TEXTE
28/2014

Standardisation of release factors for the exposure assessment under REACH Developments since 2010

Summary

Umwelt Bundesamt

| TEXTE | 28/2014

Project No. 26785
Report No. 001915/E

Standardisation of release factors for the exposure assessment under REACH Developments since 2010
Summary

by

Antonia Reihlen

Ökopol GmbH

On behalf of the Federal Environment Agency (Germany)

UMWELTBUNDESAMT

This publication is only available online. It can be downloaded from
http://www.umweltbundesamt.de/publikationen/standardisation-of-release-factors-for-the-exposure

ISSN 1862-4804

Study performed by: Ökopol Institut für Ökologie und Politik GmbH
Nernstweg 32-34
22765 Hamburg

Study completed in: October 2013

Publisher: Federal Environment Agency (Umweltbundesamt)
Wörlitzer Platz 1
06844 Dessau-Roßlau
Germany
Phone: +49-340-2103-0
Fax: +49-340-2103 2285
Email: info@umweltbundesamt.de
Internet: http://www.umweltbundesamt.de
http://fuer-mensch-und-umwelt.de/

Edited by: Section IV 2.3 Chemicals
Nannett Aust, Daniel Sättler

Dessau-Roßlau, March 2014

Content

Tables

Tables

1 Background

The European Chemicals Industry Association CEFIC developed the concept of „Specific Environmental Release Categories“(spERCs) in order to concretize the “Environmental Release Categories” (ERCs) presented in the ECHA guidance with sector-specific information. CEFIC published a guidance document on how to develop spERCs in 2010[1] and provided a revised version in 2012[2]. Several industry associations have published spERCs; some already before the first registration deadline.

This study is a follow-up of a first assessment of spERCs conducted for the German Federal Environment Agency (UBA) in 2010[3]. The aim of the current study was to assess, if the recommendations from the 2010-spERCs study to improve the identified shortcomings of spERCs and the guidance document have been implemented. This regards in particular the plausibility and transparency of documentation of the derived release factors.

2 Work process

The revised CEFIC guidance document on the development of spERCs was evaluated with regard to the implemented changes. A set of aspects identified as important for a revision in the previous study served as assessment criteria (Section 3).

The availability of spERC values for modelling the environmental exposure in form of the CEFIC excel-table, of spERC factsheets documenting the derivation of the model values and of CHESAR import files was checked. For all available spERC factsheets a screening assessment of structure and content was performed (Section 4.1 and Section 4.2.).

The structure and general information content of the available spERCs were roughly screened in a first evaluation step. Based on the screening three newly developed spERC were selected for in-depth assessment. In addition, three of the spERCs already assessed in 2010 and which were revised in the meantime were re-assessed. The recommendations to improve spERCs derived in the 2010-spERCs study were used as criteria for the current assessment (Section 4.4).

Conclusions were drawn based on the assessment results and recommendations derived for ECHA, the German Federal Environment Agency, other European Member States and the industry actors (Section 5).

---

[1] CEFIC: CEFIC Guidance Specific Environmental Release Categories (spERCs) Chemical Safety Assessments, Supply Chain Communication and Downstream User Compliance; July 2010, Revision 1; http://www.reach-hamburg.de/fileadmin/user_upload/Newsletter/SPERC_Guidance_100707_FINAL.pdf

[2] CEFIC: CEFIC Guidance Specific Environmental Release Categories (spERCs) Chemical Safety Assessments, Supply Chain Communication and Downstream User Compliance, October 2012, Revision 2; http://www.cefic.org/Documents/IndustrySupport/REACH-Implementation/Guidance-and-Tools/SPERCs-Specific-Envirnonmental-Release-Classes.pdf

[3] Ökopol on behalf of the Federal Environment Agency (UBA, 2010) Project No. 363 01 300 (UFOPLAN) http://www.reach-info.de/dokumente/exposure_assessment.pdf

3 Analysis of the CEFIC guidance

CEFIC defines spERCs as Tier 1.5 assessment tools based on sector specific but conservative assumptions; hence, the level of ambition regarding the specificity of spERCs was not increased.

The guidance does not include explanation on how exactly release factors can be derived using the different types of information and derivation methods. Instead, the general approaches for spERC development are illustrated using examples. These examples do not clarify which information to present at which level of detail to sufficiently justify the release factors. The guidance is however comprehensive in informing and exemplifying a good quality description of the coverage of the spERC.

Although the guidance is not fully consistent, it gives well-structured information to guide associations in developing spERCs in general. The explanation of how associations should ensure and communicate whether or not the efficiency of obligatory risk management measures (RMMs) are included in the release factors is still not consistent and may lead to confusing information in spERC fact sheets. This is mainly due to inconsistent terminology and a lack of a respective clear description in the guidance.

Compared to the first version of the guidance, CEFIC provides more comprehensive information on RMMs, including how respective information should be presented in the factsheet. Guidance on how to evaluate the appropriateness of removal efficiencies of individual RMMs in relation to specific substances / substance groups (with specific properties) is not provided.

The guidance's recommendations on which information to include in the chemical safety report (CSR) are regarded as well reflecting the authorities' needs to assess the chemical safety assessment of registrants. Also the recommendations to registrants on their downstream communication are well structured, understandable and useful. A note highlighting the need to communicate assumptions made in iterations of a safety assessment using spERCs could have been added.

4 spERCs Assessment

4.1 Availability of spERCs in July 2013

The following table shows the industry associations which had published spERC factsheets by July 2013. It also presents whether or not spERC factsheets already existed in 2010, how many spERCs are derived and how many (revised) factsheets and if CHESAR import files existed or were planned in July 2013.

Table 1 Availability of spERCs in July 2013 (existing model values, factsheets and CHESAR files (partly planned))

Association	Sector	Factsheets available? (2010)	Factsheets available? (2013)	CHESAR files available?	# of spERCs/ # of factsheets
ACEA	Automotive	No	Revised version	Not planned	9 / 3
AISE	Detergents- soaps	Yes	Revised, some values changed	Yes	15 / 5
ATIEL	Lubricants / Lubricant additives	No	New	Not planned	11 / 11
Concawe	Petroleum	Reference to ESIG	Reference to ESIG	Reference to ESIG	c.f. ESIG

Association	Sector	Factsheets available? (2010)	Factsheets available? (2013)	CHESAR files available?	# of spERCs/ # of factsheets
Cosmetics	Cosmetics	No	New, values unchanged	Yes	18 / 4
ECPA	Crop protection	Yes	Revised, values unchanged	Yes	2 / 1
EFCC	Construction	No	New, 1 value changed	Yes	10 / 3
ETRMA	Rubber	Yes	2010 version	No	2 / 1
ESIG	Solvents	Yes	Revised version, values unchanged	Yes	44 / 32
Eurometaux	Metals	Yes	Revised version, values and spERC grouping changed	Possible, unclear	12 / 8
FEICA	Adhesives and sealants	No	Revised version, some values changed	Yes	12 / 3
CEPE	Coatings, Inks, Artist colours	Yes	Revision on-going	Planned	26 / 8
ECMA	Catalysts	No	New	Planned	1 / 1
IFRA	Fragrance Material Manufacturers & Compounders	No	New	Planned	2 / 1

SpERC values[4] were published either in the CEFIC or the CEPE overview tables on spERCs but no fact sheets were published by the following associations: TEGEWA (textile processing), AIRC (former BFL/ZKF, vehicle refinishing), ECCA (coil coating) and EMPAC (metal packaging). Several other industry associations which carry out different types of REACH activities, such as provide use mappings, according to CEFIC have however not published any spERCs[5].

4.2 Basic characterization of spERCs (screening assessment)

The screening analysis did not aim at assessing individual spERCs in detail but rather at characterizing the overall approach taken in a sector, i.e. which release factors exist and if they are differentiated for groups of substances / substance properties, what type of justification was chosen or if RMMs and their efficiency are provided. Some core characteristics of the available spERCs are presented in the following tables[6].

[4] SpERC values mean the core modeling information; this was published for the first time as excel – table by CEFIC in 2010. It contained among other the values for the release factors to air, water and soil, information on MspERC and on RMMs and their efficiency. The table is not available online anymore.

[5] Consequently, for the uses in these sectors, no standardized assessment tools are available. Examples are the plastics industry, the non-wovens industry etc. C.f. Table 5 in the final report

[6] In cases where CHESAR import files exist, spERCs are likely to be less checked by their users when applied for chemical safety assessment than when "manual" processing of information is performed. Therefore, a differentiation between spERCs with and without CHESAR files was made.

From the overview it became obvious that within a sector, spERCs are normally similar in structure and type of content (e.g. how release factors are justified). Across the sectors, different approaches are taken on how release factors are derived and justified, whether or not RMMs are provided and how the scope is actually defined.

Table 2 Screening analysis of spERC structure and content – spERCs where no CHESAR import files exist

Sector Parameter	ETRMA (2010)	Eurometaux (revised)	ACEA (new)	ATIEL (New)
CEFIC format	No	No	Yes	Yes
Availability of "old" versions on the web	Not applicable	Yes	Not applicable	Not applicable
Justification of factors	EU TGD, ECHA guidance, survey within the industry, argumentation based on reference substances and measured data as well as modelling	Measured data from "multi metals database" used for risk assessment under ESR (data of 2000 - 2010), PC argumentation (partitioning coefficient water - suspended matter)	Description of emissions and how they are generated; no justification of values in the FS. Detailed values and reasoning in excel-sheet, no sources referenced	EU TGD, sector knowledge, questionnaire responses, physical laws (water / oil partitioning)
Release to air	Tiered approach, values from EU TGD	Usually significantly lower than ERC	In most cases significantly below ERC	Usually significantly lower than ERC
Release to water	Tiered approach; values based on assessment of wastewater concentrations and use amounts	Usually significantly lower than ERC	In most cases significantly below ERC	Usually significantly lower than ERC
Release to soil	As ERC	Like or lower than ERC	Always "zero"	Usually lower than ERC
Release to waste	No	Partly provided	Provided	No
Obligatory RMM	Reference to ES on the website; these contain detailed RM information	Provided including technology information and efficiency ranges or minimum efficiencies	Yes, type (physical-chemical treatment) provided and efficiencies	Seldom provided ("sites are assumed to be equipped with"), no efficiency
Optional RMM	No	Partly provided	Provided, partly including efficiencies	Provided in some cases

Table 3 Screening analysis of spERC structure and content – spERCs where CHESAR files were available or planned

Sector Parameter	AISE (revised)	Cosmetics for Europe	ECPA (revised)	ESIG (revised)	EFCC (new)	FEICA (v2)	CEPE (2010)	ECMA (new)	Ifra (new)
CEFIC format	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No (Eurometaux)	Yes
Availability of "old" versions on the web	No (and values changed)	Not applicable	Old version via google, new version not found	No (however, values unchanged)	Not applicable	No	Not applicable	Not applicable	Not applicable
Justification of factors	Study, LCA inventory, EU TGD, qualitative arguments	Study EU TGD, expert judgment, qualitative arguments	PC-information, labelling OECD ESD USES 4.0 own study	EU TGD, ECHA guidance, PC argumentation, Ecoinvent, individual studies, OECD ESD, expert judgement qualitative arguments	OECD ESD	OECD ESD, expert judgement	OECD ESD, legislation, industry data, qualitative arguments	BREF measured data	ERC, specific survey
Release to air[7]	Usually lower than ERC, often "zero"	Lower than ERC	Depends on vapour pressure, partly lower, soil + air 100%	Differences to ERC vary; partly differentiation according to vapour pressure	Lower than ERC	Usually significantly lower than ERC	Differences to ERC vary	50% of ERC	As ERC
Release to water7	Significantly lower than ERC in most cases	Lower than ERC (partly less than factor 10)	Zero (ERC = 100)	Differences to ERC vary; partly differentiation according to water solubility	Significantly lower than ERC	Usually significantly lower than ERC	Differences to ERC vary	STP assumed in place, release factor higher than in spERC	Lower than ERC
Release to soil7	Usually significantly lower than ERC, in most cases "zero"	Lower than ERC	Depends on vapour pressure, partly significantly lower, soil + air always 100%	Differences to ERC vary	Mostly "zero"	"zero"	Differences to ERC vary	"zero"	Lower than ERC

[7] The release factors were roughly compared to the values of the ERCs in ECHA's guidance document R16. The expression "significantly lower than ERC" is used, when most values of the spERCs differ by more than one order of magnitude / factor 10. The expression "lower than ERC" is used when most values of the spERCs are lower by at least a factor of 10 compared to the ERC defaults. "Differences vary" is used, when the extent of differences is sometimes very large and sometimes insignificant.

Sector Parameter	AISE (revised)	Cosmetics for Europe	ECPA (revised)	ESIG (revised)	EFCC (new)	FEICA (v2)	CEPE (2010)	ECMA (new)	Ifra (new)
Release to waste	Considered	Considered	Provided (0.001%)	Not provided	Provided as "zero"	Provided as "zero"	Not provided	Qualitative information	No
Differentiation of release factors	No	No	Yes (air and soil: vapour pressure)	In some spERCs (air: vapour pressure; water: water solubility)	No	Only for few spERCs (air), including efficiency	Available for some spERCs, incl. efficiency	Quite specific description including efficiencies	No RMM needed
Obligatory RMM	Partly provided, not always with efficiency	Not required	Labelling and best practice	Basic information	Not required	Only for few spERCs (air), including efficiency	Partly in description	Alternatives stated suitable, if as efficient as obligatory measures	Some provided

4.3 Assessment criteria for detailed spERCs analysis

The following criteria, derived from the recommendations of the 2010-spERCs study were used to assess the spERCs in detail:

- The factsheet structure is aligned with the (revised) CEFIC format.
- Each spERC has a unique code.
- The current and the old spERC versions are provided on the association's website.
- The spERC is consistent – it does not contain doublings (including different wording).
- The coverage is unambiguously described and understandable to all actors.
    1. The description of the coverage (operational conditions (OCs), RMM) is separated from background data and justifications.
    2. No undefined terms are used (e.g. optimized processing).
- The spERC contains release factors to water, air and soil and to waste, if relevant.
- All assumptions and methods are described and justified:
- Release factors and efficiency of RMMs are separately described. It is unambiguous if the efficiency of obligatory RMMs is included in the release factors.
- If optional RMMs are provided efficiencies should be provided, these could differentiate between substances or properties.
- All assumptions, values, information sources and conclusions for a spERC are plausible and can be followed (sufficiently documented).

Three spERCs were assessed in detail, which had been analysed in the 2010-spERCs study: AISE spERC 4.1 on the industrial use of water-borne processing aids; ESIG spERC 4.6a on the industrial use of solvent-borne lubricants and Eurometaux spERC 5.1 on the industrial use of metals in metal coating. In addition, three more spERCs were assessed in detail, which did not exist in 2010, yet: ACEA's spERC 4.1.c on the industrial use of coatings, the EFFC spERC 8d.1a on the wide dispersive use of substances in professional and DIY construction chemicals as well as the FEICA spERC 5.1a on the industrial use of substances in adhesives in various applications. Finally, the ECMA spERC on metal catalysts was briefly looked at due to its similarity to the Eurometaux fact sheets.

4.4 Assessment results

All assessed factsheets are aligned with the format proposed in the CEFIC guidance, except those published by ESIG. However, the understanding of how the factsheet sections should be filled differs between the sectors and from the CEFIC guidance.

All assessed spERCs have a unique code which is structured according to the CEFIC recommendation. Only in one case the version number of the spERC was not changed after the revision.

Most sector associations which have revised their factsheets and spERCs only publish the newest version on the web. The older versions are only provided by Eurometaux.

The overall consistency of spERC factsheets has much improved in all assessed factsheets. The information is more clearly separated and doublings are reduced. Descriptions of the same aspect with different wording occur only in few cases. Some fact sheets cover sub-spERCs pertaining to two different ERCs, which leads to unclear conditions of use and risk management measures.

The scope sections of most of the assessed factsheets have been clarified and made more understandable and concise. However, in many factsheets no clarification is provided on the coverage of cleaning and maintenance processes in the spERC. The option to specify a substance domain is implemented only by some associations.

Justifications are mostly provided separately but directly next to spERC information, e.g. via differentiation of columns or rows in tables or different headings. Background information, if provided, is usually integrated into other information and can be found mostly in the sections "scope" and "narrative description". This makes it more difficult to understand the line of argumentation supporting the spERC information.

Undefined terms are still used in some of the spERC factsheets, which mainly originate from the use of the standard phrase catalogue (e.g. "process with efficient use of raw materials"). These terms need to be specified in the spERCs to provide a better understanding of the coverage.

All spERC factsheets contain release factors to air and water. For the soil compartment many factsheets do not specify a release factor. Some factsheets also contain release factors to waste. The understanding of the meaning of this release factor seems to be different in the sectors.

Assumptions made in the spERCs regard the possibility to transfer release factors from one sector, process or mixture to another and the qualitative argumentations for release factors. Respective reasoning is provided mostly for values such as M_{spERC}[8] or the number of emission days. Consequently, justifications for "zero releases" are not regarded as sufficient.

The use of literature data to derive default values of spERCs usually lacks a sound justification why the data is appropriate to use. Such justification should include a discussion that operational conditions and risk management measures correspond in literature and the spERC. Providing more specific references (page numbers) to the original documents would facilitate the verification of values. Some values could not be traced in the original sources.

Qualitative argumentation to justify release factors (usually factor of "zero") is frequently logical at first sight but lacks in-depth background information to verify if emissions can actually be excluded.

The last step in deriving release factors based on industry surveys or databases is well documented in the spERCs applying this approach. However, the description of how the data was collected and how it was processed to become input values to the equation to derive release factors does not exist. Also a justification why a transfer of values to other sectors is possible (if relevant) is not available.

[8] The M_{spERC} is the amount of a substance that can be applied per day or per year as defined by the spERC.

The obligatory risk management measures are described separately from the operational conditions in all cases due to the new structure of the factsheet. Nevertheless, it is still not fully clear in some of the spERCs, whether the release factors provided in the factsheet integrate the efficiency of RMMs (overall release factor – $RF_{Overall}$) or if the release factor only relates to the operational conditions and hence applies prior to the risk management measures ($RF_{initial}$).

Considering the need for a transparent and thorough documentation on how the operational conditions and risk management measures relate to the release factors, it can be concluded that none of the assessed old or new factsheets allow a full scale plausibility check by the authorities.

5 Summary and Conclusions

Although the revision of the spERCs and the CEFIC guidance led to much more clarity in the factsheet structure and the presentation of information, some crucial aspects have not yet been improved to a sufficient extent. This regards in particular the derivation and justification of release factors in relation to the operational conditions and obligatory risk management measures.

Where literature sources are quoted (mostly ESDs[9]) a comparison and explanation of OCs and RMMs underlying the factors in the ESD with the conditions described in the spERC are missing. This is particularly relevant in cases, where ESDs of other sectors were used.

Where release factors are derived from statistical information obtained from sector surveys or literature, the documentation of data collection and calculation methods is not presented in detail or as separate document or appendix. This makes plausibility checking cumbersome (information is scattered in the spERC) or impossible (information is insufficient).

Where release factors are derived based on qualitative argumentations, assumptions are not sufficiently justified, underpinned by physical-chemical data and/or related to the operational conditions of use (which are too general to allow the respective conclusions).

Consequently, the currently available spERCs cannot be regarded as sufficiently well documented to allow plausibility checking. Whether or not the release factors are still conservative or if they actually could lead to wrong emission estimations and risk characterization ratios cannot be judged, either.

In addition, the understandability and clarity of spERC factsheets could be improved with regard to the coverage as there are still some uncertainties about the general logics of the fact sheet[10]. A clarification of the role of the CHESAR determinants in the Appendix of the factsheets and an alignment of their content with the overall factsheet is also necessary.

[9] ESDs = Emission Scenario Documents; these documents are developed at EU level and cover different sectors. Emission factors are defined from processes based on industry data and expert judgment.

[10] With each consequent section in the early factsheet sections, the coverage is further specified. The narrative description should summarise this (encoded) description of the spERC's coverage in easy words.

The CEFIC guidance could contribute to further improvement of spERCs by providing clarification of approaches, in particular the inclusion of RMM efficiencies in release factors and the quality of documentation. However, the core work is on the industry associations to revise their factsheets (and potentially spERC values) in order to support registrants with good emission models.

6 Recommendations

In particular because the industry associations were not involved in the current project, the consultants first and foremost recommend that UBA publish the project results and that UBA and ECHA discuss the findings with industry in order to identify ways to improve the quality of spERCs in a cooperative way. A common understanding should be formed as basis for further work of what information spERCs need to contain on releases and conditions of use, including their documentation and justification to enable registrants to demonstrate safe use of their substances in the CSR.

It should be noted that the project did not check for which uses spERCs are missing. It is unfortunate that the work of associations having committed to support the REACH implementation with the development of spERCs is partly criticized whereas those associations having undertaken no efforts remain "unmentioned".

6.1 Recommendations to ECHA

The project recommends ECHA to take note of the spERCs assessment results regarding systematic shortcomings primarily in the derivation of release factors and their justification / documentation. A grouping of spERCs by industry association was developed that shows which shortcomings were identified as relevant related to the spERCs developed by the sectors. This grouping could provide orientation for the selection of dossiers for dossier evaluation or to discuss improvement needs of spERCs with industry.

The use of spERCs with inappropriate information or insufficient justification / documentation could lead to non-conform CSRs. Non-conformity in this study means insufficient information to demonstrate safe use in the CSR. The term is used (instead of incompliance) because the dossier compliance check mainly refers to the assessment of hazard information and the lack of exposure assessments; however, "mistakes" and low quality in the exposure assessment in the CSR cannot trigger a formal decision but only a quality observation letter by ECHA.

The following shortcomings of spERCs were identified as potential cause of CSRs not being in conformity with the expectations for demonstration of safe:

- No factsheet exists; because of a high likelihood of using wrong spERCs and the complete lack of documentation.
- The spERC coverage is unclear; because of likelihood of selecting the wrong spERC and resulting use of wrong justification / documentation.
- Release factors cannot be traced; because correctness of emission estimation is questionable and insufficiently documented.
- Justification of release factors is insufficient; because although the estimation may be close to real condition, the documentation is not sufficient to actually demonstrate that the use is safe

- Integration of RMMs efficiency in release factors is unclear; because registrants may base their emission estimation on wrong assumptions resulting in wrong exposure assessments. In addition, they may fail to communicate obligatory RMMs in the supply chain.
- Use of industry data in the justification is not fully documented; because the documentation of safe use is not complete.

It was not evaluated if and to which extent the quality of chemical safety assessments based on spERCs differs from CSRs with individually conducted environmental assessments. Hence, it is unknown if the existence of spERCs generally increases the CSRs quality or not. It would be an interesting and useful follow-up work to compare assessment results from the use of spERCs with those where no spERCs were used.

6.2 Recommendations to UBA

It is, among others recommended that UBA (as well as the responsible authorities in other Member States) considers implementing the following actions:

- Increase efforts to create a better understanding of the environmental risk assessment's relevance among all stakeholders.
- Publish the project results and actively discuss them with industry, the Member States and ECHA.
- Support the development of quality standards on how a registrant should "demonstrate safe use" and what this means in practice.
- Initiate a discussion of how the release factor to waste should be understood.
- Contribute to the further development of spERCs / best-practice examples of CSRs / ESs.

6.3 Recommendations to industry

6.3.1 CEFIC

CEFIC should consider improving its guidance by revising (among others) the following aspects:

- Further elaborate how the relation between release factors and operational conditions should be described in a spERC factsheet.
- Improve the spERC examples in the annex of the guidance to illustrate best practice; describe in more detail how release factors can be derived (methods, documentation standards).
- Remove remaining doubling information and inconsistent wording from the guidance.
- Initiate a discussion on how the emission factor to waste should be understood and implemented, include the resulting clarification in the guidance.
- Include explanation on methods to derive and check the substance specific efficiency of RMMs in the guidance.

6.3.2 Industry associations

Based on the assessment of spERCs performed in this project, (among others) the following is recommended to the industry associations:

- Delete any spERCs from tables or overviews for which no factsheets are available (CEPE[11])
- Improve the existing spERCs regarding the shortcomings outlined in this report as soon as possible.
- Meanwhile updating, clearly communicate to registrants how the on-going improvement will impact on their assessment. Recommend that spERCs be carefully used in emission estimation because:
    1. documentation of release factors, OCs and RMMs may need improvement,
    2. information generated automatically with CHESAR may be inconsistent with the spERC factsheet.
- Develop best practice examples and provide old spERCs versions in the internet.
- Encourage sector associations to develop spERCs if not yet done.

6.3.3 Registrants

Registrants are recommended to

- Carefully check if the scope of the spERCs they apply in their chemical safety assessment cover their use and inquire information from the industry associations in case this is not fully clear,
- Assess if the release factors and justification provided in the spERC factsheet are complete and sufficiently transparent
- Continue discussions with downstream users to ensure that information they provide are appropriate and, if not so, modify the spERCs accordingly and provide feedback to the respective spERC developers.

6.3.4 Downstream users

Downstream users receiving information on the safe conditions of use with the safety data sheets of substances and mixtures they use should continue thoroughly checking the implementation of the conditions of use, regardless of whether or not reference is made to a spERC. They should furthermore consider forwarding information on their conditions of use to the spERC developers to support their improvement, in particular where the spERCs do not reflect their conditions of use.

[11] The CEFIC spERCs overview table published in April 2010 is not available on the internet anymore.