

# Checklist for the compilation of Safety Data Sheets

The purpose of safety data sheets (SDS) is to ensure protection of the health and safety of those using chemicals and the protection of the environment. Proper information about chemical products is not only required by law, it is also a requirement for all companies that are working seriously with safety, health and environmental (SHE) affairs. It is in the interest of all parties that this information should be of high quality, and that instructions given are in line with the intended use of the product. For substances registered according to Reach, downstream users must follow the instructions given in the SDS. If not, a new chemical safety assessment have to be made. For the user it is a necessity to be able to handle the product in a safe and environmentally acceptable way. For the supplier it is a part of the company's image and reflects the company's competence and ambitions in the SHE-area.

This checklist is intended to be a guide and aid for those who compile SDS for chemical products. It is a part of the companies' work with Responsible Care<sup>1</sup>. It should be stressed that the checklist is mainly intended for companies committed to Responsible Care and therefore some of the points go beyond what is required by legislation.

**Completed checklists should be regarded as internal documents and are not intended to be disclosed to customers.**

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<sup>1</sup> Responsible Care is the chemical industry's program for safety, health and environment. Responsible Care means that companies constantly strive for improvement and openly present their work. IKEM Innovation and Chemical Industries in Sweden, [www.ikem.se](http://www.ikem.se)

**Note that the checklist is not a 'list of musts'**, but a support tool for the person compiling the SDS. The checklist is designed for general use, but in some cases there may be reasons to add further points, or to modify the wording in existing points.

The checklist does not deal with the rules regarding exposure scenarios.

In the new format for SDS from 1 December 2010 which contains subtitles, no subtitle may be left blank, except for 3.1 and 3.2, for substances or mixtures. If information is missing or not relevant to the topic, the reasons why the information is not provided shall be stated.

A SDS is not a confidential document, and it shall be free of charge. There is no time requirement on when a SDS should be updated, but it shall be done when relevant new information emerge. A general recommendation is that the safety data sheet is updated at least every three years.

The information in the Registration dossier should match the information in the SDS if the substance is registered according to Reach. This also applies to the chemical safety report. If a exposure scenarios is attached, it shall also be consistent with the contents of the SDS. There is a possibility to omit the figures that are specific to the individual registrant, however, the figures shall be available if the authority makes a visit.



It is important that those who prepare SDS have appropriate expertise and experience in chemistry, toxicology and ecotoxicology and have knowledge of relevant legislation. It is also important that they are aware of the product's chemical composition, properties and are knowledgeable about its packaging, labelling, handling and intended use(s).

SDS should be sent electronically or by mail and shall arrive by the day of the product. It is not enough to put the SDS on the website or to refer to the website. When the SDS is updated, a new version shall be sent to customers who purchased the product within the last 12 months. This applies unless the update merely is formal (e.g. change of risk management measure that has significant effect on safe handling )

A SDS should be sent to professional users when the substance/mixture is classified as dangerous, PBT (persistent, bioaccumulative and toxic), vPvB (very persistent, very bioaccumulative) or listed on the candidate list<sup>2</sup>. This applies without the customer asking. For mixtures that is not classified as dangerous, a SDS shall be sent at the customer's request, if there is a substance that is classified as dangerous in a concentration that exceeds 1 % by weight of non gas mixtures and 0.2 % by volume for gaseous mixtures. This applies also when there is a PBT, vPvB or a substance on the candidate list in a concentration above 0.1% by weight of a non-gaseous mixture and for substances for which there are Community workplace exposure limits in the workplace. The SDS must be available so that the customer can get it on request.

The SDS must be written in the official language of the Member state. It also applies to attachments such as exposure scenarios.

All manufacturers, importers, downstream users and distributors shall compile all information

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<sup>2</sup> ECHA's list of Substances of Very High Concern (SVHC) that are updated periodically.  
<http://echa.europa.eu/web/guest/candidate-list-table>

necessary to fulfill their responsibilities concerning SDS and keep it available at least 10 years after they last produced, imported, delivered or used the substance or mixture.

Until 1 of June 2015 both CLP (EG nr 1272/2008) and the Dangerous Preparations Directive (DPD, 1999/45/EG) applies for classification of substances and mixtures. It is important to take this into account when the SDS is reviewed using the checklist.

*This checklist can freely be copied or reproduced in any form, partly or in whole, as long as a reference to the original publication is given.*



# General information

Information	Check	Comments
Page numbers are indicated, preferably while mentioning the total number of pages, e.g. page 1(8)		
Date of issue/revision is stated on the first page of the SDS (can also be stated on every page). After revision "revised" shall be stated before the date.		
Upon revision of an existing SDS the issue date or version number for the SDS that is revised should be indicated.		
<b>Recommendation:</b> <i>The fonts and letter sizes used are clear and easy to read.</i>		
<b>Recommendation:</b> <i>The product name is stated on all pages in the document.</i>		



# SECTION 1: Identification of the substance/ mixture and of the company/undertaking

Information	Check	Comments
<p><b>1.1 Product identifier:</b> Product identifier is used to identify substances or mixtures. For a substance the product identifier indicates one or more of the following alternatives:</p> <ul style="list-style-type: none"> <li>• If the substance is in appendix VI of the CLP-regulation (Harmonized classification and labeling of certain dangerous substances) – use the name and identification number specified there.</li> <li>• Else use the name and identification number specified in the classification and labeling register.</li> </ul> <p>The identification number in these two cases are index-, CAS-, or EC<sup>3</sup>-number.</p> <ul style="list-style-type: none"> <li>• Cas-number together with IUPAC-name</li> <li>• IUPAC-name or other internationally marketable chemical name.</li> </ul>		
<p>Product designation for mixtures: Trade name or designation of the mixture.</p>		
<p>Specified product name is identical to the name on the label/packaging and on other product documents</p>		
<p>For substances subject to registration under Reach, the registration number shall be included. (The part of the registration number concerning the individual registrant can in some cases be left out)</p>		
<p><b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b> The SDS must contain the identified uses relevant to the recipient. For registered substances with a chemical safety report the identified uses must match the specific uses in the report. Refer to a table in section 16 if the list gets too long. If there are uses advised against include reasons why it is advised against. In describing the use and dissuasion generic codes<sup>4</sup> can be used.</p>		

<sup>3</sup> EC number is a unique reference number in a list of chemical substances on the European market. The list is a combination of three lists: European Chemical Substances Information System (EINECS), the European List of New Chemical Substances (ELINCS) and No Longer Polymers List (NLP).

<sup>4</sup> Guidance on information requirements and chemical safety assessment, Chapter R.12: Use descriptor system, [http://echa.europa.eu/documents/10162/13632/information\\_requirements\\_r12\\_en.pdf](http://echa.europa.eu/documents/10162/13632/information_requirements_r12_en.pdf) 20131125



<p><b>1.3 Details of the supplier of the Safety Data Sheet</b> The supplier's name, address and telephone are stated correctly. The supplier must be based in the EEA. Email Address should not go to a specific person as the SDS then need to be updated if the person is replaced.</p>		
<p><b>Recommendation:</b> <i>It is recommended that the supplier appoints a contact in the Member State where the product is placed on the market and also refers to this contact in the SDS.</i></p>		
<p><b>Information</b></p>	<p><b>Check</b></p>	<p><b>Comments</b></p>
<p><b>1.4 Emergency telephone number</b> The number should be reachable around the clock all year round. If the number is available only during office hours that must be indicated. However, if there is an official information service, this is sufficient. Via the emergency telephone number you can get advice on acute health effects.</p>		

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## SECTION 2: Hazards identification

Product classification and dangerous characteristics are given here. Furthermore, additional information that are not included in the classification, but may still be of importance can

be included. If no hazardous properties are listed here then recommended precautions and instructions in other sections are to be adapted accordingly.

Information	Check	Comments
<p><b>2.1 Classification of the substance or mixture</b> Product classification and briefly the dangerous properties of the product for humans and the environment. For substances both the classification according to CLP and Dangerous Substance Directive (DSD) shall be given until 1 June 2015. If the classification is notified to the Classification and Labelling Inventory the information shall be consistent. For mixtures, the classification shall be according to the Dangerous Preparation Directive (DPD) until 1 June 2015 when the CLP regulation takes effect. CLP classification can be used, but the DPD classification shall be included until 1 June 2015. If the product is not classified as dangerous it must be clearly stated.</p>		
<p><b>2.2 Label elements</b> For substances labeling information shall be given according to CLP. For mixtures, the classification shall be according to DPD until 1 June 2015 when the CLP regulation takes effect. If CLP is implemented before this date, the product can be labeled according to CLP, then label elements by both CLP and DPD shall be indicated here.</p>		
<p><b>2.3 Other hazards</b> If the substance is classified as PBT- or vPvB it shall be stated.</p>		
<p>Important physicochemical aspects shall be specified, including features that are not reflected in the classification, such as fire or explosion hazard in the pure product or in combination with other substances and the risk of dust explosions.</p>		
<p>Product health properties that are not reflected in the classification, for example suffocation or danger for frostbite.</p>		
<p>The environmental hazardous properties that are not reflected in the classification, such as hazards to soil-dwelling organisms.</p>		
<p><b>Additional control:</b> If only symbol letters/hazard statements is specified there shall be a reference to Section 16 where all relevant symbol letters/hazard statements shall be declared in plain text.</p>		
<p>No information is given to highlight the product for marketing</p>		

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purposes, for example 'Not hazardous' or 'The diluted product is safe'.		
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# SECTION 3: Composition/information on ingredients

The basic principle should be that the content, including pollution, is given as accurately as possible, both for chemical identity and concentration.

Information on unclassified materials is given if they are relevant from a hazard or risk assessment point of view, when used as intended.

Information	Check	Comments
Substances that are assigned with occupational community workplace exposure limit values <sup>5</sup> shall be identified by name and concentration, even those that are not classified as a health or environmental hazard.		
Substances that are classified as allergenic shall be included, even if they are below the threshold for classification.		
Substances that are classified as PBT or vPvB shall be included if the content is 0.1% or higher.		
No non-information, such as 'free from xx' is given to highlight the product for marketing purposes. This should not be confused with information about the level of a pollutant (eg, benzene or asbestos) is below a certain level.		
If concentrations are given as ranges, the intervalls should be small, and may not be so large that the product classification is questionable. If ranges are given for several substances, the total of the upper limits may not significantly exceed 100%.		
If only the symbol letters/hazard statements is specified, a reference to Section 16 shall be included where all relevant symbol letters/hazard statements shall be declared in plain text.		
<b>3.1 Substances</b> If the product contains other substances, for example pollutants, they should be included if they contribute to the classification. Product identification shall be included but not hazard classification, since they have already contributed to the classification.		
<b>3.2 Mixtures</b> The product identifier, registration number (if available),		

<sup>5</sup> Occupational exposure limit values in the EU is established with the support of the Chemical Agents Directive (98/24/EC), except for carcinogens as determined pursuant to the Carcinogens Directive (2004/37/EC) but also the Asbestos Directive (83/477/EEC). The Swedish Work Environment Authority's webpage <http://www.av.se/teman/hygieniska/> page contains a list of all indicative and binding EU limit values..





Information	Check	Comments
classification and concentration or concentration range shall be included for all substances, written in section 3.2. Classification according to DSD. Classification also according to CLP if information is available.		
Substances in a mixture, that are classified, are to be specified if the substance is classified as dangerous and in a concentration level exceeding the rules that are in the CLP regulation (Table 1.1) and DPD (Table in Article 3.3), if there is a Community exposure limit or if the substance is classified as PBT or vPvB. This also applies if the chemical is on the candidate list and the content is greater than 0.1%.		
Substances in a mixture that are not classified should be included if they are classified as dangerous or if there is a Community workplace exposure limit and the substance is present in a concentration level of more than 1% by weight in non-gaseous mixtures and over 0.2% volume in gaseous mixtures. This also applies if the chemical is classified as a PBT, vPvB or included on the candidate list and the content is greater than 0.1%.		
If the substance does not meet the classification criteria, the reason for indicating the substance in subsection 3.2 shall be described, such as “non-classified vPvB substance” or “substance with a Community workplace exposure limit”		

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## SECTION 4: First aid measures

Information	Check	Comments
Write so that untrained personnel can understand. Specific information to medical personnel should be labeled as such.		
The need for special equipment which should be available in case of accidents needs to be assessed (eg. emergency shower). If it turns out that the need may arise, the equipment shall be mentioned in the SDS.		
<b>4.1 Description of first aid measures</b> If immediate medical attention is required enter that first.		
The recommended measures must be proportional to the hazards, eg should immediate medical help or 15-minute eye wash not be written routinely.		
<b>4.2 Most important symptoms and effects, both acute and delayed</b> Actions in case of inhalation, skin contact, eye contact and ingestion. Specific symptoms that may occur and requires a certain action.		
Information about medical treatment, delayed effects, if fresh air is required, the handling of the person's clothing, use of protective equipment for first aid personnel.		
<b>4.3 Indication of any immediate medical attention and special treatment needed</b> The need for medical care is evaluated and listed if relevant.		
The need for antidotes that should be available for immediate treatment is assessed and stated if applicable.		



## SECTION 5: Firefighting measures

Information	Check	Comments
<b>5.1 Extinguishing media</b> Suitable extinguishing media is provided.		
Unsuitable extinguishing, such as sprays of water against burning hydrocarbons or water pumping directly into a burning storage tank.		
<b>5.2 Special hazards arising from the substance or mixture</b> Particularly hazardous decomposition products/gases that may be formed under fire conditions.		
<b>5.3 Advice for firefighters</b> Special protective equipment for firefighters.		
Recommendation to move or water cool container if there is risk for pressure and thus rupture of containers.		
<b>Recommendation:</b> <i>The handling of waste from any rescue work should be considered.</i>		



## SECTION 6: Accidental release measures

Information	Check	Comments
<p><b>6.1 Personal precautions, protective equipment and emergency procedures</b> Measures to prevent harm to human health, e.g. such as preventing skin contact and warn/evacuate people in the neighborhood if necessary.</p>		
<p>Personal protective equipment for the persons performing the clean up. Make a reference to section 8 if the equipment is the same as for normal handling. Suitable materials in the protective equipment shall be included if relevant.</p>		
<p><b>6.2 Environmental precautions</b> Measures to prevent contamination of the environment, such as the prevention of pollution in wells etc.</p>		
<p><b>6.3 Methods and material for containment and cleaning up</b> General measures, e.g. as ventilation, removal of ignition sources and to prevent the spread of dangerous dust.</p>		
<p>Methods for collection of and cleaning up of spills, such as containment or drainage arrangements.</p>		
<p>Method for disposal of collected waste, absorbents or similar.</p>		
<p>Inappropriate sanitation practices and inadequate absorbent.</p>		
<p>Appropriate means and methods to neutralize or deactivate the spilled product.</p>		
<p>Advice after large spills to contact the emergency services, waterworks, sewage treatment plants and/or municipal environmental management.</p>		
<p><b>6.4 Reference to other sections</b> If additional supplemental information is available under sections 8 and 13, refer to these.</p>		



## SECTION 7: Handling and storage

The recommendations given here can be adapted to different management situations and shall mainly deal with the identified uses. Be clear about the possible circumstances in which there is a need for e.g. explosion-proof electrical equipment or measures to prevent the spread of hazardous vapors. If the product is intended for a specific use

recommendations should be adapted accordingly and be as detailed as possible, preferably with reference to current industry standards and accepted industry practices.

If exposure scenarios are attached subsection 7.1 and 7.2 may refer to them.

Information	Check	Comments
<b>7.1 Precautions for safe handling</b> Need for closed systems, local exhaust ventilation or other technical controls to prevent exposure.		
Measures to prevent the spread of aerosols and dust.		
Measures to eliminate the risk of explosion due to static electricity.		
Need for explosion-proof electrical equipment and other special equipment that is important to safety.		
The advice and instructions given are customized for the intended use. If the product for example is intended to be heated the advice and instructions shall be adapted accordingly. Recommendations may also be directed to specific tasks in the handling, e.g. dilution or mixing.		
Measures to prevent releases to the environment, such as use of filters or scrubbers in the exhaust ventilation or embankment of the area where the product is handled or stored.		
Suitable temperature range for handling.		
Is there an available manual or other form of advice on use of the product? If so, is it compatible with the information in section 7?		
If there are more detailed advice in a product data sheet or something like that, make a reference to that.		
<b>7.2 Conditions for safe storage, including any incompatibilities</b> Equipment and material that may not be or should not be used with the device is indicated, e.g. rubber gaskets.		
Particular requirements for storage space and storage containers.		
Suitable storage temperature and other conditions that may be of importance for storing, e.g. light and humidity.		

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Information	Check	Comments
Inappropriate methods to handle or store the product, if they can be predicted.		
Materials and substances that may not be stored with the product.		
Limited storage time due to the formation of dangerous substances.		
Limited storage time due to changes in product quality. It must be clear that it is only the quality and not the hazardous properties that may change during storage for a long time.		
If there is a risk that hazardous vapors may accumulate above the liquid in storage tanks this is indicated (even if the hazardous substance is only included with low content in the product).		
<b>7.3 Specific end use(s)</b> If the product is intended for specific end use the recommendations should be designed for this, be realistic and detailed.		



## SECTION 8: Exposure controls/ personal protection

The recommendations given here may have to be adapted to different management situations. The information in this section will be used in the workplace as a basis for the (employer's) risk assessment of chemical safety and health risks and to determine the handling and safety instructions relevant to the workplace. A risk assessment shall include the following assessed parameters; hazardous properties, synergistic effects with other chemical hazards, possible reactions with other substances and materials. Actions that may be needed to be taken is, for example where handling may occur, technical measures such as

equipment, but also instructions on the use of personal protective equipment. Thus it is important that the information provided is factual and relevant so that a proper assessment can be done.

Environmental precautions must be consistent with and summarize the risk management measures that give adequate control of environmental exposure to the substance, for the exposure scenarios set out in the annex to the safety data sheet .

Information	Check	Comments
<b>8.1 Control parameters</b> Occupational exposure limits, of the constituent substance(s), applicable in the Member State where the substance is placed on the market. It shall also contain information about the type of exposure limit referred and from which regulation they are taken. Each substance addressed should be written in the same way as in Section 3.		
If a chemical safety report is required, the relevant thresholds Derived-No-Effect Levels (DNEL) and Predicted No Effect Concentration (PNEC) for the substance shall be given for the exposure scenarios listed in the SDS.		
<b>8.2 Exposure controls</b>		
If exposure scenario is attached, it is possible to refer to it to avoid repetition.		
If the substance is registered as an isolated intermediate under Reach regulation, it should be stated.		
Appropriate technical control measures should be included for the identified uses and the most relevant substances.		
Specific measures that are needed to reduce exposure, such as the need for ventilation, local exhaust ventilation etc.		
The need for respiratory protection is specified e.g. respirator with specified cleaning material (cartridge or canister), appropriate partikel filters and masks, or air compressors		

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Information	Check	Comments
Need for gloves or other hand protection measures, including the type of gloves and suitable material. If any glove material is inappropriate, this should be stated.		
The breakthrough time for the recommended glove, by the exposure quantity and exposure time.		
Need for eye or face protection.		
Need for special protective clothing and footwear.		
The recommended safety measures shall be proportionate to the hazard of the product. Extensive protective equipment should not be recommended for dealing with products that are not assessed as hazardous to health.		
The recommended measures are reasonable with respect to the volumes that the product is normally handled in. Extensive protective equipment should not normally be recommended for products that only come in small packages.		
The measures is necessary for the user to meet the requirements of environmental protection legislation applicable within EEA. If a chemical safety report is required, a summary of the risk management measures needed to, in a appropriate way, limit the exposure of the substance to the environment has to be submitted for the exposure scenarios specified in the appendix to the SDS.		
<p><b>Recommendation:</b>  <i>For the recommended protective measures there are instructions when the measures or equipment should be used.</i>  <i>Example: Respiratory protection/gloves/goggles must be worn during mixing/spraying/welding/casting/work in rooms with poor ventilation.</i></p>		
<p><b>Additional control:</b>  Is there an available manual or other form of advice on use of the product? If so, is it compatible with the information in Section 8?</p>		
If the product contains lead/inorganic lead compounds or cadmium/inorganic cadmium compounds, also specify the is biological limits.		
Occupational exposure limits for dust, oil mist or similar, if it is relevant.		

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## SECTION 9: Physical and chemical properties

For complex products (mixtures) should primarily properties of the preparation be indicated. In cases where this information is missing, it might be relevant to specify the characteristics of one or more of the components of the formulation (e.g.

vapor pressure or flashpoint). In such cases it shall be clear to what substance the information belongs.

Units must be clearly indicated.

Information	Check	Comments
<b>9.1 Information on basic physical and chemical properties</b> The physical conditions of the product (e.g. powder, liquid, paste, gas).		
Product color ('colourless' is also relevant information).		
The smell of the product ('odorless' is also relevant information).		
Odor threshold.		
pH value (including concentration value if there is a water solution).		
Melting point/freezing point.		
Initial boiling point and boiling range.		
Flash point (including method).		
Evaporation rate.		
Flammability (solid, gas).		
Upper/lower flammability or explosive limits.		
Vapor pressure (indicate whether it is measured or calculated. If measured, state at what temperature (°C) the measurement was made).		
Vapor density.		
Relative density (specify at what temperature (°C), this is measured).		
Solubility (specify solvents).		
Partition coefficient n-octanol/water.		
Ignition temperature.		
Decomposition temperature.		
Viscosity.		
Explosive properties.		
Oxidising properties.		

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Information	Check	Comments
<b>9.2 Other information</b> Give other data as needed, e.g. such as conductivity and solubility in fat.		
For powdered materials dust explosion data are stated.		



## SECTION 10: Stability and Reactivity

Here it is stated how stable the product is and any circumstances in which hazardous reactions may occur during use or if the product gets into the environment.

If data for the mixture is missing, data on the substances in the mixture shall be stated.

Information	Check	Comments
<b>10.1 Reactivity</b> The reactivity of the substance or mixture.		
<b>10.2 Chemical stability</b> Is the substance or mixture stable or unstable under anticipated temperature and pressure conditions during storage and handling?  Needs and/or content of stabilizers is given where this is relevant to storage, i.e. hazard may occur due to poor stabilization of the product.		
Is the safety affected by a change in the product's physical state?		
<b>10.3 Possibility of hazardous reactions</b> Hazardous decomposition or degradation products that can be foreseen in case of fire, heat, reaction with air or water.		
<b>10.4 Conditions to avoid</b> Specify any conditions such as temperature, pressure, light, shock, static discharge, vibrations or other physical stresses that might result in a hazardous situation shall be listed and if appropriate a brief description of measures to be taken to manage risks associated with such hazards shall be given.		
<b>10.5 Incompatible materials</b> Identification of materials or substances that could react to produce a hazardous situation (e.g. an explosion, a release of a toxic or flammable materials, or a liberation of excessive heat). Include a description of measures to reduce the risk when in contact with these materials.		
<b>10.6 Hazardous decomposition products</b> Known and reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating shall be stated here.		



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# SECTION 11: Toxicological information

This Section includes both the results of animal testing and observations in humans. The products potential health effects shall be described in plain language. The results of the studies are given in numerical values (with reference to the test method), but they should also be accompanied by a description of how they are interpreted .

If survey data for a mixture is missing, the hazard is assessed based on the single substances in the preparation. This applies for the substances mentioned in Section 3. If the toxicity is similar the substances can be written as a group. If the concentration of the substances is too low to have an effect or if there is no information about the interactions the substances do not need to be

included. Some characteristics (ability to cause cancer, mutations and reproductive toxicity) must always be evaluated on the basis of the individual substances.

If survey data are missing, an assessment can to a limited extent be made based on chemically related products. If the assessment is based on data on other products that should be state clearly .

Both direct (acute) and delayed effects should be described, and risk of long-term effects through repeated exposure to low levels. Test information obtained during registration will be summarized in this section , with reference to the test method .

Information	Check	Comments
<p><b>11.1 Information on toxicological effects</b>                      The relevant hazard classes for which information shall be provided concerning substances, are:</p> <ul style="list-style-type: none"> <li>a) acute toxicity;</li> <li>b) skin corrosion/irritation;</li> <li>c) serious eye damage/irritation;</li> <li>d) respiratory or skin sensitisation;</li> <li>e) germ cell mutagenicity;</li> <li>f) carcinogenicity;</li> <li>g) reproductive toxicity;</li> <li>h) STOT (Specific target organ toxicity)-single exposure;</li> <li>i) STOT-repeated exposure;</li> <li>j) aspiration hazard.</li> </ul>		
<p>For CMR substances (carcinogenic, mutagenic, reprotoxic) that will or have been registered the result of the comparison of category 1A and 1B according CLP shall be included.</p>		



Information	Check	Comments
<p>Mixtures</p> <p>The relevant hazard classes for which information shall be provided concerning mixtures, are:</p> <ul style="list-style-type: none"> <li>a) acute toxicity;</li> <li>b) irritation;</li> <li>c) corrosivity;</li> <li>d) sensitisation;</li> <li>e) repeated dose toxicity;</li> <li>f) carcinogenicity;</li> <li>g) mutagenicity;</li> <li>h) toxicity for reproduction.</li> </ul>		
<p>If the substances enumerated in Section 3 provides health effects not shown in the mixture as a whole it must be described. This applies to cancer, mutations, birth defects, reproductive disorders, STOT, allergies and hypersensitivity.</p>		
<p>Information shall be provided on likely routes of exposure and the effect of the substance or mixture via each possible route of exposure, i.e. ingestion, inhalation or exposure of skin/eyes.</p>		
<p>Description of symptoms from low to high exposure, e.g. 'May cause headaches and dizziness, and lead to fainting or unconsciousness. High doses can lead to coma and death.'</p>		
<p>Will the symptoms appear immediately after exposure or is the effect delayed?</p>		
<p>Possible interactions between substances in a mixture that can change the conditions of toxicity.</p>		
<p>The relevant data on toxicokinetics, metabolism and distribution in the human body.</p>		

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## SECTION 12: Ecological information

A brief summary of the data should be given on every point. Target species, media, units, test duration and test conditions shall be included. A mixture's hazardous properties are assessed based on the ingredients. Information shall be provided on bioaccumulation, persistence and degradability of each substance in the mixture, if the information is available and relevant. Information should also be provided for hazardous transformation products arising from the degradation of substances and mixtures. If survey data are missing, the substance/mixture can to a limited extent be assessed based on chemically related products. If the assessment is based on data for other products this should be clearly stated.

The product's potential effects on the environment must be described in plain language. Results of the investigations are given in numerical values (with reference to the used test

method), but they should also be accompanied by a description of how they are interpreted. For mixtures a summary assessment should be given of each ingredient.

Properties that may be of importance for how the product occurs in the environment is indicated by the nature of the product and the probable use. Such properties may be chemical and physical data which is not mentioned in paragraph 9, such as surface tension or characteristics such as adsorption and desorption.

Information relevant to the environment should also be given in other Sections, in particular instructions for controlled release, accidental release measures, transport and disposal in Sections 6, 7, 13, 14 and 15.

Test information obtained during registration shall be summarized in this section.

Information	Check	Comments
<b>12.1 Toxicity</b> Indication of the included substances toxicity to aquatic organisms. Both acute and chronic effects.		
If data on toxicity to soil organisms, insects, plants and birds are available these are included.		
Measured or estimated toxicity to microorganisms and known or anticipated effects in the treatment plant.		
<b>Recommendation:</b> <i>If it is known that the product has inhibitory effects on nitrification process in wastewater treatment plant this is indicated (for products that by intended or foreseeable use can enter drains).</i>		
<b>12.2 Persistence and degradability</b> Indication of the included substances degradation in the environment, both biodegradation and degradation by other processes, such as oxidation or hydrolysis.		
Indication of degradation in sewage treatment plants.		

### Checklist for the compilation of Safety Data Sheet



Information	Check	Comments
<p><b>12.3 Bioaccumulative potential</b> Indication of the included substances potential for bioaccumulation. If available the partition coefficient between n-octanol and water (<math>K_{ow}</math>) and/or bioconcentration factor (BCF).</p>		
<p><b>12.4 Mobility in soil</b> Known or predicted movement and distribution in the environment, based on the water solubility, surface tension, adsorption etc. If a substance has the potential to spread to groundwater or far from the emission source that shall be indicated.</p>		
<p><b>12.5 Results of PBT and vPvB assessment</b> If a chemical safety report is required, the results of the PBT assessment shall be included in the chemical safety report.</p>		
<p><b>12.6 Other adverse effects</b> Other known effect of significant impact on the environment, such as potential of endocrine disruption, ozone depletion, photochemical ozone creation, global warming or acidification.</p>		





## SECTION 13: Disposal considerations

Information	Check	Comments
<b>13.1 Waste treatment methods</b> Appropriate method of waste treatment for the substance or mixture.		
Appropriate means and methods to neutralize or disable residue of the product.		
Appropriate method of waste treatment for contaminated packaging		
Specific health-, environment- and safety risks that arise in occurrence with waste treatment, eg. risk of auto-ignition in combination with certain substances.		
Any relevant Community provisions relating to waste shall be referred to. In their absence any relevant national or regional provisions in force shall be referred to.		
<b>Recommendation:</b> <i>The waste code (EWC-code), if the products possible use is such that the kind of waste can be anticipated.</i>		
<b>Recommendation:</b> <i>Information whether waste from the products intended use or other anticipated use is to be considered as hazardous waste.</i>		
<b>Recommendation:</b> <i>Information whether residue from unused product is to be considered as hazardous waste.</i>		



## SECTION 14: Transport Information

The section refers to the substance or mixture in section 1.

For evaluated products that doesn't meet the criteria write "Not dangerous goods" or similar.

Information	Check	Comments
<b>14.1 UN number</b>		
<b>14.2 Proper UN shipping name</b> Proper shipping name.		
<b>14.3 Transport hazard class(es)</b> Transport hazard class assigned in accordance with the UN Model Regulations, including subsidiary risks.		
<b>14.4 Packing group</b> According to the Un Model Regulations, if relevant.		
<b>14.5 Environmental hazards</b> It shall be specified if the substance or mixture is environmentally hazardous in accordance with the UN Model Regulations		
<b>14.6 Special precautions for user</b> Other information or special precautions that might be necessary in connection with transport of the product.		
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> For transportation in bulk special rules apply, MARPOL and IBC		



## SECTION 15: Regulatory information

This section of the safety data sheet shall describe the other regulatory information on the substance or mixture that is not already provided

in the safety data sheet. Also if relevant the national laws of the relevant Member States shall be mentioned.

Information	Check	Comments
It shall be specified whether the substance or mixture is subject to the EU Regulations on substances that deplete the ozone layer <sup>6</sup> , persistent organic pollutants <sup>7</sup> and amending Directive 79/117/EEC or export and import of dangerous chemicals <sup>8</sup> and other EU legislation not already provided in the safety data sheet.		
<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b> Regulations/legislations of the substance or mixture concerning SHM shall be provided, eg Seveso.		
If the substance or a substance in a mixture is subject to specific provisions or limitations in accordance with Reach regulation appendix 14 and 17.		
<b>National legislation:</b>		
Any national legislation concerning handling, storage, export/import etc. of the product shall be specified here.		
<b>15.2 Chemical safety assessment</b> State if a chemical safety report for the substance or a substance in the mixture is compiled.		

<sup>6</sup> Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer, EGT L 244, 29.9.2000.

<sup>7</sup> Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC, EUT L 158, 30.4.2004.

<sup>8</sup> Regulation (EC) No 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals, EUT L 204, 31.7.2008.

### Checklist for the compilation of Safety Data Sheet



## SECTION 16: Other information

Information	Check	Comments
In case of a revised safety data sheet, a clear indication of where changes have been made to the previous version of the safety data sheet (unless such indication is given elsewhere in the SDS) with an explanation of the changes, if appropriate.		
List all relevant hazard statements, precautionary statements, risk- and safety phrases in full text not already given elsewhere.		
Advise on any training appropriate for workers handling the product.		
Unless it is not already obvious specify what method that has been used to classify the mixture.		
References to additional information and/or technical contacts might be stated.		
References to important documents and basic data used to compile the safety data sheet might be stated .		
<b>Rekommendation:</b> <i>Specify the classification of the of the mixture according to directive 1999/45/EC if the transition to CLP has been made.</i>		
<b>Rekommendation:</b> <i>Editors of of safety data sheets are responsible for the content and all disclaimers should be formulated with care.</i>		
<b>Rekommendation:</b> <i>Information of possible branch agreements should be stated</i>		

