Criteria
Environmentally suited products for specific degreasing, 2015:1
Kemikaliesvepet
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1. Introduction

Products for specific degreasing
This document is a translated version of selected parts of the original Swedish version “Miljöanpassade produkter för särskild avfettning, 2015:1”. The intention is to make the criteria understandable for manufacturers of car care products in non-Swedish speaking countries. In addition, the Swedish Society for Nature Conservation (SSNC) hopes that an English version can serve as a tool for authorities abroad who wish to apply environmental criteria in, for example, public procurement. Hence, the English translation (in contrast to the Swedish one) contains almost exclusively the criteria as such. For information regarding application procedures and fees etc, please see the Swedish version.

The Environmental Governance of Gothenburg produced the list “Products for Specific Degreasing” in 1993. Among other things, the list was the result of desires to find alternatives to using petroleum spirits for cleaning heavily soiled areas of vehicles being washed in automatic car washes. The list has more and more come to be used when searching for alternatives to petroleum spirits when cleaning and degreasing engine parts, ball bearings, metal surfaces etc. in workshops. Primarily, it has been an issue of substituting petroleum spirit solvents. One should note that there are many situations within industry and other types of facilities where specially adapted substances are needed for degreasing.

There is reason to emphasise that SSNC does not accept that products for specific degreasing, containing a high solvent concentration, are used as cold degreasing agents for complete vehicle wash applications. Cold degreasing as a cleaning method for vehicles has not been an approved method in Gothenburg for decades. Therefore, it is emphasised that the criteria does not pertain to car wash detergents, rather products for specific degreasing as described above.

The criteria are coupled to a list on the website www.kemi-kaliesvepet.se where the degreasing substances, which meet the requirements, are listed.

Note: The original Swedish version always prevails

About the criteria
The Swedish Society for Nature Conservation (SSNC) has been responsible for these criteria and the accompanying list since 2011. In this version (2015:1), the criteria have been updated to harmonise with the CLP-regulation (EC) No 1272/2008. In addition, some texts have been updated and clarifications have been made.
2. The criteria

These criteria apply only to degreasing agents intended for professional use and, therefore, only pertain to products delivered in packages containing 3 litres or more. See section 1 "Introduction" for more information on which products the criteria pertain to.

The products shall, when they are available on the market, be registered on the Swedish Chemicals Agency’s Products Registry list.

1. When assessing, all components contained in the product shall be listed and the approximate concentration of each is to be provided.

2. The Precautionary Principle is to be applied when assessing the product.

3. When used in the highest recommended concentration, no components contained in the in use solution may result in classification of the solution in accordance with the CLP-regulation (EC) No 1272/2008 in any of the hazard classes health hazard or physical hazard.

Components which, in the highest recommended in-use solution concentration, cause the solution to be classified in accordance with the CLP-regulation using the following hazard statements are exempt from this requirement:

H302, Harmful if swallowed
H304, May be fatal if swallowed and enters airways
H315, Causes skin irritation
H318, Causes serious eye damage
H319, Causes serious eye irritation
H335, May cause respiratory irritation

4. The following shall be valid for the product:

\[ \sum \frac{C \times SF}{TOX} < 60000 \]

\( C \) is the concentration of the substance (mg/l) contained in an in-use solution of the highest recommended concentration. SF is a safety factor which is:

1 if there is toxicity data available for all three trophic levels, for fish, Daphnia and algae
5 if there is toxicity data available for two of the trophic levels and
10 if there is toxicity data available only for one of the trophic levels.

\( TOX \) is a value used to express the acute toxicity. The lowest LC\(_{50}\), IC\(_{50}\) or EC\(_{50}\) value is to

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1 A correlation which can be used to exhibit the concentration as a percentage can be found in the section "Clarifications and Exceptions"
be used as the TOX value.

5. Organic substances and their degradation products shall be readily biodegradable in accordance with OECD Guidelines 301 A-F. Preservatives are exempt from this requirement. Preservatives used shall, however, be shown to be inherently degradable in accordance with OECD Guidelines 302 A-C or demonstrate >40 % degradation in tests carried out in accordance with OECD Guidelines 301 A-F. There are also exceptions for a polymer and certain exceptions for fragrances.2

6. Preservatives may not be potentially bioaccumulative in accordance with OECD Guidelines 107, 117 or 305.

7. The product may not contain components which have been classified as environmentally hazardous in accordance with the CLP-regulation, (EC) No 1272/2008. The following exceptions to this requirement apply:

   • Organic substances classified as environmentally hazardous solely based on the value for acute aquatic toxicity (≤ 1 mg/l, H400).

   • Organic substances with the classification H412 (Harmful to aquatic life with long-lasting effects) or H413 (May cause long-lasting harmful effects to aquatic life). The exception is valid assuming that all other requirements have been met and that the product (not to be confused with the in-use solution) has not been classified with any of these hazard statements.

8. The product may not contain any components which have been classified due to carcinogenicity, mutagenicity or reproductive toxicity based on EU-harmonised, obligatory classifications in accordance with Category 1A, 1B or 2 of the CLP-regulation, (EC) No 1272/2008.

9. Volatile organic compounds shall have a vapour pressure < 0.05 kPa at 20°C or have a water solubility > 5 g/l. Complex distillation products shall have a vapour pressure < 0.025 kPa at 20 °C. Aromatic organic compounds (aromatic hydrocarbons) may not be included in the product. Exceptions exist for residual products of aromatics and fragrances below certain concentrations.2

10. The product, as in-use solution in the highest recommended concentration, may contain a maximum of 5 % surface active agents.

11. Rapid decomposition shall be demonstrated by exhibiting a result of < 100 mg/l of mineral based oil in the aqueous phase after 2 hours of separation when utilising the IVL-test 2 on an in-use solution of the highest recommended concentration. It is not necessary to perform this test if one can show that a comparable product meets these requirements.

2 See section “Clarifications and Exceptions”
Clarifications and Exceptions

The test results needed for the assessment shall pertain to the component present in the product. Analogous argumentation is accepted only if it can be motivated using a scientific standpoint.

Item 1
A complete declaration is a fundamental requirement in order to facilitate an adequate assessment.

Item 2
This means that a substance may not be included if there is reason to believe that the substance could lead to serious effects even if it meets the requirements. This also means that the classification of included substances does not necessarily have to be obligatory for it to be put into practice, aside from instances when it is explicitly stated. For further interpretation of the Precautionary Principle refer to the Swedish Environmental Code and the REACH-regulation.

Item 4
Alternatively, the calculation can be performed according to:
\[ \sum \frac{C \times SF}{TOX} < 6 \]
where \( C \) in this case is the concentration of the substance in weight-% as in-use solution with the highest recommended concentration. The other variables in the formula correspond to the same values as explained in criterion 4 above.

Clarification: If an interval has been provided as toxicity data, the lower interval is used and the value is multiplied by 1.2.

One should primarily use the toxicity values provided by the supplier. Those who deliver the raw materials are responsible for ensuring that the data provided is reliable. Regarding both SF and TOX, guidance can be found on Miljömärkning Sveriges (Svanen) DID-list (The Nordic Ecolabel’s Detergent Ingredient Database list).

If there are significant discrepancies between the values provided by the supplier and those on the DID-list, the source which results in the highest SF/TOX quote should be used as long as there are no available investigations which point to the other source being more reliable.

With regards to acute toxicity, values pertaining to sensitive water living organisms such as fish from the genus Salmo, Salvelinas, Oncorhynchus (salmon fish), Brachydanio (zebra fish), Rasbora (harlequin fish), Pimephales (fathead minnow), Alburnus (alburn) should be used. Guppies and carp are regarded as non-sensitive fish species. When considering algae, green algae in the genus Scenedesmus, Selenastrum or Chlorella are suitable species.
Item 5  
Exception: The polymer CMC (carboxyl-methyl-cellulose) is an accepted thickener until further notice although it is not readily biodegradable.

Exception: Regarding fragrances, an ester is accepted in accordance with criterion 5 if both the corresponding alcohol and the organic acid are readily biodegradable (in accordance with OECD Guidelines 301 A-F). Furthermore fragrances are accepted provided that they have proved readily biodegradable in two tests with consistent results or if they have been investigated in more than two tests and proved readily biodegradable with somewhat contradictory results.

Item 7  
Regarding the exception pertaining to organic substances which have been classified as environmentally hazardous solely based on the value associated with acute aquatic toxicity, it shall be viewed in the light of the requirement of the limitation of the weighted toxicity described in item 4 above.

Clarification: The exception pertains to organic substances classified with H400, Very toxic to aquatic life.

The exception pertaining to organic substances classified as H412, Harmful to aquatic life with long lasting effects, or H413, May cause long lasting harmful effects to aquatic life, is motivated by the fact that certain substances, not least surface active agents, have been classified with these hazard statements although they are readily biodegradable.

Item 8  
EU-harmonised obligatory classifications are stated in Appendix VI of the CLP-regulation, (EC) No 1272/2008. The appendix is adjusted on a regular basis, meaning that it is of utmost importance that you also regularly monitor if the classification changes for any of the substances included in the listed products. If nothing else is stated, the product’s recipe is to be adjusted no later than the date when the obligatory classification is taken into effect.

Item 9  
Alternative: As an alternative to the requirements regarding vapour pressure, the following may be used: Substances with a boiling point >190°C are accepted. Distillation products with a lower boiling point interval of >185°C are accepted.

Exception: Aromatic organic compounds (aromatic hydrocarbons) may not be added to or included in the product. As a rule, however, normal paraffins and dearomatised naphtas contain aromatic hydrocarbons amounting to one or a couple tenths of one percent, which is accepted. The concentration of aromatic hydrocarbons in the added raw product may not, however, exceed 0.5 %.

Exception: Fragrances, which do not meet the requirements of this criterion, may still be added if the total concentration does not exceed 0.2 %.
Item 10
The purpose of limiting the amount of surface active agents is to limit the amount of organic substances which reach wastewater treatment plants.

Item 11
The issue of rapid cleavage is discussed in the Swedish Environmental Protection Agency’s General Guidelines 1975:10 where the method pertaining to the IVL-test 2 is referred to in Appendix 5. The relevance of the test should be assessed on an individual basis using 1975:10 as a guide.
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The Swedish Society for Nature Conservation is an environmental organisation with power to bring about change. We spread knowledge, map environmental threats, create solutions, and influence politicians and public authorities, at both national and international levels. Moreover, we are behind one of the world’s most challenging ecolabellings, “Bra Miljöval” (Good Environmental Choice).

Climate, the oceans, forests, environmental toxicants, and agriculture are our main areas of involvement.

www.kemikaliesvepet.se
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