

List of Undesirable Substances 2004

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Preface

List of Undesirable Substances

The first List of Undesirable Substances (LOUS) was published in 1998. Already at that time, it was decided that the monitoring and providing information on the most problematic substances were to be carried out on an ongoing basis. Therefore, a first revised list was published in 2000, and in 2003 work was commenced on another revision of the LOUS.

The new, revised LOUS is now available. Compared to the previous lists, the criteria for the selection of substances for the list have been changed. This means that a number of chemical substances or substance groups are no longer on the LOUS. These substances/substance groups are listed in Appendix D. A number of criteria are no longer used in the systematic selection. These are listed in Appendix E. As a consequence of the new criteria, a number of substances are on the list for the first time. These are listed in Appendix F. The new selection criteria and the reason for removing from the list some of the original criteria, and consequently substances and substance groups, are described in further detail in the chapter on selection criteria.

It must be emphasised that the LOUS is not exhaustive, as new knowledge, changed patterns of consumption and new international initiatives are constantly emerging. This means that the LOUS must also be periodically updated in the future.

If they are used for commercial purposes in Denmark, dangerous chemical substances and products must be reported to the Danish Product Register. Manufacturers and importers are obliged to update this information when changes occur. The data from the Danish Product Register formed the basis for the selection of substances for the list.

List of Effects

The List of Effects formed the basis for the List of Undesirable Substances. The List of Effects comprises approx. 6,400 substances selected on the basis of the criteria described in Chapter 1. The substances have been extracted from the List of Dangerous Substances (2002), the EU list of substances with documented endocrine-disrupting effects that have been prioritised for further testing, high-tonnage substances suspected in the EU of having PBT and vPvB¹ characteristics, and the Danish EPA's Advisory List for Self-classification of Dangerous Substances.

On the basis of the List of Effects and with assistance from the Danish Product Register, the substances on the List of Effects that are today used in Denmark as well as the amount used have been identified. On the basis of these data, the final List of Undesirable Substances has been prepared.

The new List of Effects is published as a separate document.

¹ PBT substances are persistent, bioaccumulative and toxic substances, while vPvB substances are very persistent and very bioaccumulative substances.

The List of Undesirable Substances is a signal list

Thus, the LOUS should be considered as both a signal to, and a guideline for, manufacturers, product developers, purchasers and other players with regard to chemicals, the use of which should either be reduced or stopped in the long term. This could be achieved by those companies involved that on the basis of the LOUS, take initiative to substitute the problematic substances themselves.

When substituting one substance for another, it is always vital to ensure that, in addition to determining whether the alternative is actually technically applicable, the substitute is less dangerous to the environment and health than the substance it replaces, even if the substitute is not included on the List of Undesirable Substances. Every effort should be made to use alternatives, the effects of which have been studied and documented. It is also important to be aware of whether or not the environmental and health effects of the substitute will be of any significance in relation to the product in which it will be used as well as the consumption pattern and consequently the users' exposure to the product.

Who can use the LOUS?

Under the right conditions the LOUS can be used by corporate product developers, by professional purchasers when making environment-friendly purchases and by others who are interested in how chemical substances are used in products.

The use of the LOUS does, however, presume a certain level of professional expertise in environmental matters and chemistry, before the user is able to assess the use of the substances in products, the properties of any alternatives and their suitability, etc.

The Danish EPA 2004

1 Selection criteria

In relation to the previous editions of the LOUS, a number of significant changes have taken place as to the criteria forming the basis for selection of substances for the LOUS.

1.1 Future EU regulatory framework for chemicals and the sustainability strategy

As a completely new initiative, the Danish EPA has chosen that the principles and criteria included in the prioritisation of the particularly dangerous substances under the authorisation system in the future EU regulatory framework for chemicals and in the Danish government's sustainability strategy [Denmark's National Strategy for Sustainable Development](#) are to be reflected on the LOUS. This means that a number of substances appear on the LOUS for the first time. Moreover, several substances, which were previously on the LOUS, have been removed because they no longer meet the selection criteria.

Although the substances are now selected on the basis of new criteria, the more technical method of selection remains the same. Some substances are selected in a purely systematic manner because they possess clearly undesirable properties, while other substances are selected because there is a political wish to have them replaced.

In the systematic analysis, substances are selected automatically if they meet some clear and defined criteria, eg. problematic classifications, because they are under suspicion for being PBT/vPvB (Persistent, Bioaccumulative, Toxic/very Persistent, very Bioaccumulative) or endocrine-disrupting.

Using the other method - so-called supplementary selection - the substances not caught in the systematic selection, but which still have a number of undesirable effects, will be added to the LOUS. This could be substances that constitute a particular problem for drinking water or in the waste stream.

In the following paragraphs, the individual steps of the selection procedure are described in detail.

1.2 Systematic selection of substances for the List of Undesirable Substances

The first step of the systematic selection of substances for the LOUS is to clarify the properties regarded as most problematic.

1.2.1 Determination of problematic properties

In October 2003, the European Commission presented a proposal for a revision of the EU chemicals legislation, REACH. The proposal consolidates more than 40 individual legal acts in one single regulatory framework in order to create an overview of the chemicals that European consumers risk contact with. The proposal also includes a description of which substances are re-

garded by the EU as being so problematic that, in future, approval will be required for specific use.

The goal of the Danish EPA is for the principles reflected in the so-called authorisation system in the new EU regulatory framework to also be reflected in the way substances are selected for the LOUS. Therefore, the definitions of the very problematic substances referred to in the future EU regulatory framework for chemicals will also play an important role in the selection of substances for the LOUS.

Another cornerstone in the policy on chemicals in Denmark is the government's strategy [Denmark's National Strategy for Sustainable Development](#) from 2002. In this Strategy, the paragraph about chemicals states the following: "**Chemicals used in society must not have any undesirable impact, such as carcinogenic effects, reproduction toxicity, mutagenicity or effects on vulnerable ecosystems. By 2020, no products or goods on the market may contain chemicals that have highly problematic effects on health and the environment.**" In order to be able to meet this objective, it is necessary already now to reduce the use of very problematic substances. Therefore, the Danish EPA has incorporated the principles of the objectives regarding chemicals in the Strategy for Sustainable Development into the way substances are selected for the LOUS.

In the following paragraphs, the criteria applied by the Danish EPA to identify substances with undesirable effects will be described.

1.2.1.1 The List of Dangerous Substances

The List of Dangerous Substances² contains a list of the substances that, in the EU, have been evaluated and classified as to their physiochemical properties, the danger they pose to human health and their environmental effects. For each substance on the list, which includes approx. 7,000 substances/substance groups, the danger classification is stated, including risk phrases that briefly identify the inherent dangerous properties of the substances.

On the basis of the List of Dangerous Substances, the Danish EPA has chosen to concentrate on the substances that could cause very serious and long-term damage. In other words, substances which may cause chronic damage to human health or which may impact future generations. Precisely these substances are among those that the EU has indicated as particularly problematic in the new regulatory framework for chemicals and which will be subject to an authorisation system.

More specifically, this means that substances classified for the so-called CMR effects in categories 1 and 2 (carcinogens, mutagens, reproduction toxins) are subject to authorisation for specific application before they can be used. Therefore, the substances are candidates for the LOUS.

Moreover, the Danish EPA has decided that substances under suspicion for having the same effects (CMR-category-3 substances); substances posing a risk of serious damage to human health by prolonged exposure; and substances that are extremely toxic to aquatic organisms and that may, at the same time, cause undesirable long-term effects in the aquatic environment are so problematic that they are also candidates for the LOUS.

² Statutory Order no. 439 of 3 June 2002: Statutory Order on the list of dangerous substances.

All in all, this means that substances classified as having one or more of the following properties are candidates for the LOUS:

- R33 Danger of cumulative effects
- R39 Danger of very serious irreversible effects
- R40 Limited evidence of carcinogenic effects
- R42 May cause sensitization by inhalation
- R45 May cause cancer
- R46 May cause heritable genetic damage
- R48 Serious damage to health by prolonged exposure
- R49 May cause cancer by inhalation
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- R58 May cause long-term adverse effects in the environment
- R59 Dangerous for the ozone layer
- R60 May impair fertility
- R61 May cause harm to the unborn child
- R62 Possible risk of impaired fertility
- R63 Possible risk of harm to the unborn child
- R64 May cause harm to breastfed babies
- R68 Possible risks of irreversible effects

For a number of substances on the List of Dangerous Substances, the CMR effect is attached to possible constituents (including impurities and, for example, the content of benzene, 1,3-butadiene, DMSO extract) in the complex compound on the list. This means that the substances are only to be classified for CMR effects if they contain these constituents. These substances all have one or more of the comment codes P, M, N, L, K or J on the list and thus indicate that it is not the entire complex compound listed that has CMR effects, but rather the impurities or specific constituents of the compound.

Previous studies carried out by the Danish Product Register have, however, shown that the substances used in Denmark do not contain these impurities/constituents and should therefore not be classified for CMR effects. Therefore, the Danish EPA has chosen not to include the substances with CMR effects that can be solely attributed to these impurities/constituents.

Substances used for motor fuel and combustion have not been included on the list although they may have problematic classifications. This type of application is not undesirable. The same method applies to oil derivatives which are included on the list. This undesirable application does not apply when they appear as a natural part of petrol and oil products, but merely when they are applied in other connections.

In the 29th adaptation of the EU Directive on Dangerous Substances (Directive 67/548/EEC), new classifications for a number of substances have been adopted³. Where relevant, the new classification is listed under the individual substances in Appendix A.

³ Directive 2004/73/EC of 30 April 2004

1.2.1.2 The Danish EPA's Advisory List for Self-classification of Dangerous Substances⁴

Lack of data for chemical substances is a great problem in connection with eg. evaluation of dangerous properties of chemicals. The Danish EPA estimates that sufficient test results from experiments on animals etc. are lacking for up to 90 per cent of the just over 100,000 substance entries in the EU's inventory of existing substances (EINECS).

Manufacturers/importers are obliged to assess whether the substances placed on the market are dangerous on the basis of existing knowledge on the substances. Experience shows that lack of data for chemical substances makes it extremely difficult to meet this obligation in a qualified manner. In a few cases, this may mean that today danger labels on products do not contain information about those dangerous properties of substances that have not been studied.

Therefore, the draft of the new EU regulatory framework for chemicals contains a requirement for new studies, and in this connection more extensive use of computer models for evaluation of the dangerous properties of substances will be made possible.

The Danish EPA has prepared an Advisory List for [Self-classification](#) of Dangerous Substances, which was made using QSAR models (Quantitative Structure Activity Relationships). The models can predict the dangerous properties of chemical substances on the basis of information about the substances' structure and physiochemical properties and comparison with other substances that have known dangerous properties. The accuracy of the models used is approximately 70-85 per cent. This means, that for some of the evaluated chemical substances - approximately 20 per cent - the model predictions will overestimate or underestimate the danger of the chemical substances (false positives/false negatives).

The Danish EPA has used the QSAR models on approx. 47,000 organic substances from EINECS with an unambiguous structure. On the list for self-classification, advisory classifications for 20,624 substances have been indicated for the following properties:

- Acute oral toxicity
- Sensitization by skin contact
- Mutagenicity
- Carcinogenicity
- Danger to the aquatic environment

Substances on the Advisory List for Self-classification of Dangerous Substances with one or more of the problematic classifications indicated in paragraph 1.2.1.1 have been selected as possible candidates for the LOUS.

1.2.1.3 The EU list of possible PBT substances and vPvB substances

In the draft EU regulatory framework for chemicals, not only CMR substances in categories 1 and 2 are subject to authorisation before use. The so-called PBT substances (persistent, bioaccumulative and toxic substances) and

⁴ Environmental Project No. 635, 2001. Report on the Advisory List for Self-classification of Dangerous Substances.

vPvB substances (very persistent and very bioaccumulative substances) are also subject to such authorisation. These substances are regarded as being so problematic that they may only be used under controlled conditions, ie. when authorisation for their use has been obtained.

Exactly because substances with PBT/vPvB properties have long-term effects and may cause damage to future generations, they are also included in the Danish Strategy for Sustainable Development.

In the European Commission's proposal⁵ for a new regulatory framework for chemicals, criteria for PBT/vPvB substances have been defined. In this connection, the EU has prepared a working document with the substances that are currently regarded as having PBT or vPvB properties. A short description of the criteria deciding whether a substance has PBT or vPvB properties can be found in Appendix C.

The Danish EPA decided that all substances listed on the EU candidate list as PBT substances/vPvB substances are to be included on the LOUS when they are used in volumes of more than one tonne per year in Denmark. In this way, we ensure increased focus on the substances that constitute a special problem.

However, it is important to emphasise that the work on finding new PBT/vPvB substances or on clearing suspected PBT/vPvB substances is carried out on an ongoing basis and will take several years. This means that the PBT/vPvB substances on the LOUS are all substances that currently fall under the EU criteria. Since the work on identifying these substances is an ongoing process, studies of the properties of the substances may mean that a substance, which in 2003 was regarded as a PBT/vPvB substance, will not necessarily be regarded in the same way in 2005, because new knowledge has removed the suspicion - just as the opposite may happen.

1.2.1.4 The EU list of substances with documented endocrine-disrupting effects that have been prioritised for further testing

Endocrine disrupters classified for CMR effects in categories 1 and 2 are covered by the authorisation system in REACH. Other substances with endocrine-disrupting effects may be included after a special evaluation of the substance. This is because there are no existing internationally accepted testing methods to determine whether a substance has endocrine-disrupting properties, and there are thus no fully standardised criteria to classify all endocrine-disrupting effects.

Currently, the EU work on prioritising substances for further testing when commonly recognised testing methods have been developed has resulted in a list of 66 substances for which documentation for endocrine-disrupting effects exists. The list is dynamic. As more and more knowledge is gathered in the area, substances may be added to and removed from the list.

So far, the Danish Parliament's Environment and Regional Planning Committee has, however, decided that all substances on the EU list of substances

⁵ Proposal for a regulation of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency and amending Directive 1999/45/EC and Regulation (EC) {on Persistent Organic Pollutants}, which has been published by the European Commission on the website: http://europa.eu.int/eur-lex/en/com/pdf/2003/com2003_0644en.html.

with documented endocrine-disrupting effects which are not already prohibited in Denmark should be included on the LOUS. All 66 substances are included in Appendix B; the substances not already regulated through bans or through an authorisation system are also included in Appendix A, except substances solely used as pesticides. Substances used both as pesticides as well as for other purposes have been included, because the use for purposes other than those authorised is undesirable.

1.2.1.5 Priority substances in relation to the Water Framework Directive

The selected substances on the LOUS have been compared with the substances covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive). 33 substances/substance groups have been prioritised on the basis of the discharge into and occurrence in the aquatic environment as well as those of their properties possibly harmful to human health and the environment. This designation distinguished between "priority substances" and "priority hazardous substances" which are the potentially most harmful substances. It applies to all priority substances, including the dangerous ones, that a progressive reduction of additions (ie. discharges, emission and losses) of the substances to the aquatic environment with a view to meeting the qualitative objectives for the aquatic environment by 2015. In addition, by 2020 (after one generation), additions of priority hazardous substances to the aquatic environment must be ceased.

A large part of these substances is either covered by pesticide and biocide regulation or other regulation. The remaining substances which are, at the same time, applied above the tonnage limits in Denmark (see 1.2.3.2) are included on the LOUS. If a substance is one of the priority substances or priority hazardous substances in the Water Framework Directive, this will appear in Appendix A.

1.2.2 Selection criteria no longer used

In relation to the most recent LOUS (2000), a number of selection criteria are no longer used. The Danish EPA have, as can be seen in this LOUS, emphasised particularly problematic substances.

Criteria no longer used in the systematic selection are primarily risk phrases (R phrases) pertaining to classification for acute toxicity and skin allergy.

Chemical substances and products such as paints and cleaning products classified as toxic and very toxic may not be sold to non-professional consumers.

Professional use in industry is regulated by other legislation with regulations stipulating either substitution, encapsulation or personal protective equipment. Use may also be regulated in another manner so that employees are not exposed to health hazards, just as regulations take account of discharges and emissions into the environment.

Development and occurrence of allergies are subject to individual conditions. In the working environment, where the greatest exposure to individual substances occurs, people handle allergenic substances in the same way as acutely toxic substances that are regulated by other legislation. Exposure to potentially allergenic substances through consumer products is an individual problem. Therefore, it is important to provide information about potentially allergenic

substances directly on the products so that consumers have a choice to avoid substances that are problematic for them.

Since the new labelling regulations for cosmetics regarding certain allergenic perfume ingredients have not yet entered into force, a number of known allergenic perfume ingredients have been placed on the LOUS. Moreover, particularly problematic allergenic substances have been selected. These include substances that cause allergies by inhalation as well as substances that cause allergies upon skin contact, but where the current labelling regulations are not sufficient to ensure that consumers avoid contact with the substances in finished products.

As part of strengthened efforts in relation to chemical substances in consumer products, the Ministry of the Environment has also established the National Allergy Research Centre. The Centre was established in cooperation with the dermatology and respiratory wards at the Copenhagen County University Hospital in Gentofte and the dermatology ward at the Odense University Hospital.

The National Allergy Research Centre is situated at the Copenhagen County University Hospital in Gentofte and takes care of tasks pertaining to research, monitoring, information and prevention of allergies to chemical substances in consumer products.

Classification on the basis of environmental hazards with R51/53 and R52/53 are no longer used as selection criteria. This is based on a wish to focus on the most problematic substances. Focus has been on PBT/vPvB substances, but in addition to this, the most environmentally problematic substances have been included, ie. the substances classified as N;R50/53 or the substances appearing on the advisory list with the designation N;R50/53. These substances may be easily degradable, but since they are most toxic to the aquatic environment, work should also focus on substituting these substances with less problematic substances.

Labelling with "R53: May cause long-term adverse effects in the aquatic environment" does not necessarily mean that the substances are difficult to degrade (persistent). Therefore, the specific application of the substances will determine whether they are problematic for the aquatic environment.

Despite the changes in selection criteria, it remains relevant to substitute allergenic, acutely toxic substances and substances with problematic properties according to the aquatic environment if the specific application indicates that there may be a risk. However, a prioritisation has been made with this list so that substances with particularly problematic and long-term effects come in focus. This is also reflected by the fact that the tonnage limits have been reduced for the particularly problematic substances.

As a further insurance in relation to the criteria no longer being used, a study has been made as to which substances on the List of Dangerous Substances are classified on the basis of environmental hazards with N;R51/53 and where the use in Denmark exceeds the tonnage limit of 100 tonnes. This concerns 6 substances. None of these six substances have been deemed particularly problematic or persistent and thus do not appear on the LOUS 2004.

Criteria no longer used appear in Appendix E.

1.2.3 Identification of substances with problematic properties

The next step after identifying substances with problematic properties is to study whether these substances are used in Denmark and the volumes and purposes of such use.

1.2.3.1 Extracts from the Danish Product Register

If they are used for commercial purposes in Denmark, dangerous chemical substances must be reported to the Danish Product Register. Manufacturers and importers are obliged to update this information when changes occur. The Danish Product Register is an important source for an overview of the chemical substances used in Denmark.

The Danish Product Register has studied whether substances with problematic properties from the List of Dangerous Substances and the Advisory List for Self-classification of Dangerous Substances are actually used in Denmark. Moreover, the Danish Product Register has studied the use of PBT/vPvB substances and endocrine-disrupting substances.

1.2.3.2 Tonnage limits

CMR substances in categories 1 and 2 and PBT substances/vPvB substances used in volumes of more than one tonne per year in Denmark have been included on the LOUS. According to the draft EU regulatory framework for chemicals, these substances can only be used in future if they have been approved for a particular application.

Other substances with problematic properties will be included on the LOUS if they are used in volumes of more than 100 tonnes per year in Denmark. This includes substances with CMR effects in category 3, substances that may have cumulative effects, or substances that are particularly dangerous to the environment.

Tonnage limits mean that problematic substances that were previously used in large volumes, but today are only used in very small volumes, will no longer appear on the LOUS. Therefore, it is important to ensure that these substances are not taken into use again in Denmark. The substances will still appear from the List of Effects, and if consumption increases again, they will return to the LOUS.

There are no tonnage limits for substances selected according to supplementary criteria or because of suspicion of endocrine-disrupting effects.

1.2.3.3 Deselection of candidates for the LOUS

Although a chemical substance immediately meets all the criteria for being included on the LOUS as regards both problematic properties and consumption, there may be matters that result in the substance not being included on the LOUS.

For example, substances that are only used as biocides and pesticides have been eliminated, since they are already regulated under an authorisation system. However, biocides and pesticides that are also being used for other purposes have been included on the LOUS. Also substances, which are only used in connection with the synthesis of other chemicals or in the pharmaceutical industry, have been deselected as have substances only used as laboratory

chemicals. These substances are deemed to pose a slight risk to human health and the environment or they are subject to other study or control schemes.

Substances that are formed in various industrial processes have not been included on the list, since it only includes substances actually used as chemical substances. This means that substances like dioxins and furans have not been included on the list since they are not used directly. However, the substances are still prioritised politically through the existing Danish Dioxin Action Plan (only available in Danish) which works for a continued minimisation of dioxin discharges and for more knowledge about unidentified dioxin sources.

1.3 Supplementary systematic selection of substances for the LOUS

1.3.1 The systematic selection has certain limitations

In connection with the efforts so far to minimise to the greatest extent possible the adverse effects on human health and the environment from chemical substances, some substances/substance groups have previously been identified as problematic due to their effects on the environment and health. These may include substances constituting a particular problem eg. in the waste stream or to groundwater.

A number of substances in focus today have not been identified in the systematic selection due to various selection-technical reasons. This may be because:

- the relevant substances have not yet been classified and have thus not been "caught" by the computer models.
- the relevant substance or substance group does not have a known identity number.
- the substances in question are certain pure metals/metal compounds that do not appear on the List of Dangerous Substances, since they have not been classified as particularly dangerous, or because they cannot be identified using computer-based selection methods.

1.3.2 Supplementary selection criteria

In order to ensure that the LOUS represents all the substances that the Danish EPA believes to be problematic for human health and/or the environment, a more pragmatic selection of substances has been carried out as a supplement to the systematic selection. This selection was carried out on the basis of the following five criteria:

1.3.2.1 Substances being phased out

Substances being phased out due to their environment- or health-related properties, but for which no time limits have been set in certain areas of use, as no technically and financially feasible alternatives have yet been found for these areas; or substances where restrictions on use are being or have been decided in the EU.

1.3.2.2 Substances with only partial restrictions on use

Substances that are only subject to partial restrictions on use, although other uses are also considered to be a cause for concern with regard to human health or the environment.

1.3.2.3 Substances that are problematic in waste streams

Substances that make the use of the residual products of waste streams (flue-gas cleaning products, slag, sludge and compost) problematic.

1.3.2.4 Substances that are prioritised politically

Substances covered by political phase-out goals.

1.3.2.5 Substances that are problematic with respect to groundwater.

Substances considered problematic with respect to groundwater.

Appendix A – List of Undesirable Substances

Acrylamide

CAS No./EINECS No.:	79-06-1/201-173-7
Synonym	2-Propenamamide
Product groups/function:	Grout for building and construction activities. Appears as residual monomer in paints and varnishes (conc. < 0.1 %).
Classification:	Carc2;R45 Mut2;R46 Xn;R20/21 T;R25- 48 /23/24/25 Xi;R36/38 R43 Rep3;R62
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible. Risk-reduction measures at EU level are being considered. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Certain alkanes and cycloalkanes

Name	Cyclohexane
CAS No./EINECS No.:	110-82-7/203-806-2
Product groups/function:	Solvents, propellant gases.
Classification:	F;R11 Xi;R38 Xn;R65 R67 N; R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with France as the Member State responsible.

Name	Heptane
CAS No./EINECS No.:	142-82-5/205-563-8
Synonym	n-Heptane
Product groups/function:	Degreasing agents, lubricants, thinner.
Classification:	F;R11 Xi;R38 Xn;R65 R67 N; R50/53

Appendix A– List of Undesirable Substances

Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	

Name	Hexane
CAS No./EINECS No.:	110-54-3/203-777-6
Synonym	n-Hexane
Product groups/function:	Dissolvent, lubricants.
Classification:	F;R11 Xi;R38 Xn; R48/20-65 Rep3;R62 R67 N;R51/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in category 3 are, in principle, prohibited in cosmetic products. The use of this substance in cosmetic products will be prohibited from 11 September 2004.

Name	C9-12-Isoalkanes
CAS No./EINECS No.:	90622-57-4/292-459-0
Product groups/function:	Paints, developers, waxes, thinners, preservatives, polishes, degreasing agents, binding agents.
Classification:	None
Reason for selection:	Under suspicion of being a vPvB substance.
Activities/further information:	<p>C9-C12 alkanes and isoalkanes are used in the dry-cleaning sector in hydrocarbon dry-cleaning equipment as an alternative to dry-cleaning with tetrachlorine. In this connection, the alkanes and the isoalkanes are a better alternative than tetrachlorine as regards both human health and the environment. The substances are not discharged directly into the environment from dry-cleaning facilities.</p> <p>The use of alkanes and isoalkanes in dry-cleaning facilities is regulated by the "bekendtgørelse om etablering og drift af renserier" (Ministry of the Environment Statutory Order of 18 June 2003 on the establishment and operation of dry-cleaning facilities).</p> <p>Undergoing EU evaluation as to vPvB properties.</p> <p>A survey of the use of these substances in consumer products in Denmark is currently being prepared by the Danish EPA. Report to be published in 2004.</p>

Name	Isododecane
CAS No./EINECS No.:	31807-55-3/250-816-8
Product groups/function:	Fuel additive, stabiliser, raw material for synthesis.

Appendix A– List of Undesirable Substances

Classification:	None
Reason for selection:	Problematic properties according to the Advisory List for Self-classification of Dangerous Substances N;R50/53 .
Activities/further information:	Undergoing evaluation in relation to EU classification.

Alkylphenols and alkylphenol ethoxylates

CAS No./EINECS No.:	This group consists of many compounds, so no CAS No. is given.
Name	<i>Examples from this group:</i> Nonylphenol, octylphenol, nonylphenoethoxylates, dodecylphenol
Product groups/function:	Binding agents, cleaning products, paint and varnish hardeners, adhesives.
Classification:	Nonylphenol and nonylphenol, branched: Xn;R22 C;R34 N;R50/53 . New classification of nonylphenol according to the 29th ATP: Rep.3;R62 Rep.3;R63 Xn;R22 C;R34 N;R50/53 .
Reason for selection:	These substances are only subject to partial restrictions on use, but other uses are also considered to be a cause for concern with regard to the environment. (Directive 2003/53/EC) Nonylphenol is on the EU list of substances with documented endocrine-disrupting effects. Problematic properties according to the List of Dangerous Substances. Further problematic properties for nonylphenol and octylphenol according to the Advisory List for Self-classification of Dangerous Substances - N; R50/53. Dodecylphenol (27193-86-8) is under suspicion of being a vPvB substance.

Appendix A– List of Undesirable Substances

Activities/further information:	<p>Risk evaluations of nonylphenol and nonylphenol ethoxylates have been carried out in the EU. An EC Directive has been adopted that prohibits the use of nonylphenol and nonylphenol ethoxylates for certain purposes.</p> <p>Octylphenol and octylphenol ethoxylates are undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible. The United Kingdom has decided to carry out such risk evaluation.</p> <p>Dodecylphenol is undergoing EU evaluation as to vPvB properties.</p> <p>Covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as priority substances.</p>
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Alkyl sulfonic acid phenyl ester

CAS No./EINECS No.:	91082-17-6/293-728-5
Product groups/function:	Joint fillers, sealing compounds.
Classification:	None
Reason for selection:	Under suspicion of being a vPvB substance.
Activities/further information:	Undergoing EU evaluation as to PBT/vPvB properties.

Benzenamine, N-phenyl-, styrenated

CAS No./EINECS No.:	68442-68-2/270-485-3
Synonym	
Product groups/function:	Antioxidant.
Classification:	None
Reason for selection:	Under suspicion of being a PBT or vPvB substance.
Activities/further information:	Undergoing EU evaluation as to PBT/vPvB properties.

1,4-Benzenediamine, N,N'-mixed Phenyl and tolyl derivates

CAS No./EINECS No.:	68953-84-4/273-227-8
Product groups/function:	
Classification:	None
Reason for selection:	Under suspicion of being a PBT or vPvB substance.
Activities/further information:	Undergoing EU evaluation as to PBT/vPvB properties.

Biphenyl

CAS No./EINECS No.:	92-52-4/202-163-5
Synonym	Diphenyl
Product groups/function:	Impregnation products, road-surfacing products.
Classification:	Xi;R36/37/38 N; R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Covered by "Bekendtgørelse om kvalitetskrav for vandområder og krav til udledning af visse farlige stoffer til vandløb, søer eller havet" (Statutory Order no. 921 of 8 October 1996 on quality requirements for water bodies and requirements to the discharge of certain dangerous substances to watercourses, lakes or the sea).

Bisphenol-A

CAS No./EINECS No.:	80-05-7/201-245-8
Synonym	4,4'-Isopropylidenediphenol
Product groups/function:	Epoxy, polycarbonate plastics, PVC.
Classification:	R36/37/38-43 New classification according to the 29th ATP: Rep. 3; R62; Xi;R37-41 R43.
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects.
Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible.

2,2'-Bisphenol F diglycidylether

CAS No./EINECS No.:	54208-63-8/259-026-8
Synonym	2,2'-[methylenebis(o-phenyleneoxymethylene)]bisoxirane
Product groups/function:	Paints, undercoat, binding agent.
Classification:	None
Reason for selection:	Problematic properties according to the Advisory List for Self-classification of Dangerous Substances Mut3;R40 Carc3;R40.
Activities/further information:	Undergoing evaluation in relation to EU classification.

Lead and lead compounds

CAS No./EINECS No.:	Pertains to several different CAS Nos.
Product groups/function:	Ceramics and crystal glass.
Classification:	<p>Examples from this group:</p> <p>Lead acetate, basic (CAS No. 1335-32-6): Rep1;R61 R33 Carc3;R40 Xn;R48/22 Rep3;R62 N;R50/53</p> <p>Lead alkyls: Rep1;R61 Tx;R26/27/28 R33 Rep3;R62 N;R50/53</p> <p>Lead chromate (CAS No. 7758-97-6): Rep1;R61 R33 Carc3;R40 Rep3;R62 N;R50/53</p> <p>Lead diazide (CAS No. 13424-46-9): Rep1;R61 R33 Carc3;R40 Rep3;R62 N;R50/53</p> <p>Lead chromate molybdate sulfate red (CAS No. 12656-85-8) CI77605: Rep1;R61 R33 Carc3;R40 Rep3;R62 N;R50/53</p> <p>Lead di(acetate) (CAS No. 301-04-2): Rep1;R61 R33 Xn;R48/22 Rep3;R62 N;R50/53</p> <p>Lead hexafluorosilicate (CAS No. 25808-74-6): Rep1;R61 Xn;R20/22 R33 Rep3;R62 N;R50/53</p> <p>Lead hydrogen arsenate (CAS No. 7784-40-9): Carc1;R45 Rep1;R61 T;R23/25 R33 Rep3;R62 N;R50/53</p> <p>Lead(II)methane sulfonate (CAS No. 17570-76-2): Rep1;R61 Xn;R20/22-48/20/22 R33 Xi;R38-41 Rep3;R62 N;R58</p> <p>Trilead bis(orthophosphate) (CAS No. 7446-27-7): Rep1;R61 R33 Xn;R48/22 Rep3;R62 N;R50/53</p> <p>Lead styphnate (lead 2,4,6-trinitro-m-phenylene dioxide) (CAS No. 15245-44-0): Rep1;R61 E;R3 Xn;R20/22 R33 Rep3;R62 N;R50/53</p> <p>Lead sulfochromate yellow (CAS No. 1344-37-2) CI 77603: Rep1;R61 R33 Carc3;R40 Rep3;R62 N;R50/53</p> <p>Other lead compounds: Rep1;R61 Xn;R20/22 R33 Rep3;R62 N;R50/53</p>
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	<p>CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.</p> <p>The use of lead is regulated in Statutory Order no. 1012 of 13 November 2000 on prohibition of import and marketing of products containing lead. There may, however, still be problems with lead in the waste stream caused by old products containing lead.</p> <p>Covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as a priority substance.</p>

Certain boric compounds

CAS No./EINECS No.:	Examples from this group 10043-35-3/233-139-2 (boric acid); 1303-96-4 (borax) 1303-86-2/215-125-8 (diboron trioxide)
Synonym	Borax, boric acid, boroxide
Product groups/function:	Impregnation products, flame retardants, toys and cosmetics
Classification:	Currently none New EU classification has been proposed: Boric acid (CAS No. 10043-35-3 and 11113-50-1), boroxide (CAS No. 1303-86-2), borax (CAS No. 1303-96-4) and certain other boric compounds (CAS No. 1330-43-4, 12267-73-1 and 13840-56-7): Rep.3; R62; Rep.3;R63.
Reason for selection:	Substances that are only subject to partial restrictions on use, although other uses are also considered to be a cause for concern with regard to human health or the environment.
Activities/further information:	Boric acid (10043-45-3) is undergoing risk evaluation in the EU with Austria as the Member State responsible.

Certain brominated flame retardants

Name	All brominated flame retardants that are either persistent, degradable to persistent compounds, bioaccumulative or toxic. Examples from the group are PBBs (polybrominated biphenyls) and PBDEs (polybrominated diphenyl ethers).
CAS No./EINECS No.:	Examples from this group: Pentabromodiphenyl ether 32534-81-9/251-084-2 Octabromodiphenyl ether 32536-52-0/251-087-9 Decabromodiphenyl ether 1163-19-5/214-604-9 Tetrabromobisphenol A 79-94-7/201-236-9 Hexabromocyclododecane 25637-99-4/247-148-4
Product groups/function:	Fire retardant in eg. plastics, electronics and textiles.
Classification:	Pentabromodiphenyl ether is currently classified as R10 Xi;R37 Xn;R65 N;R51/53
Reason for selection:	Political phase-out goals exist for these substances. Octabromodiphenyl ether has been evaluated to be a PBT substance.

Appendix A- List of Undesirable Substances

Activities/further information:	<p>Pentabromodiphenyl ether and octabromodiphenyl ether will be prohibited in the EU medio 2004 pursuant to Directive 2003/11/EC.</p> <p>Furthermore, decabromodiphenyl ether and PBB are covered by Directive 2002/95/EC which prohibits the use of these substances in electrical and electronic equipment from 1 July 2006.</p> <p>Decabromodiphenylether, TBBPA (Tetrabromobisphenol A) and HBCD (hexabromocyclododecane) are undergoing risk evaluation in the EU with France/the United Kingdom and Sweden respectively as the Member States responsible and are being evaluated as possible PBT/vPvB substances.</p>
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Butanone oxime

CAS No./EINECS No.:	96-29-7/202-496-6
Synonym	2-Butanone oxime
Product groups/function:	Solvent, paints, undercoat.
Classification:	Xn;R21 Carc3;R40 Xi;R41 R43
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in category 3 are, in principle, prohibited in cosmetic products. The use of this substance in cosmetic products will be prohibited from 11 September 2004.

Cadmium and cadmium compounds

CAS No./EINECS No.:	This group consists of many compounds, so no CAS No. or EINECS No. is given.
Product groups/function:	Electronic components, plastics, batteries, accumulators, pigments, cadmium plating.

Appendix A– List of Undesirable Substances

Classification:	<p>Examples from this group:</p> <p>Cadmium chloride: Carc.2;R45; Mut2;R46 Rep2;R60-61 T;R25-48/23/25, Tx;R26, N;R50/53</p> <p>Cadmium cyanide; Tx;R26/27/28 R32 R33 Xn;R68 N;R50/53</p> <p>Cadmium fluoride,: Carc2;R45, Mut.;R46 Rep.2;R60-61, T;R25-48/23/25 Tx;R26 N;R50/53</p> <p>Cadmium diformate and cadmium iodide: T;R23/25 R33 Xn;R68 N;R50/53</p> <p>Cadmium hexafluorosilicate: T;R23/25 R33 Xn;R68 N;R52/53</p> <p>Cadmium oxide: Carc2;R49, Xn;R22, T;R48/23/25</p> <p>Cadmium sulphate: Carc.2;R49 Xn;R22 T;R48/23/25 N;R50/53</p> <p>Cadmium sulphide: Xn;R22 Carc.3;R49 T;R48/23/25 R53</p> <p>Other cadmium compounds: Xn;R20/21/22, N;R50/53</p>
Reason for selection:	<p>Substances that make the use of the residual products of waste streams (flue-gas cleaning products, slag, sludge and compost) problematic. A number of the compounds have problematic properties according to the List of Dangerous Substances.</p> <p>Substances that are only subject to partial restrictions on use, although other uses are also considered to be a cause for concern with regard to human health or the environment.</p>
Activities/further information:	<p>Cadmium (CAS No. 7440-19-0) and cadmium oxide (CAS No. 1306-19-0) are undergoing risk evaluation in the EU with Belgium as the Member State responsible.</p> <p>Covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as a priority dangerous substance.</p>

Certain chlorinated solvents

Name	Benzyl chloride
CAS No./EINECS No.:	100-44-7/202-853-6
Product groups/function:	Catalyst.
Classification:	Carc2;R45 Xn;R22-48/22 T;R23 Xi;R37/38-41
Reason for selection:	Problematic properties according to the List of Dangerous Substances.

Appendix A– List of Undesirable Substances

Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.
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Name	1,2-dichloromethane
CAS No./EINECS No.:	75-09-2/200-838-9
Synonym	Methylene chloride
Product groups/function:	Degreasing agent, solvent, varnish strippers.
Classification:	Carc3;R40
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	EU restrictions on use are being considered. CMR substances in category 3 are, in principle, prohibited in cosmetic products. However, this substance may be used if the EU scientific committee has evaluated it and deemed it acceptable for cosmetic use. Covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as a priority substance.

Name	Tetrachloroethylene
CAS No./EINECS No.:	127-18-4/204-825-9
Synonym	Tetrachloroethene, Perchlor, Perchlorethylene
Product groups/function:	Degreasing agent, solvent, dry cleaning.
Classification:	Carc3;R40 N;R51/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible. CMR substances in category 3 are, in principle, prohibited in cosmetic products. The use of tetrachloroethylene in cosmetic products is prohibited (Appendix II).

Name	Trichloroethylene
CAS No./EINECS No.:	79-01-6/201-167-4
Synonym	Trichloroethene
Product groups/function:	Degreasing agent, solvent.
Classification:	Carc2;R45 Xi;R36/38 R67 Mut3;R68 R52/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.

Appendix A– List of Undesirable Substances

Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.
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Chlorinated paraffins (short-, medium- and long-chained)

CAS No./EINECS No.:	Chlorinated paraffins form a non-homogeneous substance group, for which there are many CAS Nos., depending on the chlorination and molecular length of the paraffins.
Product groups/function:	Adhesives, coolants/lubricants and cutting oils, paints, plastics and flame retardants.
Classification:	The short-chained chlorinated paraffins (CAS No. 85535-84-8) are classified as: Carc3; R40 R50/53
Reason for selection:	Substances that are only subject to partial restrictions on use, although other uses are also considered to be a cause for concern with regard to human health or the environment. Short-chained chlorinated paraffins have been evaluated to be PBT-substances.
Activities/further information:	<p>Short-chained chlorinated paraffins have been risk-evaluated in the EU and are covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as priority dangerous substances. The short-chained chlorinated paraffins are subject to certain restrictions on use, including a ban on use in coolants/lubricants. (Statutory Order no. 461 of 26/05/2003).</p> <p>The medium-chained chlorinated paraffins are undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible.</p> <p>The long-chained chlorinated paraffins are undergoing voluntary risk evaluation in the EU with the United Kingdom as the Member State responsible.</p>

Certain chromate compounds

Name	Chromium trioxide
CAS No./EINECS No.:	1333-82-0/215-607-8
Synonym	Chromium (VI) oxide
Product groups/function:	Woodcare products, products for chromate treatment, oxidising agents and tanning.
Classification:	Carc1;R49 O;R8 T;R25 C;R35 R43 N;R50/53

Appendix A– List of Undesirable Substances

Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Sodium dichromate
CAS No./EINECS No.:	10588-01-9/234-190-3
Product groups/function:	Dispersant, oxidising agent, viscosity agent.
Classification:	Mut2;R46 Carc2;R49 O;R8 Xn;R21 T;R25 Tx;R26 Xi;R37/38-41 R43 N; R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Calium dichromate
CAS No./EINECS No.:	7778-50-9/231-906-6
Product groups/function:	Oxidising agent.
Classification:	Mut2;R46 Carc2;R49 Xn;R21 T;R25 Tx;R26 Xi;R37/38-41 R43 N; R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Strontium chromate
CAS No./EINECS No.:	7789-06-2/232-142-6
Product groups/function:	Undercoats.
Classification:	Carc2;R45 Xn;R22 N; R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

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Name	Zink chromate
CAS No./EINECS No.:	13530-65-9/236-878-9
Product groups/function:	Catalyst, undercoats.
Classification:	Carc1;R45 Xn;R22 R43 N;R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Cobalt(II) sulphate

CAS No./EINECS No.:	10124-43-3/233-334-2
Product groups/function:	Catalyst, siccativ for paints etc.
Classification:	Carc2;R49 Xn;R22 R42/43 N;R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products. A Cleaner Product project has been prepared regarding alternative siccatives.

Creosote compounds with carcinogenic "impurities"

CAS No./EINECS No.:	This substance group embraces many CAS Nos.
Synonym	Creosote oil, anthracene oil etc.
Product groups/function:	Sealing compounds, building materials and anti-rust products.
Classification:	Most compounds: Carc.2;R45 with benzene (J) and/or benzo(a)pyrene (M) as the marker; H Examples from this group: Anthracene oil (90640-80-5): Carc2;R45 comment code H, M Anthracene oil with a low content of anthracene: Carc2;R45 comment code H, J, M

Appendix A– List of Undesirable Substances

Reason for selection:	<p>Problematic properties according to the List of Dangerous Substances and special priority substance.</p> <p>The comment code M entails that the substance must be classified as carcinogenic. This classification may, however, be omitted if it can be determined that the substance contains less than 0.005% benzo(a)pyrene. The marker indicates that the most critical carcinogenic substances have been removed if the content is below this limit.</p>
Activities/further information:	<p>Anthracene oil and anthracene oil with a low content of anthracene are undergoing EU evaluation as to PBT/vPvB properties.</p> <p>Covered by the "bekendtgørelse om begrænsning af salg og anvendelse af creosot" (Statutory Order no. 665 of 4 July 1996 on restricting the sale and use of creosote) as amended by Statutory Order no. 535 of 18 June 2003.</p> <p>Covered by the "bekendtgørelse om begrænsning af salg og anvendelse af creosot til træbeskyttelse og creosotbehandlet træ" (Statutory Order no. 534 of 16 June 2003 on restricting the sale and use of creosote for wood preservation and creosote-treated wood).</p>

Cyclohexane-1,2-dicarboxylic anhydride (unspec.)

CAS No./EINECS No.:	85-42-7/ 201-604-9
Product groups/function:	Hardeners.
Classification:	Xi;R41 R42/43
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	The Danish EPA is considering carrying out studies of the significance of the use of this substance in consumer products.

Dibenzyltoluene

CAS No./EINECS No.:	26898-17-9/248-097-0
Product groups/function:	Dielectric media.
Classification:	None
Reason for selection:	Problematic properties according to the Advisory List for Self-classification of Dangerous Substances N;R50/53.
Activities/further information:	Listed for the first time on the LOUS.

3,4-dichloroaniline

CAS No./EINECS No.:	95-76-1/202-448-4
Function:	By-product in the production of herbicides, dyes and medicine.
Classification:	T;R23/24/25 R33 N;R50/53
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects.
Activities/further information:	Undergoing risk evaluation in the EU with Germany as the Member State responsible.

Diethanolamine

CAS No./EINECS No.:	111-42-2/203-868-0
Synonym	2,2'-iminodiethanol
Product groups/function:	Accelerators, coolants, lubricants and corrosion inhibitor.
Classification:	Xn;R22-48/22 Xi;R38-41
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	

N,N-dimethylformamide

CAS No./EINECS No.:	68-12-2/200-679-5
Product groups/function:	Solvent.
Classification:	Rep2;R61 Xn;R20/21 Xi;R36
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Ethanthiol

CAS No./EINECS No.:	75-08-1/200-837-3
Synonym:	Mercaptan.
Product groups/function:	Smelling substance.
Classification:	F;R11 Xn;R20 N;R50/53

Appendix A– List of Undesirable Substances

Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Listed for the first time on the LOUS. Among other things, ethanethiol is added to certain types of gas in order to ensure that leaks in consumer installations are discovered. This type of use is not undesirable since there is no discharge into the aquatic environment.

Fluorinated greenhouse gases (HFCs, PFCs and sulphur hexafluoride)

Names:	HFCs HFC 134a, HFC 125, HFC 143a, HFC 152a etc. PFCs CF ₄ , C ₂ F ₆ , C ₃ F ₈ etc. Sulphur hexafluoride (SF ₆)
CAS No./EINECS No.:	HFC 134a: 811-97-2/212-377-0 HFC 125: 354-33-6/206-557-8 HFC 143a: 420-46-2/206-996-5 HFC 152a: 75-37-6/200-866-1 CF ₄ : 75-73-0/200-896-5 C ₂ F ₆ : 76-16-4/200-939-8 C ₃ F ₈ : 76-19-7/200-941-9 SF ₆ : 2551-62-4/219-854-2
Product groups/function:	Spray canisters, refrigeration systems, foam rubber, insulating materials.
Classification:	None
Reason for selection:	Substances covered by political prioritisation since they are potent greenhouse gases. Substances being phased out.
Activities/further information:	Covered by Statutory Order no. 552 of 2 July 2002 Regulating Certain Industrial Greenhouse Gases.

Formaldehyde

CAS No./EINECS No.:	50-00-0/200-001-8
Product groups/function:	Binding agents, complexing agent, preservatives, adhesives, disinfectants.
Classification:	T;R23/24/25 C;R34 Carc3;R40 R43
Reason for selection:	Problematic properties according to the List of Dangerous Substances.

Appendix A– List of Undesirable Substances

Activities/further information:	CMR substances in category 3 are, in principle, prohibited in cosmetic products. However, this substance may be used if the EU scientific committee has evaluated it and deemed it acceptable for cosmetic use.
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Formamide

CAS No./EINECS No.:	75-12-7/ 200-842-0
Product groups/function:	Solvents
Classification:	Rep2;R61
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Glutaraldehyde

CAS No./EINECS No.:	111-30-8/203-856-5
Synonym:	1,5-pentanedial
Product groups/function:	Disinfectants, pesticides
Classification:	T;R23/25 C;R34 R42/43 N;R50
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	The Danish EPA is considering carrying out studies of the significance of the use of this substance in consumer products.

2,3-epoxypropyl neodecanoate

CAS No./EINECS No.:	26761-45-5/247-979-2
Product groups/function:	Binding agents, paints, solvents.
Classification:	None
Reason for selection:	Problematic properties according to the Advisory List for Self-classification of Dangerous Substances Mut3;R40 R43
Activities/further information:	Undergoing evaluation in relation to EU classification.

Certain glycol ethers

Name	2-ethoxyethanol
CAS No./EINECS No.:	110-80-5/203-804-1
Synonym	ethylene glycol monoethyl ether/EGEE
Product groups/function:	Hardeners
Classification:	Rep2;R60-61 R10 Xn;R20/21/22
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with Germany as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	2-ethoxy ethyl acetate
CAS No./EINECS No.:	111-15-9/203-839-2
Synonym	Ethyl glycol acetate/EGEEA
Product groups/function:	Binding agents
Classification:	Rep2;R60-61 Xn;R20/21/22
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with Germany as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	2-methoxyethanol
CAS No./EINECS No.:	109-86-4/203-713-7
Synonym	Methyl glycol/EGME
Product groups/function:	Solvent
Classification:	Rep2;R60-61 R10 Xn;R20/21/22
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	2-methoxyethyl acetate
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Appendix A– List of Undesirable Substances

CAS No./EINECS No.:	110-49-6/203-772-9
Synonym	Methyl glycol acetate/EGMEA
Product groups/function:	Solvent
Classification:	Rep2;R60-61 Xn;R20/21/22
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	2-methoxypropanol
CAS No./EINECS No.:	1589-47-5/216-455-5
Synonym	1PG2ME
Product groups/function:	Thinner, solvent.
Classification:	Rep2;R61 R10 Xi;R37/38-41
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	2-methoxypropyl acetate
CAS No./EINECS No.:	70657-70-4/274-724-2
Synonym	1PG2MEA
Product groups/function:	Paints, varnishes, thinners, cleaning products.
Classification:	Rep2;R61 R10 Xi;R37
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Hexahydro-4-methylphthalic anhydride

CAS No./EINECS No.:	19438-60-9/243-072-0
Product groups/function:	Hardeners.
Classification:	Xi;R41 R42/43
Reason for selection:	Problematic properties according to the List of Dangerous Substances.

Appendix A– List of Undesirable Substances

Activities/further information:	The Danish EPA is considering carrying out studies of the significance of the use of this substance in consumer products.
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Hydrocarbons, C4, 1,3-butadiene-free, polymd., triisobutylene fraction, hydrogenated

CAS No./EINECS No.:	93685-81-5/297-629-8
Product groups/function:	Plastic construction, solvent.
Classification:	None
Reason for selection:	Under suspicion of being a vPvB substance.
Activities/further information:	Undergoing EU evaluation as to vPvB properties

Hydroxybenzenes – hydroquinone and resorcinol

Hydroquinone	
CAS No./EINECS No.:	123-31-9/204-617-8
Synonym	1,4-dihydroxybenzene
Product groups/function:	Developers.
Classification:	Xn;R22 Carc3;R40 Xi;R41 R43 Mut3;R68 N;R50
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in category 3 are, in principle, prohibited in cosmetic products. However, this substance may be used if the EU scientific committee has evaluated it and deemed it acceptable for cosmetic use.

Resorcinol	
CAS No./EINECS No.:	108-46-3/203-585-2
Synonym:	1,3-dihydroxybenzene 1,3-benzenediol
Product groups/function:	Adhesives, hardeners, hair dyes and production of rubber.
Classification:	Xn;R22 Xi;R36/38 N;R50
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects.
Activities/further information:	A mass-flow analysis is being prepared and will be published in 2004.

Hydroxylammonium sulphate

CAS No./EINECS No.:	10039-54-0/233-118-8
Synonym	Bis(hydroxylammonium) sulphate
Product groups/function:	Dyes.
Classification:	Xn;R22- 48 /22 Xi;R36/38 R43 N;R50
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with Germany as the Member State responsible.

Certain isocyanates – MDI and TDI

MDI	
Name	Methylenediphenyl diisocyanate
CAS No./EINECS No.:	Several CAS Nos.: MDI: 26447-40-5/247-7147-0 2,4' MDI: 5873-54-1/227-534-9 4,4' MDI: 101-68-8/202-966-0
Synonym	Diphenylmethane-2,4'-diisocyanate Diphenylmethane-4,4'-diisocyanate
Product groups/function:	Hardeners, paints, varnishes, binding agent, jointing compounds, adhesives.
Classification:	Xn;R20 Xi;R36/37/38 R42 /43
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	The Danish EPA is considering carrying out studies of the significance of the use of this substance in consumer products. Undergoing risk evaluation in the EU with Belgium as the Member State responsible.

TDI	
Name	Benzene, 1,3-diisocyanatomethyl- (unspec.)
CAS No./EINECS No.:	Several CAS Nos. TDI: 26471-62-5/247-722-4 2,4 TDI: 584-84-9/209-544-5 2,6 TDI: 91-08-7/202-039-0

Appendix A– List of Undesirable Substances

Synonym	Toluene-diisocyanate Toluene-2,4-di-isocyanate/4-methyl- <i>m</i> -phenylene diisocyanate Toluene-2,6-di-isocyanate/2-methyl- <i>m</i> -phenylene diisocyanate
Product groups/function:	Binding agents, foam formation, plastic hardeners.
Classification:	Tx;R26 Xi;R36/37/38 Carc3;R40 R42/43 R52/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in category 3 are, in principle, prohibited in cosmetic products. The use of this substance in cosmetic products will be prohibited from 11 September 2004.

Copper and copper compounds

CAS No./EINECS No.:	This group consists of several compounds, so no CAS No. or EINECS No. is given.
Product groups/function:	Impregnated wood, anti-fouling products, pigments and dyes, copper water pipes.
Classification:	Examples from this group: Copper (I) chloride (CAS No. 7758-89-6): Xn;R22 Copper (II) methane sulphonate (CAS No. 54253-62-2): Xn;R22 Xi;R41 R50/53
Reason for selection:	Problematic properties according to mussels and organisms living in sediments.
Activities/further information:	Requirements have been laid down with regard to release of copper compounds from anti-fouling paint (Statutory Order no. 792 of 2 September 2003).

Mercury and mercury compounds

CAS No./EINECS No.:	This group consists of many compounds, so no CAS No. or EINECS No. is given.
Product groups/function:	Batteries, dental fillings, fluorescent lamps.
Classification:	Examples from this group: Mercury (CAS No. 7439-97-6): T;R23 R33 N;R50/53 Certain organic mercury compounds: Tx;R26/27/28 R33 N;50/53

Appendix A– List of Undesirable Substances

Reason for selection:	Substances that make the use of the residual products of waste streams (flue-gas cleaning products, slag, sludge and compost) problematic. A number of the compounds also have problematic properties according to the List of Dangerous Substances.
Activities/further information:	In 2004 the Danish EPA will prepare a strategy for flue-gas cleaning products in which handling of mercury will be included. Covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as a priority dangerous substance.

4,4'-methylenedianiline

CAS No./EINECS No.:	101-77-9/202-974-4
Synonym	4,4'-diaminodiphenylmethane
Product groups/function:	Hardeners, paints, varnishes, anti-rust product, casting/moulding compounds/materials.
Classification:	Carc2;R45 T;R39/23/24/25 R43 Xn;R48/20/21/22 Mut3;R68 N;R51/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with Germany as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products. Regulated in Statutory Order no. 755 of 15 August 2003.

Mercaptobenzothiazole (MBT)

CAS No./EINECS No.:	149-30-4/201-297-1
Synonym	Benzothiazole-2-thiol, MBT
Product groups/function:	Natural rubber, e.g., babies' pacifiers and rubber gloves
Classification:	R43 N;R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances. A special initiative for this substance has been given high priority.
Activities/further information:	Denmark has asked the Commission to look more closely into the release of MBT to consumer products.

Molybdenum trioxide

CAS No./EINECS No.:	1313-27-5/215-204-7
Product groups/function:	Catalysts.
Classification:	Xi;R36/37 Xn;R48/20/22
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Listed for the first time on the LOUS.

MTBE

CAS No./EINECS No.:	1634-04-4/216-653-1
Synonym	Methyl tertiary butyl ether
Product groups/function:	Additive to certain fuels.
Classification:	New classification according to the 29th ATP: F;R11 Xi;R38
Reason for selection:	This substance has been specifically selected. It is problematic since it is difficult to degrade and, at the same time, mobile in soil and groundwater. MTBE is not regarded as constituting a health problem, but it is possible to smell/taste it at concentrations below a level that is possibly harmful to human health.
Activities/further information:	Has undergone risk evaluation in the EU. As regards health aspects, the conclusion was that no risk is expected and that the most significant risk to groundwater quality as to taste and odour is caused by leakages from underground tanks and spillage from overflows. With the future upgrade of petrol filling stations, the risk of groundwater impacts will be minimised ("bekendtgørelse nr. 555 af 9. juni 2001 om forebyggelse af jord- og grundvandsforurening fra benzin- og dieselsalgsanlæg" - Statutory Order no. 555 of 9 June 2001 on the prevention of soil and groundwater contamination from petrol and diesel filling stations). However, small petrol filling stations are not required to meet the tightened requirements until 2008.

Sodium and calcium hypochlorite

CAS No./EINECS No.:	7681-52-9/231-668-3 (sodium hypochlorite) 7778-54-3/231-908-7 (calcium hypochlorite)
Product groups/function:	Disinfectants, cleaning products

Appendix A- List of Undesirable Substances

Classification:	Sodium hypochlorite: R31 C;R34 Calcium hypochlorite: O;R8 Xn;R22 R31 C;R34 N;R50
Reason for selection:	A special initiative for this substance has been given high priority - particularly because these substances are used in consumer products where there is a risk of formation of toxic substances when these substances are mixed with acid/NH ₄ .
Activities/further information:	Sodium hypochlorite is undergoing risk evaluation in the EU with Italy as the Member State responsible.

Certain nickel compounds

Name	Nickel
CAS No./EINECS No.:	7440-02-0/231-111-4
Product groups/function:	Catalysts, welding powder, friction agents, conductors.
Classification:	Carc3;R40 R43
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU together with the compounds nickel carbonate, nickel chloride, nickel sulphate, nickel nitrate with Denmark as the Member State responsible. CMR substances in category 3 are, in principle, prohibited in cosmetic products. However, this substance may be used if the EU scientific committee has evaluated it and deemed it acceptable for cosmetic use. Nickel and compounds of nickel may not be used in products designed for long-term direct contact with the skin . (Statutory Order no. 24 of 14 January 2000). Covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as a priority substance.

Name	Nickel oxide
CAS No./EINECS No.:	1313-99-1/215-215-7
Synonym	Nickel monoxide
Product groups/function:	Catalysts.
Classification:	Carc1;R49 R43 R53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.

Appendix A– List of Undesirable Substances

Activities/further information:	<p>CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.</p> <p>Nickel and compounds of nickel may not be used in products when there is direct contact with the skin.</p>
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4-nitrotoluene

CAS No./EINECS No.:	99-99-0/202-808-0
Function:	Used in closed systems for chemical synthesis.
Classification:	T;R23/24/25 R33 N;R51/53
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects.
Activities/further information:	Undergoing risk evaluation in the EU with Spain as the Member State responsible. A mass-flow analysis is being prepared and will be published in 2004.

Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate

CAS No./EINECS No.:	2082-79-3/218-216-0
Product groups/function:	Anti-oxidants
Classification:	None
Reason for selection:	Under suspicion of being a vPvB substance.
Activities/further information:	Undergoing EU evaluation as to vPvB properties

Octamethylcyclotetrasiloxane

CAS No./EINECS No.:	556-67-2/209-136-7
Synonym:	Forms part of cyclomethicone (CAS No. 69430-24-6)
Function:	Viscosity-altering agent
Classification:	Rep3;R62 R53
Reason for selection:	Assessed to be a PBT and vPvB substance. Problematic properties according to the List of Dangerous Substances.

Appendix A– List of Undesirable Substances

Activities/further information:	<p>CMR substances in category 3 are, in principle, prohibited in cosmetic products. However, this substance may be used if the EU scientific committee has evaluated it and deemed it acceptable for cosmetic use.</p> <p>Included in a mass-flow analysis, which is being prepared and will be published in 2004.</p> <p>A survey of the use of this substance in consumer products in Denmark is currently being prepared in the Danish EPA. Report to be published in 2004.</p>
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Certain oil derivatives

Name	Petroleum for certain uses
CAS No./EINECS No.:	8002-05-9/232-298-5
Product groups/function:	Degreasing agents, surface treatment agents, skin cleansing agents.
Classification:	Carc2;R45
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Hydrocarbons, C₂₈₋₅₅, arom.-rich
CAS No./EINECS No.:	97722-04-8/307-753-7
Product groups/function:	Impregnation products, flooring materials, road-surfacing materials.
Classification:	Carc2;R45
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Extracts (petroleum), light paraffinic distillate solvent
CAS No./EINECS No.:	64742-05-8/265-104-2
Product groups/function:	Friction-reducing agent
Classification:	Carc2;R45
Reason for selection:	Problematic properties according to the List of Dangerous Substances.

Appendix A– List of Undesirable Substances

Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.
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Name	Distillates (petroleum), heavy paraffinic
CAS No./EINECS No.:	64741-51-1/265-052-0
Product groups/function:	Mould oils, releasing agents.
Classification:	Carc1;R45
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Extracts (petroleum), heavy paraffinic distillate solvent
CAS No./EINECS No.:	64742-04-7/265-103-7
Product groups/function:	Textile impregnation products, binding agents.
Classification:	Carc2;R45
Reason for selection:	Problematic properties according to the List of Dangerous Substances. Under suspicion of being a PBT substance.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products. Undergoing EU evaluation as to PBT/vPvB properties.

Name	Residues (petroleum), steam-cracked
CAS No./EINECS No.:	64742-90-1/265-193-8
Product groups/function:	Binding agents, certain special cleaning products.
Classification:	Carc2;R45
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Stoddard solvent
CAS No./EINECS No.:	8052-41-3/232-489-3
Product groups/function:	Solvent, undercoat, paints, adhesives, cleaning products, desiccants.

Appendix A- List of Undesirable Substances

Classification:	Carc2;R45 R10 Xn;R48/20-65
Reason for selection:	Problematic properties according to the List of Dangerous Substances. The Carc.2 classification is no longer required if the substance contains less than 0.1% benzene (comment code P), but the R10 Xn;R48/20-65 classification is maintained.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products. The term "mineral turpentine" is applied to several chemical substances. Only this specific CAS No. is covered.

Name	Solvent naphtha (petroleum), medium aliph.
CAS No./EINECS No.:	64742-88-7/265-191-7
Product groups/function:	Paints, varnishes, thinners, wood-impregnation products, insulation materials, degreasing agents, anti-rust products, desiccants.
Classification:	R10 Xn;R48/20-65
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	This substance has code H, which means that the substance has only been evaluated as regards carcinogenicity and/or ability to cause chemical pneumonia. Self-evaluation with a view to ascertaining any other dangerous properties is still required.

Certain organo-tin compounds

Name, CAS No./EINECS No.:	<p>The group consisting of dibutyl tin (DBT), dioctyl tin (DOT) and triphenyl tin (TPT) covers several CAS Nos.</p> <p>Organo-tin compounds on the EU list of substances with documented endocrine-disrupting effects:</p> <table border="0"> <thead> <tr> <th>CAS No.</th> <th>Substance name</th> </tr> </thead> <tbody> <tr> <td>688-73-3</td> <td>Tributyl tin</td> </tr> <tr> <td>No CAS No.</td> <td>Tributyl tin compounds</td> </tr> <tr> <td>56-35-9</td> <td>Tributyl tin oxide = bis(tributyl tin) oxide</td> </tr> <tr> <td>26354-18-7</td> <td>2-propenoic acid, 2-methyl-, methyl ester = Stannane, tributyl metacrylate</td> </tr> <tr> <td>No CAS No.</td> <td>Methoxyethyl acrylate tributyl tin, co-polymer</td> </tr> <tr> <td>4342-30-7</td> <td>Phenol, 2-[[tributylstannyl]oxy]carbonyl = Monotributyl tin salicylate</td> </tr> <tr> <td>4342-36-3</td> <td>Stannane, (benzoyloxy)tributyl-</td> </tr> <tr> <td>4782-29-0</td> <td>Stannane, [1,2-phenylenebis(carbonyloxy)]</td> </tr> <tr> <td>36631-23-9</td> <td>Stannane, tributyl = Tributyl tin naphthalate</td> </tr> <tr> <td>85409-17-2</td> <td>Stannane, tributyl-, mono(naphthenoyloxy)</td> </tr> <tr> <td>24124-25-2</td> <td>Stannane, tributyl[(1-oxo-9,12-octadecad)]</td> </tr> <tr> <td>3090-35-5</td> <td>Stannane, tributyl[(1-oxo-9-octadecenyl)]</td> </tr> <tr> <td>26239-64-5</td> <td>Stannane, tributyl[[[1,2,3,4,4a,4b,5,6,1]]]</td> </tr> <tr> <td>1983-10-4</td> <td>Stannane, tributylfluoro- Me</td> </tr> <tr> <td>2155-70-6</td> <td>Tributyl[(2-methyl-1-oxo-2-propenyl)oxy]</td> </tr> <tr> <td></td> <td>Stannane</td> </tr> <tr> <td>No CAS No.</td> <td>Tributyl tin carboxylate</td> </tr> <tr> <td>26636-32-8</td> <td>Tributyl tin naphthalate</td> </tr> <tr> <td>No CAS No.</td> <td>Tributyl tin polyethoxylate</td> </tr> <tr> <td>2279-76-7</td> <td>Tri-n-propyl tin (TPrT)</td> </tr> <tr> <td>668-34-8</td> <td>Triphenyl tin</td> </tr> <tr> <td>1461-25-2</td> <td>Tetrabutyl tin (TTBT)</td> </tr> <tr> <td>900-95-8</td> <td>Fentin acetate</td> </tr> </tbody> </table>	CAS No.	Substance name	688-73-3	Tributyl tin	No CAS No.	Tributyl tin compounds	56-35-9	Tributyl tin oxide = bis(tributyl tin) oxide	26354-18-7	2-propenoic acid, 2-methyl-, methyl ester = Stannane, tributyl metacrylate	No CAS No.	Methoxyethyl acrylate tributyl tin, co-polymer	4342-30-7	Phenol, 2-[[tributylstannyl]oxy]carbonyl = Monotributyl tin salicylate	4342-36-3	Stannane, (benzoyloxy)tributyl-	4782-29-0	Stannane, [1,2-phenylenebis(carbonyloxy)]	36631-23-9	Stannane, tributyl = Tributyl tin naphthalate	85409-17-2	Stannane, tributyl-, mono(naphthenoyloxy)	24124-25-2	Stannane, tributyl[(1-oxo-9,12-octadecad)]	3090-35-5	Stannane, tributyl[(1-oxo-9-octadecenyl)]	26239-64-5	Stannane, tributyl[[[1,2,3,4,4a,4b,5,6,1]]]	1983-10-4	Stannane, tributylfluoro- Me	2155-70-6	Tributyl[(2-methyl-1-oxo-2-propenyl)oxy]		Stannane	No CAS No.	Tributyl tin carboxylate	26636-32-8	Tributyl tin naphthalate	No CAS No.	Tributyl tin polyethoxylate	2279-76-7	Tri-n-propyl tin (TPrT)	668-34-8	Triphenyl tin	1461-25-2	Tetrabutyl tin (TTBT)	900-95-8	Fentin acetate
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No CAS No.	Tributyl tin carboxylate																																																
26636-32-8	Tributyl tin naphthalate																																																
No CAS No.	Tributyl tin polyethoxylate																																																
2279-76-7	Tri-n-propyl tin (TPrT)																																																
668-34-8	Triphenyl tin																																																
1461-25-2	Tetrabutyl tin (TTBT)																																																
900-95-8	Fentin acetate																																																
Product groups/function:	Anti-fouling, plastic construction materials, binding agents for paints, preservatives																																																
Classification:	<p>Tributyl tin compounds: Xn;R21 T;R25-48/23/25 Xi;R36/38 N;R50/53</p> <p>Fentin: T;R24/25 Tx;R26-48/23 Xi;R37/38-41 Carc. 3;R40 Rep.3;R63 N;R50/530</p>																																																
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects. Problematic properties according to the List of Dangerous Substances. TTBT is under suspicion of being a PBT or vPvB substance.																																																

Appendix A– List of Undesirable Substances

Activities/further information:	<p>Undergoing EU evaluation for endocrine-disrupting effects. Restrictions on use are being considered in the EU for DBT, DOT and TBT.</p> <p>More than one tonne of the following five substances is being used in Denmark:</p> <table style="border: none;"> <tr> <td style="padding-right: 20px;">26354-18-7</td> <td>Tributyl tin methacrylate/methylmethacrylate, copolymer</td> </tr> <tr> <td>56-35-9</td> <td>Bis(tributyl tin) oxide</td> </tr> <tr> <td>2155-70-6</td> <td>Tributyl tin methacrylate</td> </tr> <tr> <td>1983-10-4</td> <td>Tributyl tin fluoride</td> </tr> <tr> <td>85409-17-2</td> <td>Tributyl tin naphthenate</td> </tr> </table> <p>TTBT is undergoing EU evaluation as to PBT/vPvB properties.</p> <p>Some of these compounds are covered by Decision No 2455/2001/EC of the European Parliament and of the Council of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive).</p>	26354-18-7	Tributyl tin methacrylate/methylmethacrylate, copolymer	56-35-9	Bis(tributyl tin) oxide	2155-70-6	Tributyl tin methacrylate	1983-10-4	Tributyl tin fluoride	85409-17-2	Tributyl tin naphthenate
26354-18-7	Tributyl tin methacrylate/methylmethacrylate, copolymer										
56-35-9	Bis(tributyl tin) oxide										
2155-70-6	Tributyl tin methacrylate										
1983-10-4	Tributyl tin fluoride										
85409-17-2	Tributyl tin naphthenate										

Surfactants which do not degrade completely under low-oxygen conditions

CAS No./EINECS No.:	Substance group with several CAS Nos.
Examples from this group:	LAS (linear alkylbenzene sulphonates), certain alkane sulphonates and certain sulphosuccinates.
Product groups/function:	Detergents and cleaning products.
Classification:	None
Reason for selection:	Substances that make the use of the residual products of waste streams (flue-gas cleaning products, slag, sludge and compost) problematic.
Activities/further information:	The content of LAS in sludge is being monitored on an ongoing basis.

Certain perfume ingredients

Appendix A– List of Undesirable Substances

Name, CAS No./EINECS No.:	<p>Perfume ingredients that, according to the Scientific Committee on Cosmetic and Non-Food Products intended for Consumers (SCCNFP), have been evaluated to be allergens upon skin contact, ie. allergenic substances.</p> <ul style="list-style-type: none"> • Amylcinamal (CAS No. 122-40-7, EINECS 204-541-5) • Amylcinnamyl alcohol (CAS No. 101-85-9, EINECS 202-982-8) • Anisyl alcohol (CAS No. 105-13-5, EINECS 203-273-6) • Benzyl alcohol (CAS No. 100-51-6, EINECS 202-859-9) • Benzyl benzoate (CAS No. 120-51-4, EINECS 204-402-9) • Benzylcinnamate (CAS No. 103-41-3, EINECS 203-109-3) • Benzyl salicylate (CAS No. 118-58-1, EINECS 204-262-9) • Cinnamyl alcohol (CAS No. 104-51-1, EINECS 203-212-3) • Cinnamal (CAS No. 104-55-2, EINECS 203-213-9) • Citral (CAS No. 5392-40-5, EINECS 226-394-6) • Citronellol (CAS No. 106-22-9, EINECS 203-375-0) • Coumarin (CAS No. 91-64-5, EINECS 202-086-7) • d-Limonene (CAS No. 5989-27-5; EINECS 227-813-5) • Eugenol (CAS No. 97-53-0, EINECS 202-589-1) • Farnesol (CAS No. 4602-84-0, EINECS 225-004-1) • Geraniol (CAS No. 106-24-1, EINECS 203-377-1) • Hexylcinnamaldehyde (CAS No. 101-86-0, EINECS 202-983-3) • Hydroxycitronellal (CAS No. 107-75-5, EINECS 203-518-7) • Hydroxymethylpentylcyclohexenecarboxaldehyde (CAS No. 31906-04-4, EINECS 250-863-4) • Isoeugenol (CAS No. 97-54-1, EINECS 202-590-7) • Lilial (CAS No. 80-54-6, EINECS 201-289-8) • Linalool (CAS No. 78-70-6, EINECS 201-134-4) • Methyl heptyne carbonate (CAS No. 111-12-6, EINECS 203-836-6) • 3-methyl-4-(2,6,6-trimethyl-2-cyclohexene-1-yl)-3-buten-2-one (CAS No. 127-51-5, EINECS 204-846-3)
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Appendix A– List of Undesirable Substances

Product groups/function:	Fragrances, cosmetics, cleaning products, solvents.
Classification:	The following four substances are classified in the List of Dangerous Substances . Benzyl alcohol (CAS No. 100-51-6): Xn; (R20/22). Benzylbenzoate (CAS No. 120-51-4): (R22). Citral (CAS No. 5392-40-5): (R38), (R43). d-Limonene (CAS No. 5989-27-5): R10 Xi;R38 R43 N;R50/53
Reason for selection:	Substances that are only subject to partial restrictions on use, although other uses are also considered to be a cause for concern with regard to human health or the environment.
Activities/further information:	As per 11 March 2005, the above perfume ingredients must be declared in cosmetics if they are used in volumes of more than 0.01% in products that are removed from the skin and 0.001% in products that are not removed. Under the future EU regulation on detergents, the above perfume ingredients must be declared if they are used in detergents or cleaning products in volumes of more than 0.01%.

Pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)

CAS No./EINECS No.:	6683-19-8/229-722-6
Synonym	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl ester
Product groups/function:	Hardeners, anti-oxidants.
Classification:	None
Reason for selection:	Evaluated by the EU to be a potential vPvB substance.
Activities/further information:	Undergoing EU evaluation as to vPvB properties

PFOS compounds

CAS No./EINECS No.:	Several CAS Nos. (175 stated in the below report from the Danish EPA)
Synonym	Perfluorooctanyl sulfonate compounds
Product groups/function:	Impregnation products for textiles, leather and paper, waxes and other polishes, paints, varnishes and printing inks and cleaning products - both ordinary cleaning products and products for cleaning metal surfaces or carpets.
Classification:	None

Appendix A– List of Undesirable Substances

Reason for selection:	Selected due to a special initiative with regard to these substances. PFOS compounds are compounds that are all potentially degradable into perfluorooctane sulfonate, which has proven to be difficult to degrade and which has been measured in the blood of humans, in blood from blood banks as well as in animals. Currently, we do not know whether these substances constitute a risk to human health. Experiments on animals have shown effects at higher concentrations than those found in the environment.
Activities/further information:	Mapping of perfluorooctane sulfonate and similar substances in consumer products - phase 2 (http://www.mst.dk/udgiv/Publikationer/2002/87-7972-122-2/html/default.htm - in Danish)

Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-

CAS No./EINECS No.:	128-37-0/204-881-4
Synonym	2,6-di-tert-butyl-p-cresol
Product groups/function:	Hardeners.
Classification:	None
Reason for selection:	Problematic properties according to the Advisory List for Self-classification of Dangerous Substances Xn;R22 N;R50/53.
Activities/further information:	Undergoing evaluation in relation to EU classification.

Phenyl glycidyl ether

CAS No./EINECS No.:	122-60-1/204-557-2
Synonym	1,2-epoxy-3-phenoxypropane
Product groups/function:	Paints, varnishes, flooring materials.
Classification:	Carc2;R45 Xn;R20 Xi;R37/38 R43 Mut3;R68 R52/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Certain phthalates

Name	Benzyl butyl phthalate
CAS No./EINECS No.:	85-68-7/201-622-7

Appendix A– List of Undesirable Substances

Product groups/function:	Plasticiser, paints, varnishes, undercoats, jointing compounds, sealing compounds.
Classification:	Currently none EU classification proposed: Rep.2; R61; Rep.3;R62 N;R50/53
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects. Problematic properties according to the Advisory List for Self-classification of Dangerous Substances N;R50/53
Activities/further information:	Undergoing risk evaluation in the EU with Norway as the Member State responsible. Covered by Statutory Order no. 151 of 15 March 1999 banning phthalates in toys for children aged 0-3 and in certain childcare articles etc.

Name	Di- (2-ethylhexyl) phthalate
CAS No./EINECS No.:	117-81-7/204-211-0
Synonym	DEHP
Product groups/function:	Plasticiser, disinfectants.
Classification:	Rep2;R60-61
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects. Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with Sweden as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products. Covered by Statutory Order no. 151 of 15 March 1999 banning phthalates in toys for children aged 0-3 and in certain childcare articles etc. Covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as a priority substance.

Name	Dibutyl phthalate
CAS No./EINECS No.:	84-74-2/201-557-4
Synonym	DBP
Product groups/function:	Plasticiser, adhesives, paints, solvents, filler products
Classification:	Rep2;R61 Rep3;R62 N;R50
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects. Problematic properties according to the List of Dangerous Substances.

Appendix A– List of Undesirable Substances

Activities/further information:	<p>Undergoing risk evaluation in the EU with the Netherlands as the Member State responsible.</p> <p>CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.</p> <p>Covered by Statutory Order no. 151 of 15 March 1999 banning phthalates in toys for children aged 0-3 and in certain childcare articles etc.</p>
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Name	Bis(2-methoxyethyl) phthalate
CAS No./EINECS No.:	117-82-8/204-212-6
Product groups/function:	Fillers, paints, undercoats.
Classification:	Rep2;R61 Rep3;R62
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	<p>CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.</p> <p>Covered by Statutory Order no. 151 of 15 March 1999 banning phthalates in toys for children aged 0-3 and in certain childcare articles etc.</p>

Phthalic anhydride, tetrahydromethyl- (unspec.)

CAS No./EINECS No.:	11070-44-3/234-290-7
Synonym	Tetrahydromethylphthalic anhydride
Product groups/function:	Hardeners.
Classification:	Xi;R41 R42/43
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	The Danish EPA is considering carrying out studies of the significance of the use of this substance in consumer products.

Certain pigments and dyes

Name:	Acetamide, N-(5-(bis(2-(acetyloxy)ethyl)amino)-2-((2-chloro-4-nitrophenyl)azo)phenyl)-
CAS No./EINECS No.:	1533-78-4/216-251-6
Synonym	2,2'-[[3-acetamido-4-[(2-chloro-4-nitrophenyl)azo]phenyl]imino]diethyl diacetate

Appendix A– List of Undesirable Substances

Product groups/function:	Azo dye.
Classification:	None
Reason for selection:	Problematic properties according to the Advisory List for Self-classification of Dangerous Substances Carc3;R40 R43.
Activities/further information:	Undergoing evaluation in relation to EU classification

Name	C.I. Pigment yellow 83
CAS No./EINECS No.:	5567-15-7/226-939-8
Synonym	2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(4-chloro-2,5-dimethoxyphenyl)-3-oxobutyramide]
Product groups/function:	Azo dye, pigment, paints.
Classification:	None
Reason for selection:	Under suspicion of being a vPvB substance.
Activities/further information:	<p>Undergoing EU evaluation as to vPvB properties. It is not yet known if the pigment is bioaccumulative. Results from further studies of the substance's potential for bioaccumulation in fish, which will be carried out in accordance with agreements with industry, will undergo evaluation in the EU PBT working group which will then decide whether the substances are to be regarded as vPvB substances.</p> <p>Other pigments may have the same properties and this should be considered when substituting one substance with another.</p> <p>A survey of the use of this substance in consumer products in Denmark is currently being prepared in the Danish EPA. Report to be published in 2004.</p>

Name	C.I. Pigment yellow 13
CAS No./EINECS No.:	5102-83-0/225-822-9
Synonym	2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(2,4-dimethylphenyl)-3-oxobutyramide]
Product groups/function:	Azo dye.
Classification:	None
Reason for selection:	Under suspicion of being a PBT or vPvB substance.

Appendix A– List of Undesirable Substances

Activities/further information:	<p>Undergoing EU evaluation as to vPvB properties. It is not yet known if the pigment is bioaccumulative. Results from further studies of the substance's potential for bioaccumulation in fish, which will be carried out in accordance with agreements with industry, will undergo evaluation in the EU PBT working group which will then decide whether the substances are to be regarded as vPvB substances.</p> <p>Other pigments may have the same properties and this should be considered when substituting one substance with another.</p> <p>A survey of the use of this substance in consumer products in Denmark is currently being prepared in the Danish EPA. Report to be published in 2004.</p>
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Name	C.I. Pigment orange 13
CAS No./EINECS No.:	3520-72-7/222-530-3
Synonym	4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-one]
Product groups/function:	Azo dye.
Classification:	None
Reason for selection:	Under suspicion of being a vPvB substance.
Activities/further information:	<p>Undergoing EU evaluation as to vPvB properties. It is not yet known if the pigment is bioaccumulative. Results from further studies of the substance's potential for bioaccumulation in fish, which will be carried out in accordance with agreements with industry, will undergo evaluation in the EU PBT working group which will then decide whether the substances are to be regarded as vPvB substances.</p> <p>Other pigments may have the same properties and this should be considered when substituting one substance with another.</p> <p>A survey of the use of this substance in consumer products in Denmark is currently being prepared in the Danish EPA. Report to be published in 2004.</p>

Name	C.I. Pigment red 224
CAS No./EINECS No.:	128-69-8/204-905-3
Synonym	Perylene-3,4:9,10-tetracarboxylic dianhydride
Product groups/function:	Dyes, paints, varnishes.
Classification:	None
Reason for selection:	Under suspicion of being a PBT or vPvB substance.

Appendix A- List of Undesirable Substances

Activities/further information:	Undergoing EU evaluation as to vPvB properties. It is not yet known if the pigment is bioaccumulative. Results from further studies of the substance's potential for bioaccumulation in fish, which will be carried out in accordance with agreements with industry, will undergo evaluation in the EU PBT working group which will then decide whether the substances are to be regarded as PBT/vPvB substances. Other pigments may have the same properties and this should be considered when substituting one substance with another.
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Name	C.I. Pigment yellow 14
CAS No./EINECS No.:	5468-75-7/226-789-3
Synonym	2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(2-methylphenyl)-3-oxobutyramide]
Product groups/function:	Azo dye.
Classification:	None
Reason for selection:	Under suspicion of being a PBT or vPvB substance.
Activities/further information:	Undergoing EU evaluation as to vPvB properties. It is not yet known if the pigment is bioaccumulative. Results from further studies of the substance's potential for bioaccumulation in fish, which will be carried out in accordance with agreements with industry, will undergo evaluation in the EU PBT working group which will then decide whether the substances are to be regarded as PBT/vPvB substances. Other pigments may have the same properties and this should be considered when substituting one substance with another. A survey of the use of this substance in consumer products in Denmark is currently being prepared in the Danish EPA. Report to be published in 2004.

Name:	6-hydroxy-1-(3-isopropoxypropyl)-4-methyl-2-oxo-5-[4-(phenylazo)phenylazo]-1,2-dihydro-3-pyridinecarbonitrile
CAS No./EINECS No.:	85136-74-9/400-340-3
Product groups/function:	Azo dye.
Classification:	Carc2;R45 R53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Propylene oxide

CAS No./EINECS No.:	75-56-9/200-879-2
Synonym	1,2-epoxypropane; methyloxirane
Product groups/function:	Joining compounds, casting/moulding compounds/materials, flooring materials.
Classification:	Carc2;R45 Mut2;R46 Fx: R12 Xn;R20/21/22 Xi;R36/37/38
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Styrene

CAS No./EINECS No.:	100-42-5/202-851-5
Product groups/function:	Binding agents, impregnation products, adhesives, paints, plastic construction, filler compounds.
Classification:	R10-20-36/38
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects.
Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible.

Terphenyl (unspec.)

CAS No./EINECS No.:	26140-60-3/247-477-3
Product groups/function:	Casting/moulding compounds/materials.
Classification:	None
Reason for selection:	Problematic properties according to the Advisory List for Self-classification of Dangerous Substances N;R50/53.
Activities/further information:	Listed for the first time on the LOUS. Undergoing evaluation in relation to EU classification.

Thiram

CAS No./EINECS No.:	137-26-8/205-286-2
Synonym	Tetramethylthiuram disulphide

Appendix A– List of Undesirable Substances

Product groups/function:	Sterilising agent in medical supplies, vulcaniser in rubber, putty, binding agents and antiseptic sprays
Classification:	R20/22-36/37-43-68
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects. Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing EU evaluation for endocrine-disrupting effects. Thiram has been approved for marketing as a pesticide in Denmark.

Certain coal-tar products

Name	Tar, coal, high-temp.
CAS No./EINECS No.:	65996-89-6/266-024-0
Product groups/function:	Impregnation.
Classification:	Carc1;R45
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Pitch, coal tar, high-temp.
CAS No./EINECS No.:	65996-93-2/266-028-2
Product groups/function:	Binding agents, paints, varnishes, anti-rust products, hardeners.
Classification:	Carc2;R45
Reason for selection:	Problematic properties according to the List of Dangerous Substances. Evaluated to be a PBT substance (on the basis of PBT substances in the mixture).
Activities/further information:	Undergoing risk evaluation in the EU with the Netherlands as the Member State responsible. CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Tar, coal
CAS No./EINECS No.:	8007-45-2/232-361-7
Product groups/function:	Anti-rust paints.
Classification:	Carc1;R45

Appendix A– List of Undesirable Substances

Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Name	Naphthalene
CAS No./EINECS No.:	91-20-3/202-049-5
Product groups/function:	Impregnation agent
Classification:	Xn;R22 N; R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with the United Kingdom as the Member State responsible. Covered by EC Decision 2455/2001/EC of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC (Water Framework Directive) as a priority substance.

1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione

CAS No./EINECS No.:	2451-62-9/219-514-3
Synonym	TGIC
Product groups/function:	Paints, varnishes, binding agents.
Classification:	Mut2;R46 T;R23/25 Xi;R41 R43 Xn; R48/22 R52/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	CMR substances in categories 1 and 2 may not be used in chemical consumer products and as of 11 September 2004 their use is prohibited in cosmetic products.

Triphenyl phosphite

CAS No./EINECS No.:	101-02-0/202-908-4
Product groups/function:	Hardeners, undercoats.
Classification:	Xi;R36/38 N; R50/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Listed for the first time on the LOUS.

Tris(2-chloroethyl)phosphate

CAS No./EINECS No.:	115-96-8/204-118-5
Product groups/function:	Fire retardation, jointing compounds, casting/moulding compounds/materials.
Classification:	Xn;R22 Carc3 ;R40 N;R51/53
Reason for selection:	Problematic properties according to the List of Dangerous Substances.
Activities/further information:	Undergoing risk evaluation in the EU with Germany as the Member State responsible. CMR substances in category 3 are, in principle, prohibited in cosmetic products. The use of this substance in cosmetic products will be prohibited from 11 September 2004.

Tris(2,4-ditert-butylphenyl) phosphite

CAS No./EINECS No.:	31570-04-4/250-709-6
Product groups/function:	Additive for plastics
Classification:	None
Reason for selection:	Under suspicion of being a PBT substance.
Activities/further information:	Undergoing EU evaluation as to PBT/vPvB properties.

Zineb

CAS No./EINECS No.:	12122-67-7/235-180-1
Synonym	Zinc ethylene bisdithiocarbamate
Product groups/function:	Anti-fouling products, biocides in paints, varnishes and solvents.
Classification:	R37-43
Reason for selection:	On the EU list of substances with documented endocrine-disrupting effects.
Activities/further information:	Undergoing EU evaluation for endocrine-disrupting effects. The use of zineb as a plant protection agent is prohibited under Statutory Order no. 558 of 19 June 2003 on the amendment of the Statutory Order on pesticides.

Appendix B – Substances on the EU list of substances with documented endocrine-disrupting effects

The EU list of substances with documented endocrine-disrupting effects (currently contains 66 substances), which have been prioritised for further testing. The list is total. Most of the substances on the list are subject to prohibition or are covered by an authorisation system for plant-protection products. Substances also included on the LOUS are marked with an *.

CAS No.	Name
12789-03-6	Chlordane
57-74-9	Chlordane (cis- and trans-)
143-50-0	Kepone = Chlordecone Highly
2385-85-5	Mirex
8001-35-2	Toxaphen = Camphechlor
50-29-3	DDT (technical) = clofenotane
50-29-3	p,p'-DDT = clofenotane
3563-45-9	Tetrachloro DDT = 1,1,1,2-Tetrachloro-2,2-bis(4-chlorophenyl)ethane
50471-44-8	Vinclozolin
12427-38-2	Maneb
137-42-8	Metam Sodium
137-26-8	Thiram *
12122-67-7	Zineb*
58-89-9	Gamma-HCH = Lindane
330-55-2	Linuron (Lorox)
1912-24-9	Atrazine
34256-82-1	Acetochlor
15972-60-8	Alachlor
100-42-5	Styrene*
118-74-1	Hexachlorobenzene = HCB
85-68-7	Butylbenzylphthalate (BBP)*
117-81-7	Di-(2-ethylhexyl)phthalate (DEHP) = Dioctylphthalate (DOP)*
84-74-2	Di-n-butylphthalate (DBP)*
80-05-7	2,2-Bis(4-hydroxyphenyl)propan = 4,4'-isopropylidenediphenol = Bisphenol A*

Appendix B – Substances on the EU list of substances with documented endocrine-disrupting effects

1336-36-3	PCB
35065-27-1	PCB153
32774-16-6	PCB169
2437-79-8	PCB47
32598-13-3	PCB77
53469-21-9	Aroclor 1242
1 2672-29-6	Aroclor 1248
11097-69-1	Aroclor 1254
11096-82-5	Aroclor 1260
59536-65-1	PBBs = Brominated Biphenyls (mixed group of 209 Congeners)
40321-76-4	1,2,3,7,8 Pentachlorodibenzodioxine
No CAS No.	2,3,7,8 Tetrachlorodibenzo-p-dioxin(TCDD)
57117-31-4	2,3,4,7,8 Pentachlorodibenzofuran
688-73-3	Tributyltin*
No CAS No.	Tributyltin compounds
56-35-9	Tributyltin oxide = bis(tributyltin) oxide*
26354-18-7	2-propenoic acid, 2-methyl-, methyl ester = Stannane, tributylmeacrylate*
No CAS No.	Methoxyethylacrylate tinbutyltin, copolymer*
4342-30-7	Phenol, 2-[[tributylstannyl]oxy]carbonyl*
4342-36-3	Stannane, (benzoyloxy)tributyl- *
4782-29-0	Stannane, [1,2-phenylenebis(carbonyloxy)]*
36631-23-9	Stannane, tributyl = Tributyltin naphthalate*
85409-17-2	Stannane, tributyl-, mono(naphthenoyloxy)*
24124-25-2	Stannane, tributyl[(1-oxo-9,12-octadecad)*
3090-35-5	Stannane, tributyl[(1-oxo-9-octadecenyl)]*
26239-64-5	Stannane, tributyl[[[1,2,3,4,4a,4b,5,6,1]*
1983-10-4	Stannane, tributylfluoro- Me*
2155-70-6	Tributyl[(2-methyl-1-oxo-2-propenyl)oxy]stannane*
No CAS No.	Tributyltin carboxylate*
26636-32-8	Tributyltin naphthalate*
No CAS No.	Tributyltin polyethoxylate*
2279-76-7	Tri-n-propyltin (TPrT)*
No CAS No.	Triphenyltin*
900-95-8	Fentin acetate*
95-76-1	3,4-Dichloroaniline*
108-46-3	Resorcinol*

Appendix B – Substances on the EU list of substances with documented endocrine-disrupting effects

61-82-5	Amitrol = Aminotriazol
1836-75-5	Nitrofen
140-66-9	4-Tert-Octylphenol=1,1,3,3-Tetramethyl-4-butylphenol
25154-52-3	Phenol, nonyl- *
1461-25-2	Tetrabutyltin (TTBT)*
99-99-0	4-Nitrotoluene*

Appendix C - Criteria for identification of persistent, bioaccumulative and toxic substances (PBT) and very persistent and very bioaccumulative substances (vPvB)

PBT/vPvB substances are defined in the proposal for a new regulatory framework for chemicals recently published by the European Commission⁶.

A substance that fulfils all three of the criteria of the section below is a PBT substance. The criteria are not to be used on non-organic compounds, but on organo-metal compounds.

Persistence

A substance fulfils the persistence criterion (P-) when:

- the half-life in marine water is higher than 60 days, or
- the half-life in fresh- or estuary water is higher than 40 days, or
- the half-life in a marine sediment is higher than 180 days, or
- the half-life in a fresh- or estuary water sediment is higher than 120 days, or
- the half-life in soil is higher than 120 days.

The assessment of the persistency in the environment must be based on available half-life data collected under adequate conditions, which must be described by the registrant.

Bioaccumulation

A substance fulfils the bioaccumulation criterion (B-) when:

- the bioconcentration factor (BCF) is higher than 2,000

The assessment of bioaccumulation must be based on measured data on bioconcentration in aquatic species. Data from fresh water as well as marine water species can be used.

Toxicity

A substance fulfils the toxicity criterion (T-) when:

- the long term no-observed effect concentration – (NOEC) - for marine or fresh water organisms is less than 0.01 mg/L, or

⁶ Proposal for a regulation of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency and amending Directive 1999/45/EC and Regulation (EC) {on Persistent Organic Pollutants}, which has been published by the European Commission on the website: <http://europa.eu.int/eur-lex/en/com/pdf/2003/act0644en03/6.pdf>.

Appendix C - Criteria for identification of PBT and vPvB substances

- the substance is classified as carcinogenic (category 1 or 2), mutagenic (category 1 or 2) or toxic to reproduction (category 1, 2 or 3), or
- there is any other evidence on chronic toxicity as identified by the classifications: T, R48 or Xn, R48 under Directive 67/548/EEC.

vPvB substances

A substance that fulfils the criteria mentioned below is a vPvB substance:

Persistence

A substance fulfils the "very persistent" criterion (vP-) when:

- the half-life in marine, fresh- or estuary water is higher than 60 days, or
- the half-life in marine, fresh- or estuary water sediment is higher than 180 days,
or
- the half-life in soil is higher than 180 days.

Bioaccumulation

A substance fulfils the "very bioaccumulative" criterion (vB-) when:

- the bioconcentration factor is greater than 5,000

Appendix D – Substances that have been omitted in relation to the previous LOUS

Substances that have been removed from the LOUS in relation to the previous list from 2000.

Substance	CAS No.	Reason for omission from the LOUS
3-Aminomethyl-3,5,5-trimethyl cyclohexylamine	2855-13-2	Does not meet new criteria for undesirable properties (classifications).
Antimonytrioxide	1309-64-4	Omitted because of reduced consumption.
Azo dyes that release carcinogenic amines	Several	Special initiatives regarding this substance have previously been assigned high priority. New EU regulation on restrictions on use has minimised the risk (Statutory Order no. 755 of 15 August 2003).
2,2-Bis(p-(2,3-epoxypropoxy)phenyl)propane	1675-54-3	Does not meet new criteria for undesirable properties (classifications).
Bisphenol-A-diglycidylether (reaction product)	25068-38-6	Does not meet new criteria for undesirable properties (classifications).
1,2-Dichloroethane	107-06-2	Omitted because consumption in Denmark is now very low. Therefore, the substance does not meet new criteria. Special initiatives regarding this substance have previously been assigned high priority.
Heavy naphthenic hydrocarbons	64741-53-3	Omitted because of reduced consumption.
3,6-Diazaoctane-1,8-diamine	112-24-3	Does not meet new criteria for undesirable properties (classifications) and consumption in Denmark is below the tonnage limit.
3,3'-Dichloro-(1,1'-biphenyl)-4,4'-diamine dihydrochloride	612-83-9	New information about the use of this substance indicates that it does not constitute a risk. Solely used as a raw material for synthesis.
Tolyfluanide	731-27-1	Omitted because of reduced consumption.

Appendix D - Substances that have been omitted in relation to the previous LOUS

Dimethylphenol	1300-71-6	Does not meet new criteria for undesirable properties (classifications).
6-Ethoxy-1,2-dihydro-2,2,4-trimethylquinoline	91-53-2	Does not meet new criteria for undesirable properties (classifications).
Hexachlorobenzene	118-74-1	Special initiatives regarding this substance have previously been assigned high priority. Covered by the POP Convention (Statutory Order no. 820 of 29 September 2003 regarding certain persistent organic compounds (POP substances)) and not permitted in Denmark.
1,6-Hexamethylene diacrylate	13048-33-4	Does not meet new criteria for undesirable properties (classifications).
Rosin	8050-09-7	Does not meet new criteria for undesirable properties (classifications).
Low boiling point naphtha containing carcinogenic substances (benzene $\geq 0.1\%$ by volume).		Omitted from the list because the fraction containing carcinogenic impurities is not currently used in Denmark.
Maleic anhydride	108-31-6	New information about the use of this substance indicates that it does not constitute a risk.
Mesitylene	108-67-8	Does not meet new criteria for undesirable properties (classifications) and consumption in Denmark is below the tonnage limit.
Methenamine	100-97-0	Omitted because of reduced consumption.
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)]diacrylate	42978-66-5	Does not meet new criteria for undesirable properties (classifications).
Methyl methacrylate	80-62-6	Does not meet new criteria for undesirable properties (classifications).
Musk xylenes and musk ketones		Consumption in Denmark is very low. Special initiatives regarding this substance have previously been assigned high priority.
2,2,4,6,6-Pentamethylheptane	13475-82-6	Does not meet new criteria for undesirable properties (classifications).
Phenol	108-95-2	Does not meet new criteria for undesirable properties (classifications).
Phenol, 4,4'-(1-methylethylidene)bis, polymer with 2,2-((1-methylethylidene)bis)	25036-25-3	Omitted since the substance has a variable/unknown structure and is thus not suitable for computer calculations.

Appendix D - Substances that have been omitted in relation to the previous
LOUS

Cresol	1319-77-3	Does not meet new criteria for undesirable properties (classifications).
Phthalic anhydride	85-44-9	Omitted because of reduced consumption.
Sulfamic acid	5329-14-6	Does not meet new criteria for undesirable properties (classifications).
Pitch	61789-60-4	Does not meet new criteria for undesirable properties (classifications).
1,2,4-Trichlorobenzene	120-82-1	Consumption in Denmark is now very low. Special initiatives regarding this substance have previously been assigned high priority. EU prohibition has been proposed.
Unspecified gas oil with carcinogenic properties		Omitted from the list because the fraction containing carcinogenic impurities is not currently used in Denmark.
Petroleum distillates containing carcinogenic substances (DMSO extract $\geq 3\%$).		Omitted from the list because the fraction containing carcinogenic impurities is not currently used in Denmark.

Appendix E – Selection criteria that have been omitted

List of the criteria the Danish EPA has decided to omit in the update of the LOUS.

Risk phrases that no longer automatically entail that a substance is regarded as having undesirable effects.

R23	Toxic by inhalation.
R24	Toxic in contact with skin.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R27	Very toxic in contact with skin.
R28	Very toxic if swallowed.
R43	May cause sensitization by skin contact.
R51/53	Toxic to aquatic organisms.
R52/53	Harmful to aquatic organisms.

Supplementary selection criteria no longer used.

1. Substances included on the phase-out lists of marine conferences, where there is a desire to phase out the use in products of those substances.

Appendix F - New substances on the LOUS

Compared to the 2000 LOUS, a number of new substances have been included in the new LOUS. The reasons for including the substances on the new LOUS appear from the descriptions of the individual substances in Appendix A.

New substances:

CAS No.	Substance
79-06-1	Acrylamide
90622-57-4	Alkanes, C9-12-iso-
31807-55-3	Isododecane
91082-17-6	Alkyl sulfonic acid phenyl ester
68442-68-2	Benzenamine, N-phenyl-, styrenated
68953-84-4	1,4-Benzenediamine, N,N'-mixed Ph and tolyl derivates
54208-63-8	2,2'-Bisphenol F diglycidylether
10124-43-3	Cobalt(II)sulphate
85-42-7	Cyclohexane-1,2-dicarboxylic anhydride (unspec.)
26898-17-9	Dibenzyltoluene
95-76-1	3,4-dichloroaniline
68-12-2	N,N-dimethylformamide
75-08-1	Ethanethiol
75-12-7	Formamide
26761-45-5	2,3-epoxypropyl neodecanoate
111-15-9	2-ethoxy ethyl acetate
109-86-4	2-methoxyethanol
110-49-6	2-methoxyethyl acetate
1589-47-5	2-methoxypropanol
70657-70-4	2-methoxypropyl acetate
19438-60-9	Hexahydro-4-methylphthalic anhydride
93685-81-5	Hydrocarbons, C4, 1,3-butadiene-free, polymd., triisobutylene fraction, hydrogenated
123-31-9	Hydroquinone
108-46-3	Resorcinol
10039-54-0	Hydroxylammonium sulphate
11070-44-3	Tetrahydromethylphthalic anhydride (unspec.)
1313-27-5	Molybdenum trioxide
99-99-0	4-nitrotoluene
6683-19-8	Pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)
8002-05-9	Petroleum for certain uses
64742-05-8	Extracts (petroleum), light paraffinic distillate solvent
64742-90-1	Residues (petroleum), steam-cracked
8052-41-3	Turpentine, mineral (only one CAS No.)

	Certain organo-tin compounds:
688-73-3	Tributyl tin
No CAS No.	Tributyl tin compounds
56-35-9	Tributyl tin oxide = bis(tributyl tin) oxide
26354-18-7	2-propenoic acid, 2-methyl-, methylester=Stannane, tributyl methacrylate
No CAS No.	
4342-30-7	Methoxy ethyl acrylate tin butyl tin, copolymer
4342-36-3	Phenol, 2-[[tributylstannyl]oxy]carbonyl
4782-29-0	Stannane, (benzoyloxy)tributyl-
36631-23-9	Stannane, [1,2-phenylenebis(carbonyloxy)]
85409-17-2	Stannane, tributyl = Tributyl tin naphthalate
24124-25-2	Stannane, tributyl-, mono(naphthenoyloxy)
3090-35-5	Stannane, tributyl[(1-oxo-9,12-octadeca)]
26239-64-5	Stannane, tributyl[(1-oxo-9-octadecenyl)]
1983-10-4	Stannane, tributyl[[[1,2,3,4,4a,4b,5,6,1]]]
2155-70-7	Stannane, tributylfluoro- Me
No CAS No.	Tributyl[(2-methyl-1-oxo-2-propenyl)oxy], Stannane
26636-32-8	Tributyl tin carboxylate
No CAS No.	Tributyl tin naphthalate
2279-76-7	Tributyl tin polyethoxylate
No CAS No.	Tri-n-propyl tin (TPrT)
1461-25-2	Triphenyl tin
900-95-8	Tetrabutyl tin (TTBT)
	Fentin acetate
126-37-0	Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-
122-60-1	Phenyl glycidyl ether
	Certain pigments and dyes:
1533-78-4	- 2,2'-[[3-acetamido-4-[(2-chloro-4-nitrophenyl)azo]phenyl]imino]diethyl diacetate
5567-15-7	- C.I. Pigment yellow 83
5102-83-0	- C.I. Pigment yellow 13
3520-72-7	- C.I. Pigment orange 13
128-69-8	- C.I. Pigment red 224
5468-75-7	- C.I. Pigment yellow 14
85136-74-9	- 6-hydroxy-1-(3-isopropoxypropyl)-4-methyl-2-oxo-5-[4-(phenylazo)phenylazo]-1,2-dihydro-3-pyridinecarbonitrile
Several	PFOS compounds
75-56-9	Propylene oxide
100-42-5	Styrene
26140-60-3	Terphenyl (unspec.)
137-26-8	Thiram
65996-89-6	Tar, coal, high-temp.
91-20-3	Naphthalene
2451-62-9	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione
101-02-0	Triphenyl phosphite
31570-04-4	Tris(2,4-ditert-butylphenyl) phosphite

Appendix G - Substances on the LOUS 2004

CAS No.	Substance
79-06-1	Acrylamide
110-82-7	Certain alkanes and cycloalkanes 110-82-7 Cyclohexane
142-82-5	Heptane
110-54-3	Hexane
90622-57-4	C9-12-Isoalkanes
31807-55-3	Isododecane
	Alkylphenols and alkylphenol ethoxylates
91082-17-6	Alkyl sulfonic acid phenyl ester
68442-68-2	Benzenamine, N-phenyl-, styrenated
68953-84-4	1,4-Benzenediamine, N,N'-mixed Ph and tolyl derivates
92-52-4	Biphenyl
80-05-7	Bisphenol-A
54208-63-8	2,2'-Bisphenol F diglycidylether
	Lead and lead compounds
	Certain boric compounds
10043-35-3	Boric acid
1303-96-4	Borax
1303-86-2	Diboron trioxide
	Certain brominated flame retardants
32534-81-9	Pentabromodiphenyl ether
32536-52-0	Octabromodiphenyl ether
1163-9-5	Decabromodiphenyl ether
79-94-7	Tetrabromobisphenol A
25637-99-4	Hexabromocyclododecane
96-29-7	Butanone oxime
	Cadmium and cadmium compounds
	Certain chlorinated solvents
100-44-7	Benzyl chloride
75-09-2	Dichloromethane
127-18-4	Tetrachloroethylene
79-01-6	Trichloroethylene
	Chlorinated paraffins (short-, medium- and long-chained)
	Certain chromate compounds
1333-82-0	Chromium trioxide
10588-01-9	Sodium dichromate
7778-50-9	Potassium dichromate
7789-06-2	Strontium chromate
13530-65-9	Zink chromate
10124-43-3	Cobalt(II)sulphate
	Creosote compounds with carcinogenic "impurities"
85-42-7	Cyclohexane-1,2-dicarboxylic anhydride (unspec.)

26898-17-9	Dibenzyltoluene	
95-76-1	3,4-dichloroaniline	
111-42-2	Diethanolamine	
68-12-2	N,N-dimethylformamide	
75-08-1	Ethanethiol	
811-97-2	Fluorinated greenhouse gases (HFCs, PFCs and sulphur hexafluoride)	
354-33-6		HFC 134a
420-46-2		HFC 125
75-37-6		HFC 143a
75-73-0		HFC 152a
76-16-4		CF ₄
76-19-7		C ₂ F ₆
2551-62-4		C ₃ F ₈
50-00-0	SF ₆	
50-00-0	Formaldehyde	
75-12-7	Formamide	
111-30-8	Glutaraldehyde	
26761-45-5	2,3-epoxypropyl neodecanoate	
110-80-5	Certain glycol ethers	
111-15-9		2-ethoxyethanol
109-86-4		2-ethoxy ethyl acetate
110-49-6		2-methoxyethanol
1589-47-5		2-methoxyethyl acetate
70657-70-4		2-methoxypropanol
19438-60-9		2-methoxypropyl acetate
19438-60-9	Hexahydro-4-methylphthalic anhydride	
93685-81-5	Hydrocarbons, C ₄ , 1,3-butadiene-free, polymd., triisobutylene fraction, hydrogenated	
123-31-9	Hydroxy benzenes	
108-46-3		Hydroquinone
10059-54-0	Resorcinol	
10059-54-0	Hydroxylammonium sulphate	
26447-40-5	Certain isocyanates	
5873-54-1		MDI
101-68-8		2,4' MDI
26471-62-5		4,4' MDI
584-84-9		TDI
91-08-7		2,4 MDI
	2,6 MDI	
	Copper and copper compounds	
	Mercury and mercury compounds	
101-77-9	4,4'-methylenedianiline	
149-30-4	Mercaptobenzothiazole (MBT)	
1313-27-5	Molybdenum trioxide	
1634-04-4	MTBE	
7681-52-9	Sodium hypochlorite	
7778-54-3	Calcium hypochlorite	
7440-02-0	Certain nickel compounds	
1313-99-1		Nickel
	Nickel oxide	

99-99-0	4-nitrotoluene
2082-79-3	Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate
556-67-2	Octamethylcyclotetrasiloxane
8002-05-9	Certain oil derivatives
97722-04-8	Petroleum for certain uses
64742-05-8	Hydrocarbons, C26-55, arom.-rich
64741-51-1	Extracts (petroleum), light paraffinic distillate solvent
64742-04-7	Distillates (petroleum), heavy paraffinic
64742-90-1	Extracts (petroleum), heavy paraffin distillate solvent
8052-41-3	Residues (petroleum), steam-cracked
64742-88-7	Stoddard solvent
	Solvent naphtha (petroleum), medium aliph.
	Certain organo-tin compounds
	Dibutyl tin (DBT), dioctyl tin (DOT) and triphenyl tin (TPT), which cover several CAS Nos.
688-73-3	Tributyl tin
No CAS No.	Tributyl tin compounds
56-35-9	Tributyl tin oxide = bis(tributyl tin) oxide
26354-18-7	2-propenoic acid, 2-methyl-, methyl ester = Stannane, tributyl
No CAS No.	metacrylate
4342-30-7	Methoxyethyl acrylate tributyl tin, copolymer
4342-36-3	Phenol, 2-[[tributylstannyl]oxy]carbonyl = Monotributyl tin salicy-
4782-29-0	late
36631-23-9	Stannane, (benzoyloxy)tributyl-
85409-17-2	Stannane, [1,2-phenylenebis(carbonyloxy)]
24124-25-2	Stannane, tributyl = Tributyl tin naphthalate
3090-35-5	Stannane, tributyl-, mono(naphthenoyloxy)
26239-64-5	Stannane, tributyl[(1-oxo-9,12-octadeca)]
1983-10-4	Stannane, tributyl[(1-oxo-9-octadecenyl)]
2155-70-6	Stannane, tributyl[[[1,2,3,4,4a,4b,5,6,1]]]
No CAS No.	Stannane, tributylfluoro- Me
26636-32-8	Tributyl[(2-methyl-1-oxo-2-propenyl)oxy]Stannane
No CAS No.	Tributyl tin carboxylate
2279-76-7	Tributyl tin naphthalate
668-34-8	Tributyl tin polyethoxylate
1461-25-2	Tri-n-propyl tin (TPrT)
900-95-8	Triphenyl tin
	Tetrabutyl tin (TTBT)
	Fentin acetate
	Surfactants which do not degrade completely under anaerobic conditions

	Certain perfume ingredients:
122-40-7	Amylcinamal
101-85-9	Amylcin namyl alcohol
105-13-5	Anisyl alcohol
100-51-6	Benzyl alcohol
120-51-4	Benzyl benzoate
103-41-3	Benzyl cinnamate
118-58-1	Benzyl salicylate
104-51-1	Cinnamyl alcohol
104-55-2	Cinnamal
5392-40-5	Citral
106-22-9	Citronellol
91-64-5	Coumarin
5989-27-5	d-Limonen
97-53-0	Eugenol
4602-84-0	Farnesol
106-24-1	Geraniol
101-86-0	Hexylcinnamaldehyde
107-75-5	Hydroxycitronellal
31906-04-4	4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde
97-54-1	Isoeugenol
80-54-6	Lilial
78-70-6	Linalool
111-12-6	Methyl heptin carbonate
127-51-5	3-methyl-4-(2,6,6-trimethyl-2-cyclohexene-1-yl)-3-buten-2-one
6683-19-8	Pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)
	PFOS compounds
128-37-0	Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-
122-60-1	Phenyl glycidyl ether
	Certain phthalates:
85-68-7	Benzyl butyl phthalate
117-81-7	Di-(1-ethylhexyl) phthalate
84-74-2	Dibutyl phthalate
117-82-8	Bis(2-methoxyethyl) phthalate
11070-44-3	Phthalic anhydride, tetrahydromethyl- (unspec.)
	Certain pigments and dyes:
1533-78-4	Acetamide, N-(5-(bis(2-(acetyloxy)ethyl)amino)-2-((2-chloro-4-nitrophenyl)azo)phenyl)-
5567-15-7	C.I. Pigment yellow 83
5102-83-0	C.I. Pigment yellow 13
3520-72-7	C.I. Pigment orange 13
128-69-8	C.I. Pigment red 224
5468-75-7	C.I. Pigment yellow 14
85136-74-9	6-hydroxy-1-(3-isopropoxypropyl)-4-methyl-2-oxo-5-[4-(phenylazo)phenylazo]-1,2-dihydro-3-pyridinecarbonitrile
75-56-9	Propylene oxide
100-42-5	Styrene
26140-60-3	Terphenyl (unspec.)
137-26-8	Thiram

	Certain coal-tar products:
65996-89-6	Tar, coal, high-temp.
65996-93-2	Pitch, coal tar, high-temp.
8007-45-2	Tar, coal
91-20-3	Naphthalene
2451-62-9	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione
101-02-0	Triphenyl phosphite
115-96-8	Tris(2-chloroethyl)phosphate
31570-04-4	Tris(2,4-ditert-butylphenyl) phosphite
12122-67-7	Zineb