. This initiative was noted to be in line with the general GESAMP objective to involve scientific experts from around the world in the activities of GESAMP and its working groups.

Funding arrangements

6.2 The Group recalled that charges had now been introduced for the evaluation of new substances in line with the 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.

6.3 In the current session, nine 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.

Data for ESPH Working Group Pilot Study

6.4 As noted in the review of matters arising from IMO meetings (see Annex 3), the ESPH Working Group had requested assistance in compiling product data for a small group of pilot materials in order to undertake an evaluation of the possible influence of various parameters in relation to the assignment guidance for carriage requirements as contained in chapter 21 of the IBC Code.

6.5 A list of twenty substances had accordingly been supplied and information was assembled for the following physical-chemical properties:

vapour pressure	solubility
flashpoint	density
autoignition temperature	water reactivity (WRI)
explosion range	reactivity with air

The products concerned and the data compiled are summarised in annex 8.

6.6 Additionally, for those products where an assignment of column C3 = 4 had been made in the hazard profile, the inhalation toxicity value used by the Group for this rating was also requested.

6.7 In considering the request made by ESPH, the Group evaluated the acute inhalation hazard of Carbon disulphide noting there were a number of studies from more than 20 animal experiments that were relevant in this respect. Although some studies showed strong acute toxicity in the range of rating 4 for column C3 and the majority showed effects rated 3-4, some more recent studies now question many of these results. The Group noted a study published recently, which was of a high quality and performed in accordance with OECD standards whereby the LC_{50} derived lies on the borderline between a C3 rating of 2 and 3 (LC_{50}: 10.35 mg/1/4hrs). As other studies which have been utilized for evacuation advice in the USA, as published by the Centers of Disease Control and Prevention, are well below this toxic level, expert judgement led the Group to assign a rating of 3 for column C3 giving an Acute Toxicity Estimate (ATE) of 2-10 mg/l/4 hrs.

6.8 Additionally, noting that the C3 rating for methacrylonitrite had also already been reassigned earlier in this session (paragraph 3.8), the Group observed the information request for inhalation toxicity data was now relevant only for sulphuric acid. Information relating to this material had been discussed when the product was reviewed under agenda item 3 and the relevant data were noted there accordingly (see paragraph 3.10).

GHS Classification of floating substances

6.9 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 update of GESAMP Reports and Studies No. 64 still under development, however, it was agreed to postpone any decision on this issue pending the development of any text revisions.

7 FUTURE WORK PROGRAMME AND DATE OF THE NEXT SESSION

7.1 The Group agreed to a draft work programme for its next session which is set out in annex 9.

7.2 The Group agreed that the next regular meeting would be tentatively held from 15 to 19 April 2013.

7.3 **Submissions for this session should reach the *Technical Secretary of the GESAMP/EHS Working Group not later than Friday, 9 March 2013.**

8 CONSIDERATION AND ADOPTION OF THE REPORT

8.1 The Group adopted the report and were thanked for their considerable amount of effort, including extensive preparatory work, inter alia, the collection, collation and evaluation of data to generate Hazard Profiles. The session was closed on Friday, 29 June 2012 at 12.00 hrs.

***

* 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-NINTH 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
Max-Dohrn-Str. 8-10
D-10589 Berlin
Germany
E-mail: thomas.hoefer@bfr.bund.de
Tel: +49 30 18 412 3267
Fax: +49 30 18 412 2714

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. H. Saito
Mitsubishi Chemical Medience Corporation
2-8, Shibaura 4-chrome
Minato-ku
Tokyo 108-8559
Japan
E-mail: Saitou.Hotaka@mh.medience.co.jp
Tel: +81 3 6722 4260
Fax: +81 3 6722 4261

Dr. S. Le Floch
Cedre
715 rue Alain 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

Dr. O. Awodele
Department of Pharmacology
Toxicology Unit
College of Medicine
University of Lagos
P. M. B. 12003
Lagos
Nigeria
E-mail: awodeleo@yahoo.com
Tel: +234 8023624044

* * *

IMO SECRETARIAT

Dr. K. McDonald
Technical Secretary of the EHS 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

Mr. N. M. Soutar
IMO Technical Advisor
International Maritime Organization
Marine Environment Division
4 Albert Embankment
London SE1 7SR
United Kingdom
E-mail: nsoutar@imo.org
Tel: +44 (0)20 7463 4217
Fax: +44 (0)20 7587 3210

***

ANNEX 2

AGENDA FOR THE FORTY-NINTH 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
- Further amendments

4 Consolidation of data files

- Miscellaneous amendments
- Use of Trade names

5 Communication and publication

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

6 Any other business

- Membership issues
- Review of funding arrangements
- Data for ESPH Pilot Study
- GHS Classification of floating substances

7 Future work programme and date of the next session

8 Consideration and adoption of the report

***

ANNEX 3

MATTERS ARISING FROM IMO

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

.1 recalled that when GESAMP ratings are placed in brackets reflecting that the assignment is not based on an actual test result, this should nevertheless be interpreted in the same manner as an unbracketed result for the purposes of assigning carriage conditions. This point along with others was now noted in BLG.1/Circ.33 which summarizes decisions taken by the Group with respect to the categorization and classification of products. In relation to this circular, it was noted that a correction was required for the text in paragraph 2.2 of the annex in order to clearly separate the two conditions for adopting a B2 rating of 1 and that a corrigendum should be issued accordingly;

.2 noted that following a review of the eye irritation data available for Calcium carbonate slurry, GESAMP/EHS had revised the rating for column D2 and had consequently also amended ratings for columns C3 and E3 in the hazard profile. Based on the amended GESAMP Hazard profile, it was concluded by the Group that Calcium carbonate slurry should now be transferred from chapter 17 of the IBC Code to become a chapter 18 entry;

.3 further noted that following the provision of new data from industry for Alkyl (C18-C28) toluenesulfonic acid (>90% in mineral oil), revisions to its GESAMP Hazard Profile had been introduced. Based on the revised profile, new carriage requirements were confirmed by the Group including Special Requirements, reflecting that the product was an organic acid. In discussing this latter issue, the United States expressed the view that it did not consider the product to be an organic acid;

.4 recalled that with regard to tert-Amyl ethyl ether (TAEE), its GESAMP Hazard profile had now been updated during GESAMP/EHS 47 and noted that carriage requirements based on this profile had now been proposed accordingly. With respect to a consideration of physical properties, however, it was concluded that the information on explosion limits was too limited and that more detail relating to this property and the statement of no risk was required. It was agreed therefore to defer consideration of this product until additional data to address this concern has been provided;

.5 processed 24 cleaning additives for evaluation through the revised tank cleaning additives guidance note and reporting form as issued under MEPC.1/Circ.590. Of these, 19 cleaning additives were found to meet the necessary criteria, with other products being rejected because they were not intended for cleaning cargo residues or contained more than 1% of non-readily biodegradable components of pollution category X. Concern was raised with regard to a small number of accepted cleaning additives that contained either nonylphenol polyethoxylates or a component which is carcinogenic, mutagenic, reprotoxic or sensitizing. Having expressed these concerns, as related to occupational health and protection of the marine environment, the relevant reporting countries were urged to convey these views to the manufacturers of the products concerned;

.6 observed 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 noted that GESAMP/EHS had recorded a flashpoint of 74°C in relation to Dodecane (all isomers) when compiling flashpoint values for a number of products as requested by ESPH. The Group were advised, however, that for iso-dodecane a flashpoint of <60°C was indicated in Safety Data Sheets and consequently, as the entry represented all isomers, it was agreed that the i'" column should be "No" and that i' and i" ratings of T3 and IIA should be adopted for this material;

.8 expressed concerns when assessing mixture product OLOA 9790F in relation to the GESAMP Hazard Profile used for one of the components as this had missing information which made evaluation of the mixture difficult. In consequence this product was withdrawn and it was agreed that the manufacturer would seek to provide new supporting data to GESAMP/EHS in order to update the hazard profile of the component concerned before resubmitting the product again for evaluation;

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

.10 noted from the report that, aside from the assignment of hazard profiles for seven new products, amendments to a number of existing hazard profiles had also been introduced;

.11 noted the work undertaken on the scientific paper to promote the methodology developed for the estimation of inhalation toxicity and the activities to update and re-issue GESAMP Reports and Studies No. 64 (The Revised GESAMP Hazard Evaluation Procedure for Chemical Substances Carried by Ships);

.12 observed that GESAMP/EHS was 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;

.13 noted that GESAMP/EHS had highlighted that for a number of products, there were some editorial inconsistencies with respect to EHS and IBC Code product names which might be a cause for concern. In considering whether to address this issue, the ESPH Working Group had concluded that it could be problematic to amend existing Product Names retrospectively to achieve harmonization and that since both EHS and TRN names were provided in the Composite List, cross-referencing between the two name formats was readily facilitated;

.14 observed that in the latest Composite List there were two similar EHS names now listed, 1,4-di-n-butyl phthalate and Di-n-butyl phthalate, and had queried what the differences were for these substances. The Group had been advised

that the former EHS name entry was incorrect in relation to the substance it represented and that this EHS name had already been logged for revision at the next GESAMP/EHS meeting;

.15 further considered options with regard to addressing inconsistencies in carriage requirements noted for a number of entries in the IBC Code. This had led to a number of principles being developed which included:

.1 a systematic review of chapters 17 and 18 should be undertaken rather than adopting a case by case approach;

.2 data presented in the latest GESAMP hazard profiles should be utilized and the ratings assigned in the GHP should not be discussed. If industry does not agree with the assigned GHP for a certain product, new data should be submitted to the GESAMP/EHS Working Group with a request for re-evaluation; and

.3 the merits of revising certain assignment criteria as currently specified in chapter 21 of the IBC Code should be considered with a view to establishing a consistent approach for reviewing all products in the future;

.16 highlighted, in the context of the latter issue, a number of practical points for consideration that might facilitate the review process including the following items:

.1 reconsider the value of using oral toxicity as a criterion for the assignment of Ship Type;

.2 consider the value of reintroducing a link to Saturated Vapour Concentration (SVC) for the assessment of inhalation toxicity data as utilized previously in product evaluation work; and

.3 evaluate the influence of a product's behaviour in water (as an evaporator or persistent floater) with respect to assessing any risk arising from inhalation toxicity;

.17 considered the value of introducing guidance in chapter 21 of the IBC Code or MEPC.1/Circ.512 on how to calculate the acute toxicity of mixtures, similar to what is described in the IMDG Code. It was noted, however, that this is already extensively covered by GHS and that making reference to GHS documentation might then be a better route to follow. In this context, it was recognized that if a review of chapter 21 was undertaken and amendments were introduced, this would also necessitate a review of MEPC.1/Circ.512 and that the issue could then be addressed at that time;

.18 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 16 and during this session, the ESPH Group had:

.1 evaluated a further 43 cleaning additives in line with the criteria set out in MEPC.1/Circ.590 with 29 products being approved as meeting the requirements;

.2 considered the issue of the discharge of cleaning agents in washwaters, as referred to in regulations 4.2and 6.2 of the revised MARPOL Annex V (Regulations for the prevention of Pollution by Garbage from Ships). In this context, whilst recognizing that an effective evaluation system is in place for MARPOL Annex II cleaning additives, the group concluded that, based on the different operational approaches involved, an alternative system of classification for products which may be harmful to the marine environment was required. This in part reflected concerns over the potential diversity of products which may be employed in such operations and, accordingly, it was proposed that this should function on a producer self-classification basis in line with similar principles already utilized in the IMDG Code. With respect to selecting classification criteria, it was agreed that this should comprise of two components:

.1 the cleaning product should not be a "harmful substance" in accordance with MARPOL Annex III, (noting that this definition was equivalent to that for marine pollutants in the IMDG Code); and

.2 the product should not contain any components which are known to be carcinogenic, mutagenic or reprotoxic (CMR);

.3 finalized proposed amendments to chapters 17, 18 and 19 of the IBC Code for submission to MEPC 63 and MSC 90 for their consideration and approval. It was noted that the purpose of introducing these amendments was to capture the normal changes and developments which have occurred since the 2007 amendments came into force on 1 January 2009, and it was not the intention at this point to address any product revisions which might arise as a consequence of the current consideration of inconsistencies between carriage requirements and hazard profiles which had been noted for certain products in the IBC Code; and

.4 further considered options with regard to addressing the inconsistencies in carriage requirements, in relation to GESAMP Hazard Profiles, noted for a number of entries in chapters 17 and 18 of the IBC Code. This included a review of documents which proposed possible ways to qualify the usage of mammalian toxicity taking account of the physical properties and behaviour of the substances concerned. Key properties considered were saturated vapour concentration (SVC) together with behaviour in water and the group examined the possible influence of these parameters in relation to the guidance contained in chapter 21 of the IBC Code. A small group of pilot materials was proposed in order to undertake a more systematic evaluation process, encompassing all aspects of the carriage requirements. To facilitate the process, it was proposed that GESAMP/EHS should be approached to provide assistance with certain properties such as density, saturated vapour concentration, solubility and inhalation toxicity (if available).

1.3 In BLG 16, 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 90 and MEPC 64 to approve the holding of an intersessional meeting of the ESPH Working Group in 2013.

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

.1 approved the report of BLG 15 in general;

.2 approved the work programme for the intersessional meeting of the ESPH Working Group in 2011;

.3 approved, noting MSC 89's concurrent decision, the holding of an intersessional meeting of the ESPH Working Group in 2012;

.4 endorsed, noting MSC 89's concurrent decision, the issuance of BLG.1/Circ.33 on Decisions on the categorization and classification of products;

.5 approved, noting MSC 89's concurrent decision, the timeline for the preparation of amendments to chapters 17, 18 and 19 of the IBC Code;

.6 approved the 2011 Guidelines for the carriage of blends of petroleum oil and bio-fuels and instructed the Secretariat to issue this as MEPC.1/Circ.761; and

.7 deleted the item on Application of the requirements for the carriage of bio-fuels and bio-fuel blends from the agenda of BLG as the work had been completed.

1.5 The Marine Environment Protection Committee (MEPC) had also held its sixty-third session and during this meeting, MEPC had considered urgent matters emanating from BLG 16. These had included cleaning agents under MARPOL Annex V and draft amendments to the IBC Code. For the former topic, MEPC endorsed the view of BLG 16 on the issue of the discharge of cleaning agents or additives in cargo hold, deck and external surface washwater whilst for the latter, the Committee approved the draft amendments to the IBC Code, subject to MSC 90's concurrent decision, and requested the Secretary-General to circulate them with a view to adoption at MEPC 64.

***

ANNEX 4

REVIEW OF GESAMP ACTIVITIES

1.1 The sponsoring agencies continue to support GESAMP members to attend its sessions and also to carry out some intersessional activities such as New and Emerging issues workshops. This is the core support upon which GESAMP relies and the sponsoring agencies are urged to continue their efforts each year.

1.2 The working groups have been both the familiar face of GESAMP within the UN system and for considerable stretches of its history, its main reason for existing. To ensure the long-term stability of GESAMP therefore, there is a need to attract the sponsoring agencies to support new working groups on challenging and urgent topics in the protection of the marine environment. Each of the working groups (currently 6) needs to be adequately and, in as far as possible, independently funded in order to achieve the goals of their respective Terms of Reference and produce the right product in the agreed time-frame.

- WG1 on the Evaluation of the hazards of Chemical Substances carried by ships in bulk (known to IMO as EHS), was set up at the request of IMO in 1974. Previously it was funded solely by IMO and when very busy with the revision of Annex II of MARPOL, through IMO Member State donations. In recent years, industry has been requested by IMO to pay fees for the evaluation of new substances and cleaning additive components. This provides a stable source of funding and as long as industry needs substances evaluated for the purpose of bulk maritime transport, the group is set to continue its work. In addition, IMO continues to provide WG 1 with additional funding in order for it to deal with specific questions from the Organization.

- WG 34 was set up at the request of IMO in 2006 to evaluate ballast water treatment systems using active substances. From the start, such evaluations were performed by the group following payment of fees to IMO by manufacturers on a cost recovery basis. The number of treatment systems being submitted through Administrations to the group for evaluation remains high, ensuring adequate funding, to the extent that the group is able to hold occasional “stock taking” meetings to work on their risk-based evaluation methodology.

- WG 37 on Metals in the marine environment is currently completing the reporting of its assessment of mercury at the request of UNEP. The work described in its Terms of Reference has therefore almost reached completion.

- WG 38 has been able to continue its excellent work on the assessment of the atmospheric transport of nutrients to the oceans through a mixture of funding sources. A small but long-term contribution from the lead agency WMO, has been successfully used as seed money to ensure that external funding (in the past, Sida and SCOR) has made up the balance. IMO has also contributed financially to this working group. In recent months, the US National Science Foundation has agreed to sponsor an extension of WG 38’s work until 2013. GESAMP looks forward to reading the future publications of WG 38 in the scientific literature.

- WG 39, at the request of IAEA, looks at the establishment of trends in global pollution in coastal environments. Having started the first phase of its work programme in 2011, this working group is looking for external sources of funding.

- WG 40 on Microplastics in the oceans, with UNECSO-IOC as the lead agency has recently started its work with an inception meeting held at UNESCO IOC in Paris. It has been able to secure external funding for 3-4 years from PlasticsEurope and the American Chemistry Council and at a level sufficient to meet its ambitious goals. Additionally, NOAA is sponsoring two leading experts to contribute to the work of the Group. This is a new departure for GESAMP and this collaboration is gratefully acknowledged. It is anticipated that the combination of a lead agency prepared to look for a variety of resources to gradually develop this issue as part of GESAMP's New and Emerging issues programme, combined with an active GESAMP team and an interested external sponsor will prove to be very successful.

1.3 In line with the decision of ExCom at GESAMP's 38th session in principle to charge fees for the peer review of assessment reports, IMO as part of its cost recovery strategy for WG34 has agreed to compensate GESAMP for its work in peer reviewing WG 34's (BWWG) frequent reports to MEPC. A group of GESAMP members provides a detailed peer review of each report. This, in addition to peer review work for outside agencies, e.g. UNEP-MAP in 2011, should ensure that GESAMP receives some limited funding for operational use.

1.4 GESAMP's New and Emerging Issues Programme is one of the keys to its future and may also form a useful mechanism through which it can interact with the UN Regular Process and provide advice on emerging topics. GESAMP has spent the last five years redeveloping its New and Emerging Issue Programme which includes the following topics:

- Hypoxia is acknowledged as a major threat to the oceans. The causes of hypoxia and the extent of its effects, including a special focus on endocrine disruption, is an issue on which GESAMP has already provided a scoping paper (GESAMP R&S 81, Annex VII);

- Biomagnification of contaminants in marine top predators is an issue affecting both marine and human communities and an ecological and sociological approach is warranted in the view of GESAMP. A report on the potential scope of this issue has been prepared (GESAMP R&S 85, Annex VIII) and GESAMP, in collaboration with CIESM, plans to investigate this further in 2012/13; and

- The potential impact of disinfection byproducts in the marine environment (low molecular weight halogenated substances), is an issue raised during recent peer reviews by GESAMP of WG 34's reports to the MEPC of IMO on the evaluation of ballast water treatment systems for use on board ships. Such systems predominantly use electrolysis to produce chlorine as an active substance; the chlorine oxidizes organic matter in the water to form disinfection by-products including bromoform. However, this issue is also relevant to the global expansion of coastal power generation sites, refineries and desalination plants and its proponents consider that an investigation by GESAMP may be appropriate.

GESAMP would like to see these issues objectively evaluated in terms of their importance to the protection of the marine environment.

***

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
Aluminium hydroxide, sodium hydroxide, sodium carbonate solution (40% or less)	2438	Inorg	0	0	Inorg	3	NI	0	0	(3)	3B	(3)			D	3
	3807		**RTECS No**						**CAS No**							
Bis[3-(triethoxysilyl)propyl]amine	2444	1	NI	1	R	1	NI	0	0	(2)	2	2			D	2
	3823		**RTECS No**						**CAS No**		13497-18-2					
2-Butoxyethanol/hyperbranched polyesteramide mixture	2446	NI	NI	(0)	NR	(2)	NI	1	2	2	1	2			D	2
	3731		**RTECS No**						**CAS No**							
Camelina oil	2440	(0)	NI	(0)	(R)	(0)	(0)	(0)	(0)	(1)	(0)	(1)			Fp	2
Camelina oil	3767		**RTECS No**						**CAS No**		68956-68-3					
Glucitol/glycerol blend propoxylated (containing 10% or more amines)	2441	2	NI	2	NR	1	1	NI	NI	NI	NI	NI			D	NI
	3762		**RTECS No**						**CAS No**							
Grape Seed Oil	2442	(0)	NI	(0)	(R)	(0)	(0)	(0)	(0)	(1)	(0)	(1)			Fp	2
Grape Seed Oil	3643		**RTECS No**						**CAS No**		8024-22-4					
Pentylol	2447	(1)	(1)	(1)	(R)	(2)	(0)	(1)	(1)	(2)	(2)	(3)			FED	3
	3825		**RTECS No**						**CAS No**							
Sodium methylate**	2443	NI	NI	(0)	(R)	(2)	NI	NI	NI	NI	NI	NI	T		DE	NI
	3822		**RTECS No**						**CAS No**							
3-(Triethoxsilyl)propylamine	2445	1	1	1	R	1	NI	1	0	(3)	3B	3	S		D	3
	3824		**RTECS No**						**CAS No**		919-30-2					

***

ANNEX 6

UPDATES TO THE COMPOSITE LIST, ARISING FROM THE INHALATION TOXICITY REVIEW

An exercise was undertaken to examine selected chemicals in the Composite List which have a recorded value (based on actual test data or human experience) for acute inhalation toxicity in column C3. Some missing CAS numbers have been provided, and some column C or D ratings have been revised based on the latest information available, as follows:

Butyl acetate EHS 387
The Composite List currently shows column C3 with a recorded value of 2. This was considered questionable, as IUCLID reports two values for LC_{50} of 23.4 and 21.1 mg/kg, and also a SIDS report shows a well conducted study reporting LC_{50} of 38.3 mg/kg. On the basis of this evidence, column C3 has been revised to 0.

p-Chlorotoluene EHS 482
The Composite List currently shows column C3 with a recorded value of 2. This was considered questionable, as a SIDS report shows LC_{50} of 37.5 mg/kg/4h, which is taken to be reliable. Consequently, column C3 has been revised to 0.

1,3-Cyclopentadiene dimer EHS 545
The Composite List currently shows column C3 with a recorded value of 3. IUCLID contains a report of LC_{50} 500-1000 ppm/4h. M.wt. = 132, which translates to 5.5 mg/l/4h, suggesting column C3 should be not greater than 2. This finding is also reported in InChem and SIDS. Accordingly, column C3 has been revised to 2.

Dibromomethane EHS 574
The Composite List currently shows 'NI' in columns D1 and D2. This chemical is not in ESIS or Inchem. However, Toxline/HSDB reports that it is more reactive than Dichloromethane, which the Composite List shows with D1=2 and D2=2. In view of this, columns D1 and D2 have been revised to (2), shown in brackets as these are estimated values derived by analogy. Due to this change, the rating for column E3 has also been revised to 2.

Dimethyl adipate EHS 659
The Composite List currently shows column C3 with a recorded value of 2, but this is based only on secondary or tertiary evidence. No information is available in ESIS/IUCLID or InChem but Toxnet suggests no inhalation toxicity, which throws suspicion on the validity of this rating. In view of the absence of acute oral and dermal toxicity, and only slight skin and eye irritation, column C3 has been revised to (0), as a more appropriate rating.

Ethanoltriazine EHS 2411
Currently no CAS number is shown in the Composite List. This has been updated by adding CAS no. 4719-04-4.

Ethyl 3-ethoxypropionate EHS 1439
The Composite List currently shows column C3 with a recorded value of 2. This substance is not classified in ESIS and there are no IUCLID data. An EU Risk Assessment document, however, gives no reference to any inhalation hazard and neither is there such reference in InChem. The EU RA indicates LC_{50} >998 ppm/6h. With M.wt 162, this converts to >10.13 mg/kg/4h, which suggests the rating should not be greater than 1, and column C3 has consequently been revised to 0. In view of this, the rating for column E3 has also been amended to 1.

Hexamethylene diisocyanate EHS 2142
Currently no CAS number is shown in the Composite List. This has been updated by adding CAS no. 822-06-0.

Hexamethyleneimine EHS 848
The Composite List currently shows 'NI' in columns D1 and D2. This chemical is not in ESIS or InChem but Toxline/HSDB reports LC_{50} 2.45 mg/l/4h, which confirms the current rating of 2 in column C3, and also reports that this substance is irritant to skin and eyes. On the basis of this latter information, columns D1 and D2 have been revised to 2.

Hydrocarbon waxes EHS 2278
The Composite List shows column C3 with a recorded value of 2. This assignment was considered questionable, and in view of the acute oral and dermal toxicity ratings of 0, and the very low skin and eye irritancy ratings (1), column C3 has been revised to (0), as a more appropriate value.

Methylene dithiocyanate EHS 2235
Currently, no CAS number is shown in the Composite List. This has been updated by adding CAS no. 6317-18-6. The Composite List also currently shows columns D1 and D2 with 'NI'. This substance, however, is classified as R34 (Corrosive), R43 (Skin Sensitiser), and also R26 (very toxic by inhalation). In view of the R34 classification, columns D1 and D2 have been revised to 3.

Nonane EHS 1054
This chemical is not classified in ESIS and there are no IUCLID data. Currently, columns D1 and D2 are rated 0. InChem, however, indicates that this chemical is irritant to skin and eyes, and Toxline/HSDB reports LC_{50} 3200 ppm/4h. M.wt is 128, which converts to LC_{50} 17 mg/kg/4h, confirming the column C3 rating of 1 in the Composite List. The reference to irritancy in InChem was considered to justify revising columns D1 and D2 to 1.

Piperazine EHS 2433
Currently no CAS number is shown in the Composite List. This has been updated by adding CAS no. 110-85-0.

2,4-Tolylenediamine EHS 1317
Currently, the CAS number for this chemical in the Composite List is shown as 96-80-7, but this is an error. This has been updated by amending the CAS no. to 95-80-7. Additionally, InChem reports this chemical to be a severe irritant for humans, and Toxline/HSDB reports it to be a skin and eye irritant. The Composite List currently shows column D1=1 and column D2=2 but based on this latest information, column D1 has been upgraded to 2, and D2 has been upgraded to 3.

1,2,3-Trichloropropane EHS 1329
The Composite List currently shows a recorded rating of 3 in column C3. A CICAD report provides LC_{50} 3.0 mg/l/4h, which indicates that the acute inhalation toxicity should not be rated at this level and consequently, column C3 has been revised to 2.

***

ANNEX 7

UPDATED COMPOSITE LIST

Notes:

1 In the Composite List, both EHS and TRN (shipping) names as registered in the database are shown for each product. The alphabetical listing of the products is based on EHS names.

2 Any changes introduced into the table since the last issue of the Composite List are highlighted.

3 Entries with an EHS name 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.

4 Entries with an EHS name marked ** represent mixture components which have had only a partial hazard profile assigned. These profiles **may be used** for mixture calculations in relation to bulk shipments.

ANNEX 7 - 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**							
Adiponitrile	26	0	0	0	R	1	NI	3	(3)	3	3	(3)			FD	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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, (flashpoint >60°C)	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**							
Alkenoic acid ester, borated	2376	5	(3)	(3)	R	2	NI	0	0	(2)	2	0			Fp	2
	3153		**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 (C9-C15) phenyl propoxylate	2188	0	NI	0	NR	0	NI	0	0	(2)	2	2			FD	2
Alkyl (C9-C15) phenyl propoxylate	2430		**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
Lauryl polyglucose (50% or less)	416		**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
Alkyl (C12-C14) polyglucoside solution (55% or less)	2249		**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
Alkyl(C18-C28)toluenesulfonic acid	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	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

ANNEX 7 - 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
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
Aluminium chloride (30% or less)/Hydrochloric acid (20% or less) solution	110		**RTECS No**						**CAS No**							
Aluminium hydroxide, sodium hydroxide, sodium carbonate solution (40% or less)	2438	Inorg	0	0	Inorg	3	NI	0	0	(3)	3B	(3)			D	3
	3807		**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	(0)	(0)	(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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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					
Bis(2-ethylhexyl) terephthalate	2437	0	3	3	R	0	0	0	0	(1)	1	1			Fp	2
Bis(2-ethylhexyl) terephthalate	3752		**RTECS No**						**CAS No**							
N,N-Bis(2-hydroxyethyl)oleamide (LOA)	2110	5	NI	5	NR	NI	NI	0	0	(2)	2	2			Fp	2
N,N-bis(2-hydroxyethyl) oleamide	2201		**RTECS No**						**CAS No**							
Bis[3-(triethoxysilyl)propyl]amine	2444	1	NI	1	R	1	NI	0	0	(2)	2	2			D	2
	3823		**RTECS No**						**CAS No**		13497-18-2					
Borax, anhydrous or hydrated, crude or refined	359	Inorg	0	0	Inorg	1	0	0	0	(1)	1	1	R		S	3
Borax	143		**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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**							
2-Butoxyethanol/hyperbranched polyesteramide mixture	2446	NI	NI	(0)	NR	(2)	NI	1	2	2	1	2			D	2
	3731		**RTECS No**						**CAS No**							
Butyl acetate	387	1	NI	1	R	2	NI	0	0	0	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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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 phenolic amine (C8-C40)	1728	NI	NI	NI	NR	0	NI	0	0	(1)	1	(1)			Fp	2
	171		**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**							
Camelina oil	2440	(0)	NI	(0)	(R)	(0)	(0)	(0)	(0)	(1)	(0)	(1)			Fp	2
Camelina oil	3767		**RTECS No**						**CAS No**		68956-68-3					
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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**							
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution	1536	2	NI	2	NI	2	NI	1	0	2	1	1	S		S	2

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
4-Chloro-2-methylphenoxyacetic acid, dimethylamine salt solution	62		**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
o-Chlorotoluene	534		**RTECS No**		XS9000000				**CAS No**		95-49-8					
o-Chlorotoluene	480	3	3	3	NR	3	1	0	0	0	1	1			S	1
Chlorotoluenes (mixed isomers)	189		**RTECS No**		XS9000000				**CAS No**		95-49-8					
p-Chlorotoluene	482	3	3	3	NR	3	0	0	0	0	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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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	2	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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
Decyloxytetrahydrothiophene dioxide	220		**RTECS No**						**CAS No**							
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					
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					
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Ammonium hydrogen phosphate solution	117		**RTECS No**						**CAS No**		7783-28-0					
Dibromomethane	574	1	NI	1	NR	(2)	NI	1	0	0	(2)	(2)			SD	2
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					
Di-n-butyl phthalate	582	4	4	4	R	4	1	0	0	1	0	1	R		S	3
Dibutyl phthalate	230		**RTECS No**		TI0875000				**CAS No**		84-74-2					
Dibutyl terephthalate	2430	5	(3)	(3)	R	4	2	0	0	(0)	0	0			S	0
Dibutyl terephthalate	3596		**RTECS No**						**CAS No**							
Dichlorobenzene (all isomers)	333	3	4	4	NR	3	1	1	0	1	(2)	2	CMR	T	S	3
Dichlorobenzene (all isomers)	232		**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
Polyetheramine	2946		**RTECS No**						**CAS No**							
Diethylene glycol initiated polyoxypropylene diamine	2353	0	NI	0	NR	2	NI	0	0	(3)	3B	(3)			D	3
Diethylene glycol initiated polyoxypropylene diamine	3113		**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
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					
Diethyl phthalate	648	3	3	3	R	2	0	0	0	(1)	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
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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	(0)	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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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	3	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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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	3	NI	3	R	3	NI	0	0	0	0	0			S	0
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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	0	0	R	2	NI	2	2	3	3A	3	CS		D	3
Epichlorohydrin	309		**RTECS No**		TX4900000				**CAS No**		106-89-8					
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
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**		4719-04-4					
Ethoxylated long chain (>C16)alkyloxyalkanamine (LOA)	2103	5	NI	5	NR	1	NI	0	0	(3)	3	(3)			Fp	3
Ethoxylated long chain (C16+) alkyloxyalkylamine	2203		**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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					
S-Ethyl dipropylthiocarbamate	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					
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	NI	1	(1)	(1)	0	0			D	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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			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	0	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
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-Ethylhexyl esters of fatty acids	2221	0	NI	0	R	1	NI	0	(0)	(0)	1	0			F	1
	2578		**RTECS No**						**CAS No**							
2-Ethyl-2-(hydroxymethyl)propane-1,3-diol C8-C10 ester (LOA)	2054	0	NI	0	R	0	NI	0	(0)	(0)	0	(0)			Fp	2
2-Ethyl-2-(hydroxymethyl) propane-1,3-diol (C8-C10) ester	42		**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	0	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
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 acid (C8-C16) ethyl hexyl esters	2759		**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Fatty acids, essentially linear (C6-C18) 2-ethylhexyl ester	1914		**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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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 (85% or less)	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**		65997-04-8					
Furfural	812	0	NI	0	R	2	1	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 10% or more amines)	2441	2	NI	2	NR	1	1	NI	NI	NI	NI	NI			D	NI
	3762		**RTECS No**						**CAS No**							
Glucitol/glycerol blend, propoxylated containing less than 10% amines	2368	0	NI	0	NR	1	NI	1	0	(2)	(1)	(1)			SD	2
Glucitol/glycerol blend propoxylated (containing less than 10% amines)	3074		**RTECS No**						**CAS No**							
Glycerine	814	0	NI	0	R	0	0	0	0	(1)	0	1			D	1
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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					
Grape Seed Oil	2442	(0)	NI	(0)	(R)	(0)	(0)	(0)	(0)	(1)	(0)	(1)			Fp	2
Grape Seed Oil	3643		**RTECS No**						**CAS No**		8024-22-4					
Groundnut oil	820	0	NI	0	R	(2)	NI	(0)	(0)	(0)	(0)	0			Fp	2
Groundnut oil	2769		**RTECS No**		RX2830000				**CAS No**		8002-03-7					
Heptane	827	4	NI	4	R	4	NI	0	0	0	(1)	1	A		E	2
Heptane (all isomers)	372		**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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	377		**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 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**		822-06-0					
Hexamethylene glycol	847	0	NI	0	R	1	NI	0	0	(1)	0	1			D	1
Hexamethylene glycol	376		**RTECS No**		MO2100000				**CAS No**		629-11-8					
Hexamethyleneimine	848	1	NI	1	NI	2	NI	3	1	2	2	2			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	2683		**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 (all isomers)	383		**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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)	0	(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	(3)	2	3			D	2
Hexylene glycol	388		**RTECS No**		SA0810000				**CAS No**		107-41-5					
Hydrocarbon waxes	2278	0	NI	0	NR	0	0	0	0	(0)	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
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 solutions (over 60% but not over 70% by mass)	390		**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, more than 60%	2689		**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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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	392		**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	2691		**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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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	3	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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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**							
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Long-chain alkylphenate/Phenol sulphide mixture	425		**RTECS No**						**CAS No**							
Long-chain polyetheramine in alkyl(C2-C4)benzenes	1457	NI	NI	NI	NR	2	NI	0	0	(2)	2	2			Fp	2
	422		**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
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**							
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					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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	2	2	3	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					
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					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
Amyl alcohol, primary	126		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
Isoamyl alcohol	396		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
2-Methyl-2-hydroxy-3-butyne	52		RTECS No		ES0810000				CAS No		115-19-5					
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					
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	3	3	S		NI	3
Methylene bisthiocyanate	2693		RTECS No						CAS No		6317-18-6					
2-Methyl-6-ethylaniline	984	2	NI	2	NR	2	NI	1	1	(2)	0	2			FD	2
2-Methyl-6-ethyl aniline	54		RTECS No		BY5600000				CAS No		24549-06-2					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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**							
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					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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**							
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					
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					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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)	3	3C	3			D	3
Nitric acid (less than 70%)	499		**RTECS No**		QU5775000				**CAS No**		7697-37-2					
Nitric acid (90% or less)	1029	Inorg	NI	0	Inorg	2	NI	(3)	(1)	3	3C	3			D	3
Nitric acid (70% and over)	498		**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					
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					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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	1	1	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					
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
Nonylphenol poly(4+)ethoxylate	513		**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
Alkyl(C7-C11)phenol poly(4-12) ethoxylate	97		**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					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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					
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**							
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					
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**							

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Oxygenated aliphatic hydrocarbon mixture	2266	5	2	(2)	NR	1	NI	0	0	(1)	1	1			FE	2
Oxygenated aliphatic hydrocarbon mixture	2825		**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**							
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					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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					
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					

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Pentylol	2447	(1)	(1)	(1)	(R)	(2)	(0)	(1)	(1)	(2)	(2)	(3)			FED	3
	3825		**RTECS No**						**CAS No**							
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					
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)		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**		110-85-0					
Pol (2-8) alkylene (C2-C3) glycols/ Polyalkylene (C2-C10) glycols monoalkyl ethers and their borate esters	2358	(1)	NI	(1)	(R)	(1)	(0)	0	0	0	2	2			D	2
Brake fluid base mix: Poly(2-8)alkylene (C2-C3) glycols/Polyalkylene (C2-C10) glycols monoalkyl (C1-C4) ethers and their borate esters	144		**RTECS No**						**CAS No**							
Polyacrylic acid (40% solution)	2302	(2)	NI	(2)	NR	1	NI	0	0	(1)	1	1			D	1

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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 alkyl (C2-C4) benzenes	610		**RTECS No**						**CAS No**							
Polyolefinamine (C28-C250) (LOA)	2107	0	NI	0	NR	2	NI	0	(0)	(2)	2	(1)			Fp	2
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 aromatic solvent	611		**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					
Polyoxypropylene diamine	2352	1	NI	1	NR	1	NI	0	0	(3)	3	3			D	3
	3112		**RTECS No**						**CAS No**							
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
Polysiloxane	613		**RTECS No**						**CAS No**							
Polysiloxane	1161	NI	4	4	NI	2	NI	0	(0)	(0)	0	0			F	1
Dimethylpolysiloxane	275		**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
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)	(0)	0	(0)			D	0
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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 21-30% in methanol	3608		**RTECS No**						**CAS No**							
Sodium methylate**	2443	NI	NI	(0)	(R)	(2)	NI	NI	NI	NI	NI	NI	T		DE	NI
	3822		**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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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	0	(0)	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	0	(0)	4	3C	3	C		D	3
Sulphuric acid, spent	677		**RTECS No**		WS5600000				**CAS No**		7664-93-9					
Sulphuric acid	1280	0	NI	0	Inorg	2	NI	0	(0)	4	3C	3	C		D	3
Oleum	549		**RTECS No**		WS5600000				**CAS No**		7664-93-9					
Sunflower oil	1283	0	NI	0	R	0	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
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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	2	3	CMS		Fp	3
Toluenediamine	695		**RTECS No**		XS9625000				**CAS No**		95-80-7					
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
Chloroform	186		**RTECS No**		FS9100000				**CAS No**		67-66-3					
1,2,3-Trichloropropane	1329	2	2	2	NR	2	0	2	2	2	2	2	C		SD	3
1,2,3-Trichloropropane	6		**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					
3-(Triethoxsilyl)propylamine	2445	1	1	1	R	1	NI	1	0	(3)	3B	3	S		D	3

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
	3824		**RTECS No**						**CAS No**		919-30-2					
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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

EHS Name TRN Name	EHS TRN	A1a	A1b	A1	A2	B1	B2	C1	C2	C3	D1	D2	D3	E1	E2	E3
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
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 8

DATA COMPILATION FOR ESPH WORKING GROUP PILOT STUDY PRODUCTS

Product (EHS number)	Vapour pressure Pa	Flashpoint deg. C	Autoignition temperature deg.C	Explosive range %	Solubility	Density at 20°C Kg/m^3	Water reactivity (WRI)	Reactivity with air
Acetone cyanohydrin (14)	110	70	685	2.2–12	93%	0.93	0	No
Alkylaryl phosphate mixtures (more than 40% Diphenyl tolyl phosphate, less than 0.02% ortho-isomers (2267)	very low*	~230	>500	No data	<100 mg/l	1.21	0	No
Alkyl (C5-C8) benzenes (2207)	1-50	≥66	No data	No data	<2.7 mg/l	0.86	0	No
Ammonium nitrate solutions (93% or less) (1912)	~2000	NF	NF	NF	>100%	1.60	0	No
Creosote (coal tar) (524)	~100	>110	336	No data	0.1 mg/l	1.07	0	No
Methanol (951)	12000	12	470	2.8–25	79%	0.79	0	No
Nitrilotriacetic acid, trisodium salt soln.(1030)	~2000	NF	NF	NF	>100%	1.32	0	No
Pine oil (1148)	~100	78	No data	No data	<100 mg/l	0.93	0	No
Urea/ammonium nitrate solution (containing <1% aq. Ammonia) (1387)	~2000	NF	652 (based on free NH_3)	16-25 (based on free NH_3)	>100%	1.30	0	No
N-Methylglucamine, 60% aqueous solution (2048)	100	>95	No data	No data	~50%	1.15	0	No
Phosphoric acid (1138)	30	NF	NF	NF	>100%	1.5-1.7	0	No
Sodium hydroxide solution (1254)	~1000	NF	NF	NF	>100%	1.50	0	No
Sulphuric acid (1280)	Very low*	NF	NF	NF	>100%	1.83	2	No
Tall oil pitch (2323)	Very low*	>200	No data	No data	<100 mg/l	1.00-1.03	0**	No
Sodium bromide solution (less than 50%) (2387)	~2000	NF	NF	NF	>100%	1.03	0	No
Ammonium chloride solution (less than 25%) (2388)	~2000	NF	NF	NF	>100%	1.5	0	No
Adiponitrile (26)	<10	93	500	1.7-5.0	4.5%	0.95	0	No
Methacrylonitrile (949)	9000	1	No data	2-6.8	3.0%	0.80	0	No
Propylene carbonate (2056)	4.0	107	510	1.7-32.5	8.3%	1.20	0***	No

Product (EHS number)	Vapour pressure Pa	Flashpoint deg. C	Autoignition temperature deg.C	Explosive range %	Solubility	Density at 20°C Kg/m^3	Water reactivity (WRI)	Reactivity with air
Carbon disulphide (439)	48000	-30	95	1.0-60	1.7%	1.26	0	No

* Estimated to be <1 Pa
** If carried at high temperature, may be a physical reaction with water
** Reacts slowly with water to produce CO_2

***

ANNEX 9

DRAFT WORK PROGRAMME FOR THE FIFTIETH 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

- Update of GESAMP Reports and Studies No. 64
- Read across in chemical hazard evaluation
- GHS classification of floating substances

7 Any other business

- Membership issues
- Review of funding arrangements