

Review of the output from the CEN Environmental Helpdesk

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1 Preface

The present report, Review of the output from the CEN Environmental Helpdesk, was initiated and funded by the European Organisation for Co-ordination of Consumer Representation in Standardisation, ANEC.

The work was conducted by Ph.D. Anders Schmidt, FORCE Technology/dk-TEKNIK in the autumn of 2003. Throughout the period, Dr. Franz Fiala supervised the project and provided the consultant with input in the form of draft and final CEN-standards, the comments from the Environmental Helpdesk to the Technical Committees in CEN, and a wide range of relevant discussion points that could be addressed in the report.

The report falls in two parts. The first part summarises the findings and conclusions made by the reviewer. The second part contains the reviews of the comments to each standard, although with different levels of detail.

Summary

The report contains a review of the output of the CEN Environmental Helpdesk (EHD) during its first three years of existence. The review is based on the comments given to the Technical Committees of CEN and an examination of selected standards addressed by the EHD.

The review shows that the EHD has produced about 60 comments to about 90 draft standards. In total, the number of pages produced amount to about 150. This is – all other things equal – regarded as a modest output, considering that about 3.5 man-years have been devoted to the overall efforts of the EHD. It is, however, acknowledged that the work of the EHD has been difficult. Examining a very broad range of technical standards with the aim of identifying relevant objects for environmental considerations – and establishing suggestions for how they can be handled – is demanding in terms of both knowledge and time. The following summaries and conclusions should be seen in view of this, although one of the main conclusions is that the work of the EHD has not been very effective.

One of the preconditions for environmental aspects being taken seriously into consideration is that normative requirements are established. This is only the case in a minority of the comments produced by the EHD. Instead, the main content of the comments is polite requests or recommendations to include different types of environmental information in the standards. Although the information requested is relevant and important, the users of the standard are not obliged to provide or use the information and accordingly, the comments of this type may prove to be without any effect in practice.

The work of the EHD is judged to be without a dedicated focus. The main reason for this is probably the diffuse nature of the standards commented upon, leaving little room to concentrate on identifying the most important aspects and developing suitable and adequate requirements for these. The EHD could perhaps have realised this at an early point and examined the possibility of changing their terms of reference, but this does not seem to be the case. Instead, the EHD has chosen to address all standards (where allowed to), irrespective of the scope of the standard and the ability of the EHD to produce substantial comments or requirements.

As far as can be judged from the material available during the review, the efforts of the EHD has produced very few visible results in the draft standards. The review process has not included an examination of why this seems to be case, but two possibilities seem to be credible. One is that the comments from the EHD have not been of the quality or precision normally encountered in standardisation work. The other is that the Technical Committees (TC) in CEN has not taken them seriously during their preparation of the draft standards. Under all circumstances, a stronger

commitment of the TC's is necessary if environmental aspects are to be integrated in future product standards.

The review identifies a number of problems in handling environmental issues in standards, and it also indicates possible solutions to some of them:

"Problem"	"Solution"
Only a few normative requirements have been suggested	The EHD and/or external experts should change the focus from requesting information and giving recommendations to producing normative requirements only. Obviously, this will require that the workload is shifted towards those standards where normative requirements can be established.
It is difficult to establish requirements for standards with a narrow scope	<p>Environmental issues can be divided into a limited number of classes. For each of these a horizontal approach can be established, e.g. by making frameworks for handling of issues related to the use of chemicals, management of discarded products, etc.</p> <p>Another possibility for a horizontal approach is to define an appropriate framework in relation to a group of standards addressing similar products, or in relation to a whole sector.</p> <p>Both approaches require an investment of time in the development phase, but will on the longer term be able to provide significant input with less efforts</p>
Environmental considerations are not visible in the draft standards	The interaction between the Technical Committees and the EHD needs to be changed. As it is, it is voluntary for the TC's to consider the comments and suggestions from the EHD. If no obligations are put on the TC it will also be a common future finding that a TC chooses to disregard any input. It is, however, outside the scope of the review to suggest more precise solutions, but is recommended that the "voice of the environment" is given better conditions for speaking its case.
The comments are often of relatively "low" quality	<p>The intention of using external experts to help the EHD seems to have failed. Only a few comments have been established with external help, and in these cases the comments appear to be more focused. In order to increase the amount of external expertise to help the EHD, it should as a minimum be considered to offer a suitable payment.</p> <p>Another solution is to restructure the work completely, e.g. by outsourcing the work to an organisation with expertise within a broad range of technological areas.</p> <p>It has not been examined whether any of the above suggestions are feasible from a financial point of view, but an improved possibility for payment of external expertise is judged to be very important. After all, the environmental experts have to "compete" with financially strong industries in the standardisation work, and this cannot be expected to be a fair match without relevant funding.</p>

It is concluded that the output of the EHD is disappointing, especially in terms of substance. External conditions may be partly responsible for this, but lack of expertise is also a probable reason. External experts were envisioned from the start of the EHD to provide significant input, but their help has only been available to a very limited extent. Sufficient knowledge about a broad range of products, technologies, environmental issues and standardisation processes cannot be expected to be present in one or two individuals at the Helpdesk, and it is therefore not very surprising that the amount and substance of the output from the EHD is modest.

The main suggestion is therefore to restructure the work of the EHD, either by a shift to a more horizontal approach, by improving the possibility for financial support of external experts, by outsourcing the

work wholly to external consultants or organisations, or by a combination of these. Relatively drastic changes are needed, otherwise the efforts will not produce environmental improvements.

2 Main project findings

2.1 Introduction

2.1.1 Working procedure

The review is based on a survey of the comments given by the CEN Environmental Helpdesk (EHD) in the period from late 1999 until August 2003 to about 90 draft standards covering a wide range of products, services and tests and being available on the CEN FTP server in August 2003, when the project was initiated.

The basic elements in the working procedure has been as follows:

- The EHD comments to the CEN Technical Committees was compiled by ANEC and delivered to the reviewer by electronic media
- The reviewer prepared a first, short review, identifying pros and cons of the comments that potentially could be investigated in more depth
- Relevant documents for a more detailed examination was provided by Dr. Franz Fiala from ANEC, primarily in the form of the standards addressed by the EHD. In one case, a supplementary document from an external expert providing input to the EHD was made available to the reviewer. Also, a feedback from ANEC in relation to the first review was provided, pointing to additional points that were of potential interest in the review.
- A second review of all EHD comments was prepared by the reviewer. The second review contains an edited version of the first review, giving an overview of the content of the comments by the EHD, a short, subjective discussion of the environmental importance of each standard, and a summary of the pros and cons of the comments, as perceived by the reviewer. Also in the second review, the EHD comments to some selected standards are analysed in more detail, giving the opportunity to focus on suggestions for the future work in the area of environmental considerations in standardisation work. The second draft report was also commented upon by ANEC.
- Based on the second review and the comments from ANEC, the main findings were described in the final report, together with a discussion of the nature and extent of the EHD work as well as suggestions for future directions.

2.1.2 About the CEN Environmental Helpdesk

The CEN Environmental Helpdesk (“EHD”) was established in September 1999 as an integrated part of CEN. The mission of the EHD was to prepare European standardization for the global challenge of sustainability by promoting the integration of environmental aspects into standards. It comprised raising awareness amongst CEN Technical Committees (“TC”) and encouraging an environmental discussion.

The main objectives and derived actions of the pilot phase of the EHD were intended to promote this mission and in particular to help answer two fundamental questions:

- Are there relevant environmental aspects in standards?
- How can they be considered?

The strategy of the EHD was that the TC's and their working groups had the opportunity to contact the EHD in order to get advice and help in incorporating environmental aspects in standards they were drafting. The EHD then addressed the draft standard(s) against the environmental criteria laid down in the CEN Guidelines and sent written comments to the TC, which could be considered at an appropriate stage. The decision on how the EHD comments were dealt with was entirely up to the TC, but it was required to give consideration to them as with any other comments received.

During the pilot phase the work programme for the EHD was bound to a fixed list of selected work items. From the beginning of 2002 the EHD has had the freedom to choose draft standards for evaluation out of the whole range of standards submitted to public inquiry. One of the major objectives was to reach as many relevant TCs and working groups to consider the subject themselves with regard to developed guidelines.

The work programme for the EHD has therefore become sector related in 2002. Based on the size of the sector and its actual work programme, the EHD makes the following ranking:

- Mechanical engineering (Machinery, pressure equipment, etc.)
- Building and civil engineering
- Heating, cooling and ventilation
- Healthcare
- Transport and packaging
- Utilities and energy (gas and water supply)
- Health and safety at the workplace
- Household goods, sports and leisure
- Materials (metallic and non-metallic)
- Chemistry
- Food

2.1.3 Other CEN environmental instruments

CEN has introduced four environmental pillars to ensure the integration of environmental aspects in standards. Besides the EHD, the three other pillars are described in short in the following.

2.1.3.1 Chapter in the CEN Business Operations Support Systems (BOSS)

There exists a chapter in the CEN/BOSS dealing with the development of environmental guidelines, entitled "CEN Guidelines on the consideration of environmental aspects in standards". It also contains the CEN Memorandum No 4, "Guide for the inclusion of environmental aspects in products standards" (edition 1998), identical to ISO Guide 64, which describes the current thinking of standards and the environment.

2.1.3.2 The environmental checklist

An environmental checklist was developed in order for the TC's to identify the environmental aspects related to the subject of the standard.

The checklist was used in three different ways:

- An an attachment to each draft standard, intended to be retained there until the closing of the public enquiry. The checklist used as an attachment secured transparency.
- Identification of special sectorial needs as a basis for the development of sectorial environmental guidelines.
- Identification of specific subject/process related needs as a basis for the development of environmental guidelines for a TC.

2.1.3.3 Sectorial environmental guidelines

As CEN is organised into sectors, each sector deals with different subjects and it is necessary to identify the main environmental aspects in each subject to set a frame for the development of guidance document per sector or TC. In this way the different environmental needs can be taken into account. It assures the best possible integration of environmental aspects into standards and at the same time it avoids duplication of efforts.

2.1.3.4 Discussion of the CEN instruments

In relation to the review of the work of the EHD, its use of the environmental checklist deserves some attention.

A key element in the pilot phase of the EHD was to ask each TC to fill the environmental checklist or matrix as a part of the communication between the EHD and the TC.

It is not evident from the material available to the reviewer whether the EHD gave support or guidance as to how the TCs should fill-in and use the checklist as an instrument. Very general guidance is given in the CEN Memorandum No 4, but it is judged by the reviewer to be a rather difficult job to fill-in the checklist for a given standardisation object, the basic instruments suggested being highly specialised tools like environmental assessments and life cycle assessments.

The EHD states in their comments to most TCs that the checklist is considered a valuable tool to ensure that environmental considerations are taken into account during the standardisation process. The EHD offers help with any questions the TC may have, for example if a TC wish to amend the checklist to suit the specific project. It is not known whether any TCs accepted this offer, but the annual reports from the EHD give a few examples of how the TCs have used the environmental checklist.

The environmental matrix is in its present form seen by the reviewer as a very passive tool. The EHD kindly asks every TC to fill out the matrix, including possible elaborations, but it is unclear what purpose the matrix actually serves. It is acknowledged that if filled-in by specialists, the checklist may ensure transparency as well as identify specific needs or subjects that can be addressed. However, without detailed knowledge on

the relation between technical and environmental aspects, there is a significant risk that the checklist may misdirect the focus.

It is the experience of the reviewer that even for specialists in life cycle assessments it can be difficult to fill in a matrix like the one prepared by the EHD. On the qualitative level, it requires knowledge about all available options for the product/service in order to identify good or bad practice, and in order to identify the most important aspects and the best possibly solutions, some quantitative measure is needed. Whereas the knowledge about technical possibilities can be assumed to be present in the TC, the knowledge about the importance of different aspects in relation to environmental impacts and the ability to distinguish between good and bad solutions from an environmental point of view is probably missing in many TCs.

The complexity of life cycle thinking and life cycle assessments (LCA) can be illustrated by the fact that it can take several months or even longer to produce a LCA of sufficient quality to reach a valid or usable result. This constraint is probably the main reason why only few LCA's of good quality have been published so far, and it is therefore questionable whether there have been any LCA results available to the Helpdesk in its work so far and also whether they will be available in the future. It is therefore seen as a very important element that an operational procedure is developed, which allows the "consultant for the environment" to identify all relevant environmental impacts without having to establish all knowledge from scratch.

Under all circumstances it is recommended that guidelines for how to fill the matrix and possibly also for how to use it actively is communicated to the TC in a more operational way. Otherwise, the TC may be opposed to include environmental considerations, simply because the task is seen as complex and time consuming, without giving an indication of the possible benefits that can be achieved.

It is concluded that the EHD may have overestimated the willingness and capacity of the technical committees to include environmental considerations. From an environmental point of view the approach is ideal, but the EHD is not the first environmental institution to realise that the practical treatment of the life cycle perspective in relation to an integrated product policy is very difficult.

2.1.4 About standardisation language

The wording chosen in a standard is decisive for its use in practice. The following overview is based on Annex G (normative) in the ISO/IEC Directives, Part 2, 2001.

Normative requirements are strictly to be followed by users of the standard and no deviation from this is permitted. The verbal form of normative requirements is "shall" or "shall not". Equivalent expressions such as "is to", "has to", "it is necessary", "is not allowed", "is not to be", etc. can be used in exceptional cases.

Recommendations are used to indicate that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain form course of action is preferred but not necessarily required, or – in the negative form – a certain possibility or course of action is deprecated but not prohibited. The verbal form of a recommendation is most often “should” or “should not”, while expressions such as “it is recommended that” and “ought not to” can be used in exceptional cases.

The words “may” and “need not” are used to indicate a course of action permissible within the limits of the document, while the words “can” and “cannot” are used for statements of possibility and capability, whether material, physical or causal. “May” thus signifies permission expressed by the document, whereas “can” refers to the ability of a user of the document or to a possibility open to him/her.

As a short interpretation of the above, it can be said that in order to make environmental considerations compulsory in a standard, they shall be given in the form “shall” or “shall not”. In all other cases, the user of the standard may choose to neglect them, irrespective of the good intentions laid down in the choice of words.

2.2 Outputs from the EHD

The EHD has produced comments to about 90 draft standards. In some cases, the comments addressed a number of standards at the same time, and the overall number of comments is therefore only about 60.

The EHD has in its comments addressed a very wide range of products/services, ranging from analysis of chemicals present in a product over large service systems with unknown impacts on the environment to well-known products with a known impact on the environment.

The comments range in extent from “no comments” to several pages with suggestions for how to include environmental considerations in the specific standards. In total, the comments amounts to about 150 pages.

The present review does not discuss the amount of work performed by the EHD in any detail, but focuses on the quality of the comments given by the EHD. It is, however, remarked that the output measured in pages written is judged to be modest, considering that about 3.5 man-years have been used to provide what is seen as the core function of the EHD.

A discussion of the other aspects of the EHD work was not within the scope of the study. It is only acknowledged that some of the efforts of the EHD have been used to participate in various meeting, writing newsletters and annual reports and keeping the public informed of the activities of the EHD in other fora.

2.3 The nature and substance of the EHD comments

The EHD approach in their comments to the TC's is not very consistent. There may be many reasons for this, e.g. that the standardisation objects are very different in nature and complexity combined with the (initial) need of the EHD to find a suitable way of communicating with the TC's.

2.3.1 Common expressions in the EHD comments

The comments from the EHD are formulated in many different ways. Common expressions are:

- “The EHD would like to draw attention to the following aspects...”
- “The EHD would like to propose that this clause include information concerning....”
- “The EHD would appreciate to find a recommendation concerning the correct use and correct disposal of”
- “The EHD would like to suggest to widen the scope in order to include the environment.”
- “The EHD would appreciate additional information in the informative Annex, such as...”

With this approach, the EHD points to issues that may be relevant to consider and which the TC may have overlooked or chosen not to address in the draft standards. However, the approach does not provide any solutions for the TC and is therefore of little value in relation to the possible inclusion of environmental considerations.

2.3.2 Vague, non-normative suggestions

More specifically, the EHD most often chooses to give vague suggestions like

- “With regard to the lifecycle of a product, the CEN/EHD would like to ask CEN/TC 54 to give guidance on the disposal of “Gas loaded accumulators” at the end of their intended use” (Comments to TC 54, WI 0054019)
- “The CEN/EHD would appreciate further information about the materials used, their distribution and their disposal” (Comments to TC 54, WI 0054026)
- Recognising that it is not possible to avoid the use of formaldehyde, “the EHD would however like to propose to consider the introduction of a statement in the introduction or scope of the standard that other, more environmentally friendly sterilisation methods should be applied if possible and if the same satisfactory sterilisation effect can be achieved” (Comments to TC 102, WI 120046)
- “The use of corrosion-resistant material or a corrosion-resistant protective coating has been identified a general requirement in the draft standard. The EHD welcomes this requirement as corrosion resistance is considered as a method to facilitate a longer product use and hence saves resources. However, anti-corrosion agents might have an environmental impact. Environmental friendly alternatives are available and should be used if possible. The EHD is aware that

this issue might not lie within the scope of this standard. Therefore reference to other relevant product standards in that respect might be considered to clarify which materials or coating would be suitable” (Comments to TC 221, WI 221021).

- “Therefore, we would like to suggest to include in this chapter a recommendation like “It is recommended to choose the most environmental sound surface treatment”” (Comments to TC 183, WI 183034-039).

The above examples are not useful in practice. Asking for further information will not give any environmental improvements because users of the standard are not required to make use of the information. Furthermore, it is unclear how the information eventually should be used, and by whom. The last two examples above are in fact meaningless, because users of the standards will not know what the “most environmental sound surface treatment” is, without it being defined in the actual standard or by making reference to a proper definition in another standard. If – as in the comments to TC 221 – the EHD claims that information on environmentally friendly alternatives is available and can be found in other standards, the least the EHD should do is to tell the TC which standards are relevant.

2.3.3 Normative requirements

Concrete proposals are found in a few of the comments provided by the EHD. The following examples show that clear normative requirements can be established:

- “These products must not contain any substances or preparations in concentrations which are listed in Annex 1 to Directive 67/548/EEC and must be classified and marked with the danger criteria/symbols and characteristic letters” (Comments to TC 158, WI 158055 and TC 12, WI 162220)
- “Plastic parts of containers, lids and wheels shall be marked in accordance with EN ISO 11469” (Comments to TC 183, WI 183 034-039)
- “Samples from single-use products shall be tested without pre-boiling in water” (Comments to TC 252, WI 252032).

All three examples provide clear-cut requirements that are easily integrated in the relevant standards. The use of the words “must not” and “shall” make it compulsory for users of the standard to follow the requirements.

It is, however, remarked that the first requirement regarding the content of certain substances and preparations can be phrased otherwise, with the same effect. This is discussed further in the review of the single standards. It is also remarked that the last requirement regarding testing without pre-boiling may be flawed by the possibility that coating materials may influence the test results. This is also discussed in the review in more detail. The examples are thus more an indication that the EHD knows how normative requirements shall be phrased than examples on how environmental issues are taken into consideration in the best possible way.

More examples on normative requirements can be found in the EHD comments, but it is concluded that the EHD comments in general recommends (or suggests to consider) to include non-normative requirements or informative text in the standard and that this approach will only lead to marginal improvements of environmental impacts – if any at all.

2.3.4 Dealing with “peanuts”

It is also noted that the EHD apparently does not try to consider the potential environmental improvements that can be achieved by including environmental considerations in the standard. Given the modest overall output of the EHD (about 150 pages of comments to about 90 draft standards), it can be assumed that every page of comments is time-consuming to produce. If this assumption is valid, the EHD should have considered making their own assessment of a standard prior to devoting its efforts to produce comments.

As an example, the EHD acknowledges in their comments to TC 161 on “Footwear protecting against chemicals and micro-organisms” that their suggestion to “check whether the most hazardous substances can be excluded from the list [of chemicals that might be tested]” only concerns a very small quantity. A similar example can be found in the EHD comments to TC 248 on “Textiles – methods for detection and determination of certain listed aromatic amines derived from azo colorants. Part 2”. Here, the EHD appreciates that the TC already has discussed the possible substitution of chloro-benzene with xylene in detail and states that the draft standard does not give rise to further comments from the HD.

The two examples are not the only ones demonstrating that the EHD deals with “peanuts” at the same level of detail as standards concerning more important products with a much higher potential impact on the environment, e.g. due to substantial exposure of humans and/or the environment. The conclusion is that if the EHD has experienced lack of resources to comment all draft standards in detail, the solution could be to “ignore” such standards, and only send a polite letter explaining that the resources of the EHD are scarce and therefore devoted to issues that common sense (or a screening tool) tells are important.

It is, however, also emphasized by the reviewer that environmental awareness is generated whenever the EHD comments on a draft standard. If the resources of the EHD were “infinite”, standards for testing methods could be considered as equally important as all other types of standards and the EHD could devote its time to produce suggestions for normative requirements.

2.4 Common issues addressed by the EHD

The EHD has addressed a wide range of standards and a large variety of environmental aspects. There are, however, some elements that are addressed on several occasions. These are exemplified and discussed in the following sections.

2.4.1 Single-use or recyclable products

On a number of occasions, the Helpdesk suggests the TC to include a note in the introduction to the standard, in specific clauses or in informative annexes that “single-use applications should be replaced as far as possible by re-usable applications”, or words to that effect.

Seen from an environmental point of view, a suggestion of this type will in general always be a good idea. However, it is questionable whether it will have any effect in practice, or be taken into consideration at all by the TC. First of all it is not a normative requirements as reflected by the of the word “should” instead of “shall”. Secondly, as long as the scope of the standard includes both single-use and re-usable products it is almost certain that manufacturers of single-use products will oppose the inclusion to an extent, which makes further standardisation work impossible. In other words, the information is not binding, the primary target group for the suggestion is not the manufacturers but the users of the product in question, and it is very doubtful it they will read the standard.

The result of the suggestion by the Helpdesk may therefore be that the TC uses it time to discuss issues where it from the start is obvious that no agreement can be reached, instead of discussing issues for which there is a relevant reduction potential if handled properly.

2.4.2 Appropriate end-of-life disposal

On a number of occasions the EHD asks the TC to include an informative note that the standard should specify how a given product can be recycled or indicate the most appropriate end-of-life disposal of the product. It is recognised that waste reduction is an important issue for almost all products, but the EHD approach cannot be expected to lead to significant improvements. The most important precondition for this is that it is a normative requirement, e.g. stating that the manufacturer shall provide information on how to dispose of the product with least environmental impacts. This requirement puts a heavy demand on the manufacturer, taking into consideration that the possibilities for handling of waste differs significantly from one country to another. A solution could be to point to EU and national legislation that provides the basis for best possible practices. However, even if this is accomplished, there may still be the problem of “storing” this information at the end-user of the product, i.e. the person/institution being responsible for the disposal many years from now.

There are no easy solutions to this. The best option for a first approach seems to be packaging materials, where standards for marking of materials are available. The EHD suggests on several occasions to take the EN ISO 11469 into consideration, although the wording in the suggestions to different TC's are different, i.e. both “shall” and “should” is used in the EHD comments.

With respect to disposal of the main product, the possibilities are fewer and the task more difficult. Although the classification of waste is fairly harmonised, there are significant differences with respect to local, regional

and national options in practice. It will therefore require both good ideas and a significant amount of work to establish a set of normative requirements that can be used for specific product groups, and the main focus for the future work should therefore be to create a suitable framework.

2.4.3 Chemical requirements

The EHD rightly focuses on the consumption of chemicals in many standards. Many chemicals pose a serious threat to human health and the environment, but their use cannot be totally avoided. It may, however, be possible to choose chemical substances with less impacts for many products or activities. Technical members of a TC may or may not be aware of the potential impacts and their possible solution.

If the comments from the EHD shall have an effect, they must provide clear guidance on how to treat the problem and suggest satisfactory solutions. Again, this should preferably be in the form of normative requirements, e.g. by specifying classes of substances that shall be avoided or classes of substances that are “acceptable”. The basis for normative requirements of this type can for example be EU Directives (classification/labelling, cosmetics, food additives, etc) or national legislation.

Another possibility to include chemical considerations in standardisation is to use EU eco-labelling criteria. These have already been formulated as normative requirements with proper reference to relevant regulations. Furthermore, they have been through a political process, giving all stakeholders the possibility of suggesting more or less strict criteria and have at the end been approved by national bodies. They can thus be regarded as the best possible solution, based on environmental and technical considerations made by stakeholders including relevant industrial organisations. An additional advantage in using eco-label criteria is that it will facilitate the whole application process, making it easy for applicants to collect the requested information and also making it easy for the Competent Bodies, which will have to perform less check of the verification.

It is mentioned that other eco-labelling schemes, e.g. the Nordic Swan and the German Blue Angel have developed criteria for a significantly broader range of products than the EU scheme. The Nordic and German criteria have in general not been approved by as many stakeholders as the EU criteria, but the essence and nature of the criteria are similar in all schemes, allowing a well-prepared and well-founded suggestion of requirements for best practice for use of chemicals in many products and processes.

It is emphasized that the eco-labelling criteria can be described as BATNEC criteria, i.e. Best Available Technology Not entailing Excessive Costs. The intention is that only manufacturers who can demonstrate real environmental benefits in practice can be awarded an eco-label. It would therefore be a very strict normative requirement if the eco-label criteria were adopted in a standard without changes. The framework is however judged to be very operational, giving the possibility of specifying minimum

requirements that must be followed by all manufacturers, and still with proper reference to relevant legislation, standards and testing methods, including documentation requirements.

The EHD has in its comments to a draft standard for “Paints and Varnishes – Part 1: Guide for the classification and selection of coating systems for wood based materials in furniture for interior use” chosen a different approach, namely to suggest to broaden the requirements regarding the chemical nature and content of solvents used to include information regarding the content of VOC, dangerous substances and solids in coatings. It is difficult to see an increase in environmental awareness in the paint manufacturing industry or a change in the selection of coatings in the furniture industry as a consequence of this suggestion. Even if it became a normative requirement to include this information, the basic effect is only that more information is made available, not how it can be used for environmental improvements.

The approach is, however, interesting on the longer term. It can be expected that national and EU schemes for Environmental Product Declarations will emerge in the near future, and in such schemes the information requested by the EHD will be very useful for the establishing of an EPD for a furniture product, containing (almost) all relevant information regarding the chemical substances used in the production. Today, this information is very difficult to obtain from suppliers of coatings, and a normative requirement will therefore remove a significant hurdle for information exchange in the life cycle perspective.

2.4.4 Discussion

The examples above indicate that a horizontal approach may be an operational way of including environmental considerations in standards, at least on the longer term. Specific standards addressing limited issues may not be the best forum for development of normative requirements, simply because it is not a cost-efficient solution, and therefore development of dedicated environmental standards addressing a broad range of environmental issues can have a much larger effect.

The EHD is not allowed to call for a new standard, but the possibility should be included in the considerations regarding future efforts for integration of the environment in standards. It is outside the scope of the current study to go into further detail with respect to other solutions, and it is only concluded that the horizontal approach seems to be a more promising solution than using the efforts without any real focus.

2.5 Potential effect of the EHD comments

The survey of the work done by the EHD shows that it has had very little effect on the final or draft standards that have been available for review. In fact, only a very few comments have been integrated in the draft standards and then in general only as informative notes. It is not possible to pinpoint the reason(s) for this, but it can be concluded that there is a need for substantial revision of its mode of operation if environmental aspects shall be found on the agenda in standardisation.

The suggestions and comments from the EHD are mostly in the form of polite requests for inclusion of informative information, e.g. regarding explanations of how to recycle or dispose of products in an appropriate way at the end of their lives. It is in this context emphasized that informative notes or annexes are not binding in any way for the users of the standard and accordingly, will only have little effect because they can be ignored. If the environmental considerations should be taken seriously, they have to be given in the form of normative requirements. Obviously, it is more difficult to formulate normative requirements simply because adequate standards and legislation form the basis for such requirements, and this aspect must therefore be an integral part of the prioritisations made by the EHD.

However, even though relevant normative requirements are developed and suggested to the TC, this is no guarantee that they will be considered or included in the final standard. Apparently, the environment is not high on the agenda in most standardisation efforts, and normative environmental requirements that go beyond legislative demands may be rejected by the TC's alone for the reason that they will decrease the competitive ability of many enterprises. The argument is probably relevant in some cases – at least on the short term – but very often it is merely a routine defence mechanism for the industry. Standardisation is to a large extent a consensus process, and it will often be the least common denominator that will be the result of the final standard, at least when the environment is on the agenda. Unless the EHD (or “the consultant for the environment”) is able and allowed to present the arguments to the technical members, the easy solution is to disregard or ignore the comments.

There are thus at least three elements that must be considered in the future work:

- The EHD should focus on the development of normative requirements
- A horizontal approach will be more efficient on the longer term, providing the basic input to a much wider range of standards
- It is necessary to establish a dialogue with the technical members of the TC.

All three elements are more time consuming and demanding in terms of technical and environmental knowledge in specific areas than the activities that have been performed by the EHD so far. When combined, they will however provide solutions that are more acceptable from both an environmental and industry point of view.

It is questionable whether one or two persons at a Helpdesk can provide the expertise needed to establish the approach outlined above, irrespective of a horizontal approach being chosen or not.

If it is chosen to continue to comment on single standards, input from external experts should be available to a much larger extent than has been the case so far. It is evident from the review that some of the comments have been established with the help of external experts, and these are in general (but not always) of higher quality, at least with respect to the

insight demonstrated in relation to specific environmental issues in product standards. The basic intention of the EHD to use external experts when possible, seems however not to have been successful, judged by the statements made by the EHD in its comments. The most obvious reason for this is the lack of finances available for this purpose. It cannot be expected that experts (and their employers) will devote time to comment on standards, unless being paid or otherwise getting benefits from the work. This will remain a problem as long as the current structure of the EHD and its financing is maintained.

A possible solution could be to outsource the work of the EHD, e.g. to an external organisation or consultant with a broad expertise in the relationship between products and environmental impacts and a network of colleagues that can help in areas where the knowledge is not readily available. Many universities and large, multidisciplinary consultancies can be assumed to possess this knowledge, but it is an open question whether the work can be organised in a way that produce the requested high-quality output at a competitive price. It has been outside the scope of the current review to examine this in any detail.

The other possibility is to initiate the development of horizontal standards. Seen from an environmental point of view, this will probably provide the best results, but it is seen as a major drawback that it will take a long time before such standards are finished. Meanwhile, the technical TC's will continue to do business-as-usual, seldom including environmental considerations in their work.

It is therefore only concluded that new ways of making the environment heard in standardisation should be considered. A dedicated study to this effect could be initiated with the objective of describing pros and cons of different solutions, including but not limited to those outlined above.

2.6 Discussion summary

Most of the aspects addressed in the previous sections are closely interrelated. It is chosen to summarise these discussion under selected headings, allowing some overlap and redundancy. Other headings and other lines of discussion could be equally well justified, but as they are they present the most important issues that have been identified in the review.

2.6.1 Modest output

No efforts have been devoted to create some kind of statistics regarding the output of the EHD. It is, however, noted that seen in view of the 3.5 man-years that have been used by the EHD, the volume of the output seems to be modest in terms of "pages written" and "number of suggestions". It is, however, also acknowledged that the EHD very well can have had a difficult start of its work, having to establish a wholly new discipline from scratch.

2.6.2 Few normative requirements

The comments from the EHD are in most cases kindly formulated requests to include informative notes regarding specific issues in the upcoming standard or to consider selected issues in the standardisation process.

Requesting informative notes is not effective in making the environment heard. In fact, they are more or less useless because informative notes are only communicated to a limited number of users of the standard. They do not need to take them into consideration, the consumer will not know whether they were taken into consideration, and the environment will only benefit if they are taken into consideration.

This should have been realised by the EHD already from its start. Many of the suggestions are useless as they are and although they are not very extensive they still take some efforts to produce – efforts that would have been spent far better on other issues.

2.6.3 Missing focus for the EHD efforts

The EHD has commented on a very wide range of product standards, and it seems that equal time is spent on standards dealing with details in test methods for determination of chemical substances and on standards dealing with very large amounts of materials and chemicals in common consumer products.

This is of course in line with the basic concept of the EHD, but has the serious drawback that the focus is lost to a large extent. It could have been a more operational solution to create a quick screening tool as one of the first tasks of the EHD and then use this tool to select the standards where the efforts of the EHD makes a difference.

A screening tool could for example consider the three elements: turnover of product/service, seriousness of environmental impact caused by the product/service and the improvement potential envisioned by the EHD when giving their comments. This is not necessarily an easy task, but will with relatively small efforts be able to provide an indication of both the environmental importance of the standard and relevant issues for the comments.

It is acknowledged that the results this type of tool can provide most probably were supposed to be obtained by voluntary help from external experts to the EHD. The actual dialogue between the EHD and external experts is not known, but judged from the comments given by the EHD it has been relatively limited. A reason for this is that even for environmental specialists, it is relatively time consuming (order of magnitude perhaps 1-2 days?) to create this first overview and present it to the EHD in a format that allows it to be further communicated to a TC. Such an effort cannot be expected on a voluntary basis.

A solution could be to outsource some or all of the work to a consultant with a very large network of colleagues with up-to-date knowledge of both

technical and environmental aspects of products. It is not discussed further if this is a viable or operational solution in practice, but some kind of organisational change is needed if the aim of including environmental considerations in standardisation shall be achieved.

2.6.4 Dialogue with the TCs

To the reviewers' knowledge, standardisation most often is a consensus process, in which the voice of as many stakeholders as possible is heard. In this context, the EHD is the "voice of the environment" and should as such be heard effectively in all TCs. It is, however, questionable whether polite letters with requests or recommendations from the EHD are heard in an effective way in many TCs. Standardisation is a difficult process also without environmental considerations, and an important precondition for being heard is probably that suggestions for inclusion of environmental considerations are formulated in a way that makes them directly suitable.

The only effective way to make the environment heard is by formulating normative requirements in the standardisation process **and** having them included in the final standard. If the normative requirements are presented only to the members of the TC, the audience is limited, so in order to have a long-term effect the requirements must be included in the standard.

This can very well be difficult, simply because the environment often will be seen by the TC members as an (additional) element that can prolong the process significantly. Furthermore, it may influence the business, broadly defined, of many of the stakeholders represented by members of the TC and many will need to check this with other parts of their organisation. This will in itself cause a delay in the standardisation process, but it may also lead to environmental issues being regarded as a "problem" by a significant amount of stakeholders because they will not be able to fulfil the normative requirements – or cannot predict whether they will be able to do so.

In order to facilitate the process of including environmental considerations, the "voice of the environment" should be able to meet the technical members of the TC face-to-face on one or several meetings in the process. By having a dialogue in the TC with participation of environmental experts, it may be possible to quickly identify and remove significant hurdles by explaining the practical extent and consequences of the normative requirements. With additional efforts, the environmental specialist may also be able to make further neutral investigations of the consequences for different stakeholders and communicate the results to the TC. In other words, an active participation in the work of the TC may prove beneficial for the standardisation process and the environment.

In relation to this it is mentioned that this type of active involvement is far more time consuming than just writing one or a few pages with comments. It is therefore necessary that the efforts are concentrated on the most important standards as discussed elsewhere in the report.

2.6.5 Visible results

The review can only give a limited glimpse of the visible results of the efforts of the EHD. The main information available has been the comments from the EHD and some of the draft standards that either have been commented on and/or draft version published after the EHD comments have been received by the TC.

It is remarkable that the comments from the EHD have only been taken into consideration on very few occasions. It is remarkable for two reasons: Firstly, because the comments are most often vague and formulated as informative notes or request to include recommendations of various kind. This should give the stakeholder little or no problems in practice, simply because it is not obligatory to use the information. Secondly, it is remarkable from the point of view that environmental considerations shall be an integrated element in product development and product policy in general in Europe. It would therefore be of very great interest for the future environmental work to find the reasons why the suggestions from the EHD have not been included to a larger extent.

This can be elucidated by direct contact to the TCs, e.g. by telephone, questionnaire, or face-to-face meetings on appropriate occasions. Depending on the answers, the work of the EHD can potentially be restructured in different ways. The main focus for a restructuring process should still be how to get most environment into standards, but the combined information from the present review and the direct contact to the TCs provide possibilities for a better focus. In this context, one of the most important aspects is to strike the right balance between the breadth and depth of the comments (in form of normative requirements) given by the EHD, e.g. in relation to number of standards addressed and the amount of work needed to establish an adequate dialogue with the selected TCs.

2.6.6 Re-usable solutions

It is acknowledged that the task of the EHD has been difficult, given the very broad range of environmental issues to be addressed. However, the option of creating re-usable and thereby also more sustainable solutions has only been used to a limited extent so far.

Despite the very different nature of the product standards some of them have common elements by being of interest in relation to aspects like generation of waste, possibilities for recycling, and selection and handling of chemicals.

Standardised, normative requirements may be applicable to many different kinds of standards, provided the wording is carefully chosen. The solution may not emerge from the first effort, but with a proper dialogue between the environmental specialist and the technical members of the TC, a consensus can be obtained regarding how acceptable and re-usable requirements can be formulated. When frameworks for such solutions have been established, they can be re-used, eventually after being modified to meet specific needs. The review shows that the following aspects are relevant starting points:

- Chemical requirements
- Requirements regarding re-use and recycling
- Requirements regarding waste management/disposal

Each of these solutions will require that relatively large efforts are devoted to identifying relevant legislation or other standards that can form the basis for the normative requirements. One of the largest difficulties will probably be to find relevant cross-references that are applicable at both national and European level.

Another possibility is to establish horizontal standards instead of trying to integrate rather similar requirements in every standard produced within CEN. This approach is regarded as the best possible way of creating re-usable normative requirements, but it also has an inherent risk of being a forum for continuous and never-ending discussions.

It is therefore not seen as the primary direction for future work, but rather as a possible solution, once operational frameworks have been established in more specialised contexts.

3 Review of the EHD comments

The reviews of the EHD comments are structured in the same way, although the level of detail differs significantly.

- First, the standard is identified by the number of the TC, the number of the work item (WI), and the title of the standard.
 - Secondly, a short assessment of the environmental importance of the standard is given. This assessment is purely subjective, being based alone on a quick impression from the reviewer regarding the amount or volume addressed by the standard, the seriousness of the potential impacts on the environment, and a guess about the potential for improvement/reduction of environmental impacts if relevant aspects pointed out by the EHD are considered.
- Thirdly, the comments given by the EHD are presented in a fair manner, although it is emphasized that it has not been possible to include the full comments.
- Finally, the comments are discussed, giving the opinion of the reviewer as regards primarily the nature and extent of the comments. It is emphasized that the discussion in many cases is based on relatively limited knowledge regarding the specific issues raised by the EHD. A thorough discussion would require an amount of time similar to that used by the EHD to produce its comments, and this has of course not been possible within the budget of the review.

3.1 TC 15 - WI 00015021. Inland navigation vessels - Installation of berths, reloading facilities and service stations

Environmental relevance of the standard

The volume of the “products” covered by the standard is medium, meaning that it is assumed to be significant. The seriousness of the potential environmental problems is assumed to be “low”, meaning that the product or activity covered by the standard is not known to cause emission of substances that are harmful or dangerous for the environment or humans. The reduction potential following possible changes in the standard is also assumed to be low.

EHD comments to the TC

The EHD appreciates the work done by the TC and can only point to a forthcoming directive on transportation of hazardous goods that should be observed

Discussion

The standard has not been available to the reviewer. However, the work of the EHD has not pointed to any options for environmental considerations, and the benefit from the work is therefore insignificant.

3.2 TC 19 - WI 019213. Fire-resistant hydraulic fluids – classification and specification. Guidelines on selection for the protection of safety, health and environment.

Relevance of the standard

The volume of the products addressed by the standard is medium, meaning that the amount is significant. The seriousness of the potential environmental impacts is also regarded as medium, meaning that it is a somewhat heterogeneous product group in which some products may contain substances that are known as hazardous to human health and the environment. The reduction potential is assumed to be medium, indicating that a significant amount of potential impacts can be avoided, provided that the standard allows this in practice.

EHD comments to the TC

The EHD has with the aid of several European experts in the fields of classification, use and disposal of hydraulic fluids elaborated a wide range of comments:

- General aspects:
 - The EHD points to the whole aspect of how to dispose used hydraulic fluids being missing in the standard, although it has been shown that it is possible.
 - The TC is asked to add a clause regarding the disposal of hydraulic fluids, including a definition of the term “proper disposal”
- Compliance with essential safety and health requirements
 - The EHD acknowledges that biodegradability, toxicological effects and bioaccumulation are treated in the standard but asks that the term “environmental properties” be defined in the context of hydraulic fluids.
- Information needed
 - The EHD acknowledges that the standard includes a clause dealing with the information needed to select a hydraulic fluid which operates with a low risk to human health, machinery and the environment
 - The EHD proposes that the clause include information concerning the possibilities for substituting recycled for non-recycled hydraulic fluids and fast (!?) biodegradable for non-biodegradable fluids, if the equipment so permits. The EHD also proposes that waste treatment of hydraulic fluids in general is included, together with information on the possible effects on the environment due to an accident
- Environmental hazards
 - The EHD is pleased to see that the TC deals with possible hazards due to use, storage and transport of hydraulic fluids. The EHD then suggests that it may prove useful to include information on how to avoid potential environmental hazards, either by explicitly mentioning such instruments or by making references towards such requirements
- Hazard control measures

- The EHD would welcome a link between this paragraph and the clause regarding information needed in order to examine possible alternatives to specific hydraulic fluids.
- Control of environmental hazards
 - The EHD appreciates the specific clause because of its broad scope. The EHD, however, also points to improvement options based on new or revised documents. Specifically, the EHD finds that it would be a big improvement if R-phrases were taken into consideration in the development of a European classification system, based on experiences made in Germany.
- Flowchart summarizing the fire hazard and risk assessment process
 - The EHD appreciates that a flowchart is developed to show the selection procedure in its entirety. However, the EHD points to the fact that the proposed flowchart does not take environmental aspect into account, and suggest that a question-box, e.g. “Is this hydraulic fluid the most environmentally sound fluid so far, with respect to technical requirements” is included
- Thermal decomposition
 - The EHD would be pleased to see environmental aspects included here, too

Discussion

The EHD has established a broad range of comments all of which aim at improving the usefulness of the standard in relation to its main objective to select hydraulic fluids for the protection of safety, health and environment.

Many of the comments focus on the disposal of hydraulic fluids after their useful life. It is acknowledged that this aspect may be important and should be addressed if possible. However, while giving this aspect a strong focus, equally (or more) important issues like health and environmental hazards and their control are not considered in the same detail.

The EHD points in its comments to the possibility of using R-phrases in the classification of hydraulic fluids with respect to health hazards. The informative Annex D in the draft standard contains a summary of the “Health tests and acceptance criteria” developed in the so-called “7th Luxembourg Report”¹. The report is relatively old, but contains an interesting and operational approach to selection (or rather exclusion) of hydraulic fluids with unwanted properties. Given the importance of the product group, the EHD could have chosen to use the 7th Luxembourg Report as the basis for suggestion of normative requirements, instead of just mentioning that it would be a “big improvement” to include a similar approach in the standard. It is also possible to extend the scope of the

¹ “Health and Safety Commission for the Mining and other Extractive Industries. Doc. No. 4764/10/91 EN (for English version, FR for French version, DE for German version) Requirements and tests applicable to fire-resistant fluids used for power transmission and control (hydrostatic and hydrokinetic) available from Commission of the European Communities, Directorate-General V, Unit V.F.4 “Extractive Iron and Steel Industries”, Batiment Jean Monnet C4/65, L-2920 Luxembourg”

selection procedure to include environmental considerations. Persistence, bioaccumulation and toxicity to different species can in principle be handled in the same way, using a point system to exclude substances with unwanted properties.

The point system established in the 7th Luxembourg report is specifically aimed at hydraulic fluids used in the mining industry. Its combination of a point system based on the EU classification system (Directive 67/548/EEC and subsequent amendments) and clear-cut normative exclusion rules seems to be an operational way of selecting products with best or acceptable toxicological properties. The same approach could possibly also be used for other product groups, provided that the basic knowledge on available products is available. The EHD could therefore have used its resources to revise the framework for classification used in the Luxembourg Report and add similar requirements for environmental properties as for health. The result would have been a suggestion for normative requirements regarding health and environment, and a framework for similar considerations in other product-related standards. As it is, the informative Annex D in the draft standard does not oblige the users of the standard to make such assessments.

The suggestions regarding disposal of hydraulic fluids have only been included to a limited extent:

- The requested definition of “proper disposal” is not given, nor is “improper disposal” defined although it is mentioned several times in the draft. The term “environmental properties” is defined as “chemical or physical properties of a hydraulic fluid may interact with the environment”. This definition does not make much sense as it is, and even if amended, the definition does not give an indication of the potential content, e.g. whether the definition comprise some of all of the properties ecotoxicity, bioaccumulation potential, biodegradability, etc. As a result, the user of the standard may choose to focus on a limited number of properties that will not provide a satisfactory overview.
- The standard does not consider recyclability as an element of the selection process or give advice regarding waste disposal in general. Neither does it address the possible substitution of non-biodegradable fluids with ready biodegradable.
- The flowchart is still without environmental considerations, i.e. that no question boxes to that effect have been included.

It is concluded that the EHD may have missed an opportunity to establish normative requirements in a field where the target audience for the standard can be assumed already to take health and environmental issues very seriously. The focus on recycling possibilities and proper disposal has not been followed by the TC, and the combined efforts of the EHD and the external experts have not produced significant improvements in the standard.

3.3 TC 54 - WI 00054019. Gas loaded accumulators for fluid power applications.

Environmental relevance of the standard

The draft standard has not been available during the review. Based on subjective consideration it is assumed that the volume of the products is medium, while the seriousness of its potential impacts is low and the improvement potential is also low.

EHD comments to the TC

The main content in the Helpdesk comment is a suggestion to include an informative reference to other, ongoing, standardization work, i.e. regarding environmental impacts from welding processes. This is suggested to be in the form of a note in the foreword or as an informative reference or note in the draft standard.

Furthermore, the EHD asks the TC to “give guidance on the disposal of gas loaded accumulators at the end of their intended use”.

Discussion

The comments given by the EHD does not provide a useful input to the TC or to the users of the final standard. The suggestion to include guidance on the disposal of gas loaded accumulators makes sense in the long run, but to become effective the EHD should at least try to help the TC in the right direction.

3.4 TC 54 - WI 00054026. Simple unfired pressure vessels designed to contain air or nitrogen - Part 1: Pressure vessels for general purposes

Environmental relevance of the standard

The draft standard has not been available during the review. Based on subjective consideration it is assumed that the volume of the products is medium, while the seriousness of its potential impacts is low and the improvement potential is also low.

EHD comments to the TC

The Helpdesk puts emphasis on the welding processes during the production and installation of pressure vessels. Accordingly, the Helpdesk points to the work in TC 121 WI 385 regarding an environmental checklist for welding and allied processes. The EHD, however, does not give an indication of how this checklist can possibly fit in the standard in question.

The Helpdesk also points to corrosion protection (materials and their impact on the environment) and disposal of pressure vessels as issues that ought to be addressed in the standard. The EHD therefore would appreciate further information about the materials used, their distribution and their disposal.

Finally, the EHD asks the TC 54 to ensure that the environmental aspects mentioned above are considered and clearly documented in the design and manufacturing schedule or in the manufacturing record that are addressed in normative annexes to the standard.

Discussion

The EHD points to a number of environmental aspects that very well can be relevant to address in the standard. However, the EHD offer little or no help to the TC as regards practical solutions, and it is therefore questionable whether the TC can or will take the comments from the EHD into consideration.

3.5 TC 57 - WI 00057019. Oil fired forced convection air heaters – stationary and transportable for space heating.

Environmental relevance of the standard

The standard addresses a product group that is assumed to be relatively high in volume (being a fairly common product). The products are energy consuming and are therefore an integral part of the environmental impacts caused by combustion of fossil fuels. The improvement potential can only be assessed by establishing an overview of current and future specifications of the products on the market, but is subjectively judged to be low to medium.

EHD comments to the TC

The Helpdesk has identified and used a comprehensive study on European Standards dealing with oil and gas heating appliances. The author of this study provided a comment on the draft standard.

This approach has provided a number of comments:

- Explicit exclusion of the use of asbestos and cadmium in solder is welcomed
- A foreseen requirement regarding energy efficiency is welcomed. As no values have been given, the Helpdesk cannot comment on actual suggestions
- A suggestion for a lower emission limit for nitrogen oxides is given
- Cross-reference to a standard regarding testing of heaters will provide more precise and comparable results as well as harmonisation of standards in the field

Discussion

With the help of external expertise, the EHD points to a number of issues that are very important in relation to handling of environmental aspects. The external expert is able to pinpoint missing state-of-the-art considerations within the product group, e.g. relating to emission of nitrogen oxides. Furthermore, the expert points to missing elements in the calculation of emissions (correction of NO_x to standard conditions; missing emission limit values for CO). Finally, the expert points to the fact that requirements regarding minimum efficiency are missing. The comments and suggestions are very precise and could in principle easily be integrated in the standard, of course provided that the TC accepts the suggestions.

It is noted here that the minimum efficiency required in the draft standard apparently is similar to that required in the EU “Boiler Directive” (92/42/EC), i.e. 84%. The emission limits in the standard are significantly higher than those required by the corresponding Austrian standard (KFA-Verordnung), but do include CO-limits, which by the external experts are

stated to be closely connected to emissions of NO_x. It is concluded that the TC only has taken the comments from the EHD into consideration to a very limited extent, if at all.

The EHD itself welcomes the explicit exclusion of asbestos and cadmium in solder. The use of these materials is already regulated and it is an open question whether the phrases in the standard will have an effect in practice. The EHD could perhaps equally well have pointed to lead in solder being a problematic material, the use of which should be considered in the standard.

The case is seen as an example of external experts providing useful input to the TC without any effect on the final outcome. The external expert to the EHD once attended a meeting of the environment working group of the CEN gas sector committee, where the proposal of a state-of-the art NO_x limit was defended. However, the environmental WG did not want to include this, considering it a task for the legislator (Franz Fiala, personal communication).

The cases for gas and oil appliances give a strong indication that a dialogue between environmental experts and TCs is only useful under the condition that the TCs are willing to co-operate in practice. Suggestions for normative environmental requirements should however still be given to relevant TCs. They will often not have any impact of the final standard, but they can in future political discussions be a strong argument for legal measures that standards cannot provide.

Finally, it can be argued that a horizontal approach, e.g. relating to heating appliances of all kinds as well as the important parts of them, should be established. By investing time and resources in defining a common focus and approach for each working item, a better environmental input can be given and in the long run, the horizontal approach will probably also reduce the time needed to comment on a larger number of standards.

3.6 TC 57 - WI 00057020. Heating boilers with forced draught burners - Terminology, general requirements, testing and marking.

Environmental relevance of the standard

The standard addresses a product group that is assumed to be relatively high in volume (being a fairly common product). The products are energy consuming and are therefore an integral part of the environmental impacts caused by combustion of fossil fuels. The improvement potential can only be assessed by establishing an overview of current and future specifications of the products on the market, but is subjectively judged to be low to medium.

EHD comments to the TC

The Helpdesk appreciates the inclusion of minimum energy efficiency requirements in the draft standard are in line with the mandate given by the Commission and states that it has no further comments.

Discussion

The case can be seen as another example of the potential benefits of a horizontal approach. The EHD is limited to commenting on individual work items and cannot comment on the provisions contained in the referenced standard.

The horizontal approach could for example focus on efficiency of heating appliances, relevant production processes (e.g. welding and surface treatment), choice of materials (e.g. requirements that asbestos, cadmium, and lead shall not be used) and disposal of appliances. The issues are to a large extent the same in many standards, and by establishing a set of “standard” environmental requirements of high quality, the dialogue between the environmental experts and the TC become more qualified and the chances for integration increase.

3.7 TC 102 - WI 00102046. Sterilizers for medical purposes – Low temperature steam and formaldehyde sterilizers – Requirements and test

Environmental relevance of the standard

The volume/number of steam sterilizers is assumed to be low and besides potential emissions of formaldehyde, the seriousness of the environmental impacts is assumed to be low. The EHD recognizes that use of formaldehyde cannot be avoided, and the improvement potential is therefore also judged to be low.

EHD comments to the TC

The EHD proposes a statement in the introduction to the standard that “more environmentally friendly sterilisation methods should be applied if possible and if the same satisfactory sterilisation effect can be achieved”. Secondly, the Helpdesk is concerned with the possible impacts of formaldehyde under abnormal working conditions, e.g. when released to the sewer system. In very polite terms the TC is told that the Helpdesk would welcome the necessary additional information to allow a more detailed judgement of the potential impacts.

Discussion

The proposal regarding a statement in the introduction to the standard that “more environmentally friendly sterilisation methods should be applied if possible” is judged to be useless. It is not a normative requirement and the target group for the statement – hospital staff – will in practice never be aware of its existence. Furthermore, “more environmentally friendly” sterilisation methods should be defined, and the EHD does not give any indication of which methods could be considered.

The second comment – asking for more information to allow a detailed judgement of potential impacts – is more relevant. The potential impacts on the sewer system are probably low (it is not possible to determine amounts or concentrations of formaldehyde), while the potential impacts on human health from exposure to formaldehyde always should be regarded as serious. A clause dealing with the issue is included in the standard (the door of the sterilizer shall not be able to open before the formaldehyde concentration does not constitute a hazard to human beings or the environment). There are, however, not given any requirements regarding concentrations that must not be exceeded. In an informative

Annex, some of the toxicological properties of formaldehyde are presented, but a normative requirement setting safe levels for human exposure could possibly have been suggested by the EHD, but this opportunity was missed.

The most radical solution would be to identify those applications where formaldehyde cannot be avoided and disallow it for all other uses. Similar considerations could be given to other types of sterilisation, e.g. by using ethylene oxide. This will require a significant amount of work, and it is questionable whether a standard for sterilizers is the right place for a normative requirement of this kind. In the long run, however, the overview of potential impacts from sterilisation processes on human health and the environment can be used in relation to standardisation as well as procurement and use of sterilisation equipment.

3.8 TC 102 - WI 00102048. Sterilization – Steam sterilizers – Large Sterilizers.

Environmental relevance of the standard

The amount of sterilizers addressed by the standard is probably low, but the amount of products (e.g. surgical gowns, linen and instruments) being sterilized will be high as will the amount of packaging waste generated. Whether this is a serious problem and if the standard can provide improvement options depend to a large extent on local procedures.

EHD comments to the TC

The EHD recommends marking of packaging material or test equipment to facilitate their re-use, recycling or otherwise appropriate disposal. Secondly, the EHD asks the TC to promote appropriate disposal by including a general remark or a description of the procedure in the standard. Thirdly, the EHD asks the TC to promote the evaluation of bleaches for cotton sheets and finally, the EHD points to prevention of health hazards being addressed already in the standard, while environmental hazards are not mentioned.

Discussion

The standard considers testing of the sterilizers rather than their daily function, and the EHD therefore points to the possibility that other Working Groups may be a better forum for environmental considerations. It is, however, remarked that wordings like “appropriate manner of disposal” is more or less meaningless, giving room for a subjective choice of the users of sterilizers.

The comment regarding a recommendation to use “environmentally friendly but still efficient cleaning agents” for cotton sheets is seen as rather vague. Here, specific cleaning agents or a general normative requirement could be suggested directly, or the EHD could have asked the TC to develop such requirements. As it is, it provides no guidance.

The EHD could also have investigated the importance of the efficiency of steam generation and possibly made suggestions in this respect.

3.9 TC 112 - WI 00112137. Plywood – specifications – Part 3: Requirements for plywood for use in exterior conditions

Environmental relevance of the standard

The amount of plywood being produced is high and so is the seriousness of human exposure to formaldehyde. However, as the standard regards plywood for use in exterior conditions, the improvement potential is judged to be low.

EHD comments to the TC

The Helpdesk first focuses on the use of biocides, giving a well-justified suggestion to include a sentence referring to the EU biocide directive (98/8/EC).

The second recommendation is to consider a lower limit for formaldehyde releases, corresponding to a “Class A” plywood classification, and the final recommendation is to mark panels with “For external use only”.

Discussion

The three parts of the standard were subsequently combined to one document. The reference to the Biocide Directive is still judged to be relevant, but the provisions of the Directive are probably more relevant to the producers of the biocides, who need approval for the substances and their applications. The producer of the wood article will – hopefully – use only approved agents. The Directive is rather complex and not yet fully operational. The EHD could therefore probably provide more useful comments if the Directive was examined closely to judge which sort of guidance/information is really useful in the context of standardisation. This knowledge would most probably be useful also in the context of other standards where the use of biocides is an element.

The suggestion to lower the limit for formaldehyde releases is in the context of plywood for exterior use probably of minor importance. Obviously, a reduction of formaldehyde emissions will always be beneficial, but the exposure of the general population is probably insignificant. It is however a clear-cut normative requirement that can be handled by most plywood manufacturers, and as such it is seen as a qualified input from the EHD.

The last recommendation is also formulated as a normative requirement. The suggestion is sensible, because will help to avoid use of the wrong panels for indoor applications, especially by common consumers.

3.10 TC 113 - WI 00113029. Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling

Environmental relevance of the standard

The volume of products addressed by the standard is judged to medium to high, the seriousness of the environmental problems is potentially high and – depending on the scope of the standard – the improvement potential may also be high.

EHD comments to the TC

The EHD would appreciate the integration of requirements for the disposal of heat pumps, air conditioners and liquid chilling packages in a chapter in the standard. Moreover, the EHD emphasizes that the use of cooling agents plays an important role and would appreciate to find a recommendation regarding the correct use and disposal of relevant cooling agents and states that a kind of selection procedure for the right cooling agent (e.g. recommendation of the use of ammonia) could be of value. .

The EHD also finds that further requirements concerning the efficiency and its meaning in comparison to other products (development of classes of efficiency etc) might be useful. With these aspects, the use of heat pumps in combination with other processes should be highlighted.

Discussion

In this case, the Helpdesk addresses a prEN, thereby trying to influence a standard in the final stage before approval. The issues addressed by the Helpdesk are relevant (e.g. relating to the use and disposal of cooling agents and the efficiency of air conditioners/heat pumps), but the Helpdesk primarily gives demands to the TC instead of providing operational help. This is for example evident from the suggestion to include requirements for the disposal of the overall product groups (heat pumps, air conditioners and liquid chilling packages. This is assumed to be a very complex issue that cannot be handled quickly. It is therefore questionable whether the suggestions from the EHD have had any influence on the final standard.

The recommendation of a selection procedure for cooling agents is (“e.g. recommendation of the use of ammonia”) is useful only if ammonia is the best alternative from an environmental and health point of view. Have all possibilities been examined and assessed?

3.11 TC 121 - WI 121256. Health and safety in welding and allied processes – requirements, testing and marking of equipment for air filtration – Part 2: Testing of the capture zone of welding fume extraction devices.

Environmental relevance of the standard

The volume of relevant products is assumed to be low; however, the substances addressed by the EHD indicates that they have a very high global warming potential and accordingly also a high improvement potential provided that these gases can be avoided.

EHD comments to the TC

The EHD appreciates that no toxicity has been established as a requirement for tracer gases, but also points to unwanted impacts on the environment as a problem that should be addressed.

In this context, the EHD points to two specific tracer gasses, SF₆ and N₂O, which have a high global warming potential. These are mentioned in a note to a test method and the EHD recommends that the TC signals its contribution to the overall EU reduction strategy for greenhouse gasses by replacing them in the given context.

The two suggestions are finally used as an argument to widen the scope for the standard also to include environmental requirements.

Discussion

The suggestion not to promote the use of SF₆ and N₂O as tracer gases is a step in the right direction. The EHD could possibly have requested that a normative requirement explicitly excluding their use as tracer gases should be included in the standard. The best solution in this context would be to examine the possibilities further, pinpointing a number of tracer gases that are suitable for use and that does not have any environmental impacts. Helium is such an example.

3.12 TC 121 - WI 121361-364. Welding - Test for shop primers in relation to welding and allied processes.

Environmental relevance of the standard

The standard apparently falls in four parts, each with a different focus. The volume of substances addressed by the four standards is low (Only test of shop primers), but their potential effects is high, especially regarding human health, and the improvement potential is also potentially high if the most hazardous chemicals can be avoided.

EHD comments to the TC

The EHD addresses all four drafts in its 1½ page comments.

First, the EHD recommends to check whether it is possible to include environmental considerations in the general requirements and accordingly include “environment” in the chapter headline. Also, it is suggested to include a sentence like “Environmental aspects during testing shall also be taken into account, like reduction of emissions and the use of hazardous substances”.

In its comments to the second draft, the EHD suggests to include a recommendation to the effect that substances with a high ozone depletion potential should not be used for degreasing. Instead, a normative requirement specifying groups of substances (non-cyclic hydrocarbons, aqueous cleaning agents or equivalent non-halogenated or halogen-free degreasing agent) that shall be used is suggested.

The third draft does not give rise to comments, whereas for the fourth draft concerning emission of fumes and gasses, the EHD recommends that the analyses of emission rates include definitively all hazardous substances. The EHD suggests a more binding wording, mentioning a number of specific substances as examples.

Discussion

The recommendation from the EHD regarding ozone depleting substances has been followed by the TC, but only by including an informative note in the relevant section. The original suggestion from the EHD was clearly formulated as a normative requirement, but apparently the TC has decided to use the less strict “should” in an informative note rather than the normative “shall” in a relevant clause.

Degreasing is important in welding and a wide range of options is available. It therefore seems to be a viable option to exclude those with an environmental impact; this has already been done in many companies applying cleaner technology solutions in welding processes.

The case can perhaps also be seen as an example of the real issues being outside the standard in question. The standard series could potentially be handled by a horizontal approach, using a more in-depth investigation of the relationship between welding and environmental and health impacts to establish a general standard with respect to environmental concerns.

3.13 TC 132 - WI 00132130. Aluminium and aluminium alloys – scrap – terms and definitions

Environmental relevance of standard

The volume of aluminium scrap is high, but the seriousness and improvement potential of the problems addressed by the standard is low.

EHD comments to the TC

The EHD points to additional definitions that should be included in the standard, e.g. filter dust relating to melting and casting. Furthermore, the EHD points to the risk of the standard causing confusion with legislation because of an inappropriate way of referencing to EU legislation.

Discussion

The comments from the Helpdesk aim primarily at avoiding confusion with local, national and EU legislation. The comments are therefore relevant in some respects, but it is difficult to see how they can lead to environmental improvements.

3.14 TC 132 - WI 00132133-00132148. Aluminium and aluminium alloys – scrap; part 1-16

Environmental relevance of the standard

The volume of aluminium scrap is high, and although the scrap in itself does not cause significant environmental impacts, the correct treatment of scrap is an important issue.

EHD comments to the TC

The EHD comments concern primarily the correct definitions of waste and points rightly to areas where the future users of the standard should be aware of relevant legislation in order to avoid legal problems and secure best possible recycling of aluminium. The good argument is that the standard cannot replace European wide definitions on waste, and therefore a reference to a Council Regulation on the supervision and control of shipments of waste is requested.

Discussion

The EHD points to “weaknesses” in the standard, i.e. that the definitions in the standard are not harmonised with legal definitions. The differences ought to have been identified by the TC at an early stage of the

development of the standard, and the comments are therefore relevant and in place.

3.15 TC 139 - WI 00139162. Paints and varnishes – Part 1: Guide for the classification and selection of coating systems for wood based material in furniture for indoor use.

Environmental relevance of the standard

The standard addresses only a limited application area for paints and varnishes, but is a probably part of a complex of standards of paints and varnishes that together cover a large number of product groups with a large environmental impact. The improvement potential may be considerable.

EHD comments to the TC

The EHD appreciates the proactive approach of the TC for the standardisation of a communication tool between the paint and varnish manufacturer and the furniture manufacturer and would like to incorporate environmental aspects of the products in question to enhance market-driven continuous environmental improvement.

More specifically, the EHD suggests as a normative requirement that the classification of wet properties of each of the coating systems be broadened to include a declaration of the content of VOC, dangerous substances, solid content as well as transfer efficiency.

The EHD also suggests to include informative notes regarding the appropriate disposal of paint and varnish residues, relevant process emission control measures, and a modification of the scope or the corresponding note regarding the inclusion of health, safety and environmental aspects.

Discussion

If included in the standard, the suggested normative requirements will undoubtedly give the users of coating systems a better background for choosing based on health and environmental considerations. Not only can the information thus provided be used directly in decision-making, but it can also be used in communication further down the product chain, e.g. in relation to an application for an (up-coming) eco-label for furniture, or as a part of an environmental product declaration. It is noted that the information requested by the EHD will probably already be available from the paint and varnish manufacturer; however, some of the information may be regarded as confidential.

It is, however, a main question whether the suggestions from the EHD falls within the scope of the standard, which is “classification and selection” of coating systems. In practice this means that the standard defines how the coating systems shall be classified, not how they should be declared. The TC did include a line regarding solvent content, but the main effect of this is that the standard defines the content for a given application, not that the manufacturer has to declare the solvent content.

The suggested informative notes regarding appropriate disposal and process emission control are of less value, offering little or no motivation or information that may cause improvements.

The EHD comments in this case is thus an example of the possibility of establishing clear normative requirements that offer the potential of environmental and health improvements. It is, however, also an example that the comments from the EHD have the “wrong address”. The efforts would be better suited in a larger context instead of in a standard with a relative limited scope. If a more general approach was taken, e.g. by developing a generic environmental baseline standard including declaration requirements for paints, this can and will be useful in almost all applications. In other words, if more time was dedicated to selected areas like paint and varnishes, the possibility of actually having an impact on standardisation would be significantly improved.

3.16 TC 140 – WI 00140046. Single-use receptacles for the collection of specimens, other than human blood, from humans.

Environmental relevance of the standard

The draft standard has not been available for the review. The amount/volume of single-use receptacles is relatively high, and PVC (assumed to be a main material in many such products) is known to have unwanted properties when incinerated. If PVC could be avoided there will therefore be a decrease in environmental impacts from single-use receptacles.

EHD Comments to the TC

The EHD states that it does not seem appropriate to include a requirement that single-use receptacles should be composed of other materials than PVC in a test-method standard. Accordingly, the EHD concludes that there is no occasion for special consideration of further environmental issues.

Discussion

The EHD may be right in their conclusion. The comments are, however, non-saying and it is an open question what their function are in relation to the objectives of both the EHD and the TC.

3.17 TC 158 - WI 00158055. Impact protection helmets for young children

Environmental relevance of the standard

The amount/volume of impact protection helmets is relatively high, but the improvement potential is judged to be low, because only minor parts of the products may have an unwanted impact on health.

EHD comments to the TC

The EHD is pleased to see that a clause “Materials” is included in the standard. The clause specifies that “For those parts of the helmet coming into contact with the skin the material used should be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toileteries. Materials shall not be used which are known to cause skin disorders“. The EHD would appreciate further

requirements in this context and suggests to prohibit substances and preparations that are classified and labelled with „very toxic“ (T+), „toxic“ (T), „health endangering“ (Xn), „irritating“ (Xi), „caustic“ (C), „carcinogenic“, „mutagenic“ or „teratogenic“.

Discussion

Although the EHD comments in principle only are relevant for a minor part of the product (e.g. inner lining of helmets and not the outer shell), they have a much larger potential to be used, e.g. in relation to standards dealing with textile materials in general. It could therefore be seen as a good idea to develop a more stringent framework for normative requirements in this context.

The EU eco-labelling scheme for textiles contains a number of requirements that could be used as the basis for establishing requirements for products that are not comprised by the scope of the eco-labelling scheme. The eco-labelling criteria secures that only the best products at the market can be awarded the label and are therefore rather strict in order to be used for all products. It is, however, possible to make the criteria less strict, e.g. by increasing emission levels for certain substances or by excluding the most strict requirements regarding health and environmental properties of the materials and substances used throughout the production process.

A more in-depth examination of the product group could reveal whether it is sufficient to just require colour fastness of the parts coming into contact with the skin, or if more detailed requirements are needed. More detailed requirements could e.g. be related to coatings and laminates, for example stating that they shall not be assigned specific risk sentences according to Commission Directive 67/548/EEC. This approach has been used in eco-labelling and is therefore assumed to be known by the manufacturers and their interest organisations. Other issues addressed by eco-labelling are the exclusion of the use of certain dyes and limits for the content of formaldehyde in final fabric. Under all circumstances, the eco-labelling requirements give an overview of potential “problem areas” for textile materials and how they can be handled. Further discussion and information on the issues can be found in the background reports, giving the EHD and other with interest in environmental and health issues a solid basis for their efforts.

3.18 TC 161 - WI 00161027. Footwear protecting against chemicals and microorganisms.

Environmental relevance of the standard

The volume is assumed to be low, and as the standard only concerns the testing of footwear the improvement potential is low.

EHD comments to the TC

The EHD points to the fact that use of hazardous chemicals should be avoided, also in testing methods where they are only used in small amounts. Since it is not required to test all 15 chemicals mentioned in the standard, the EHD therefore suggests to check whether the most

hazardous substances can be excluded from the list of chemicals from which two or three have to be selected for testing.

Discussion

The suggestion is relevant, i.e. there is no reason to use the most hazardous chemicals in a testing procedure, unless specifically required by the standard. The avoided health and environmental impacts are, however, judged to be minor. The EHD could possibly realise this very quickly and determine whether it is worthwhile to use their efforts on minor problems with a little general interest.

3.19 TC 161 - WI 00161041. Safety footwear with resistance to fire-fighting hazards.

Environmental relevance of the standard

The overall relevance is judged to be low as the standard deals with testing to determine the thermal behaviour footwear.

EHD comments to the TC

The EHD points to a parallel standard where a warning is given that some solings may release toxic fumes when being tested and would appreciate a similar clause in relation to the present standard.

Discussion

The EHD addresses what is judged as a minor problem, i.e. the potential release of toxic fumes during a test. The suggestion – to include a note to place the test apparatus in a well-ventilated area – is appropriate, but will most probably have only very small benefits in practice being of informative nature.

3.20 TC 162 - WI 00162036. Protective clothing – performance requirements and test methods for protective clothing against infective agents.

Environmental relevance of the standard

Not assessed, but probably limited.

EHD comments to the TC.

The main comment is the EHD welcoming the scope of the standard to include re-usable clothing.

The other comment from the EHD regards that materials and design used shall not cause skin irritation nor have any adverse effects on health and points to Annex 1 of Council Directive 67/548/EEC containing lists of substances classified as a way to achieve further guidance, e.g. the possibility of a quick-check of compliance with the requirements of the standard.

Discussion

The requirement in the standard is indeed vague, i.e. “The materials and design used shall not cause skin irritation nor have any adverse effect to health”. However, the suggestion from the EHD could also have been more specific, e.g. by asking for a normative requirement that “the materials must not contain substances classified as in accordance with Directive

67/548/EEC”, or words to that effect. Another possibility is to identify substances and preparation that are unwanted in the given context. This option is probably much more difficult, both in relation to the practical identification of all relevant substances, and in the relation to the way such a normative requirement should be formulated.

3.21 TC 162 - WI 00162085. Protective clothing for use against solid particulate chemicals – Part 1 performance requirements.

TC 162 - WI 00162036. Protective clothing – performance requirements and test methods for protective clothing against infective agents

TC 162 - WI 00162144. Protective clothes for firefighters – Laboratory test methods and performance requirements for wildland firefighting clothing.

Environmental relevance of the standards

Not assessed, but probably limited.

EHD comments to the TC

The EHD welcomes that the standards contain provisions for an improved protection against skin irritation (and allergic reactions) and proposes that the user is given further guidance by giving a reference to Directive 67/548/EEC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

Furthermore, the EHD appreciates that the standards contain requirements for marking of garments to indicate their suitability for cleaning, disinfection and re-use, because it promotes the repeated use of a garment. Finally, the EHD asks that if recycling of a garment is possible this should also be indicated. In the context of clothes for firefighters, the EHD points specifically to recycling of aramid fibres as a possibility and mentions that this could be specified by the marking.

Discussion

The main content is discussed in relation to the performance requirements addressed in TC 162 - WI 00162036 regarding test methods for protective clothing against infective agents.

Besides the possibility to establish a consistent framework for requirements regarding the potential of garments to cause skin irritation or skin diseases, the EHD focuses on the possibility for re-use, recycling or most appropriate disposal of protective garments. Although this certainly may decrease the amounts of waste, the suggestions are very vague and probably of little or no help. This is exemplified by the suggestion to include a specific marking of aramid as recyclable, based on information that the supplier of aramid fibers offers to recycle these. This may be true, but it is in principle equally possible for most other man-made fibers. However, there are no labelling schemes that so far have developed usable marking symbols for man-made fibers other than polyester (PET), and it is therefore very difficult to establish normative requirements.

It is concluded that there may be a possibility for developing normative requirements for man-made fibers relating to some of their inherent properties. However, before this can be done a thorough examination of different types of garments and the properties of the materials used must be conducted. In other words, if a substantial effect should be achieved, more work needs to be dedicated to the specific area. If possible, such work should be aimed at establishing general requirements that is addressed in one standard (e.g. Protective clothing – general requirements), which can be cross-referenced from related standards (see below).

3.22 TC 162 - WI 00162186. Protective clothing – general requirements.

Environmental relevance of the standard

As the standard concerns general requirements for protective clothing, the volume of the products affected equals the sum of products addressed in the previous standards described above. It can therefore be seen as the key standard in which normative requirements relating to health, safety and environment have the largest potential for environmental improvement.

EHD comments to the TC

The EHD appreciates references to Directives 67/548/EEC and 76/769/EEC which will enable the user of the standard to make a judgement on the classification and identification of hazardous substances. Consideration of chromium VI and azo-dyes are also seen as very positive. The EHD suggests to include the potential harm to the environment in the definition of “hazard”, and finally, the EHD is also aware of the possibility that recycling might not be the most beneficial option, depending on the prior use of the garment. It therefore encourages a discussion of the possibility of giving the user further guidance of a proper treatment of protective clothing in the end of the product life.

Discussion

The EHD could have used all of its efforts in commenting the “General requirements” – standard, provided of course that it was aware of the complex of standards relating to protective clothing that were being developed at the same time. As mentioned in the discussion of the previous standards, the EHD rightly sees a potential for using appropriate directives to improve the environmental performance of materials used for protective clothing. However, the suggestions given to the various work items are not wholly consistent, and the inclusion of environmental considerations in the standards would benefit from a consistent and well-documented framework.

In conclusion, the EHD has commented on a number of draft standards produced by TC 162. The comments vary significantly, perhaps reflecting that the work of the TC has developed over the period for commenting. If the Helpdesk had been informed of the possible itinerary and scope of the work of the TC, it could have been possible to concentrate its efforts on the reference standard (WI 162186), thereby also giving an input to the other WI's and potentially of higher quality (read: more focused on the product group as a whole). The time spent on commenting each standard could for example have been used to create the Helpdesk's own overview of

the life cycle impacts, establish a relevant matrix, and to make thorough considerations on how to handle important issues like garments recycling and re-use, and perhaps also provide guidance on more difficult subjects like emission of toxic substances from textile materials.

3.23 TC 162 - WI 00162220. Buoyant aids for swimming instruction – Part 3: Buoyant aids to be worn, swim seats - Safety requirements and test.

Environmental relevance of the standard

Buoyant aids are assumed to be a common “consumer” product with a medium volume. The potential impacts on environment and health are also assumed to be medium because of the large amounts of additives that possibly can be used and the improvement potential is also regarded as medium.

EHD comments to the TC

The EHD focuses on the migration of certain elements from the products and will appreciate that further requirements are made in this context. The EHD suggests to include a normative requirement that “These products must not contain any substances or preparations in concentrations which are listed in Annex 1 to Directive 67/548/EEC and must be classified and marked with the danger criteria/symbols and characteristic letters “very toxic” (T+), „toxic“ (T), „health endangering“ (Xn), „irritating“ (Xi), „caustic“ (C), „carcinogenic“, „mutagenic“ or „teratogenic“. Furthermore the EHD suggests a requirement that “Substances or preparations, which are not included in Annex 1 to Directive 67/548/EEC must be classified according to scientific knowledge in one of the categories according to Article 2 of this Directive”.

Discussion

The EHD is in the case of buoyant aids for swimming instruction very direct, i.e. it recommends that a requirement in the materials clause in the standard includes reference to Annex 1 in Directive 67/548/EEC regarding classification and labelling of dangerous substances.

The reviewer suggests that the phrasing is changed in order to underline the obligation of self-declaration of substances. This can be done by changing “The products must not contain any substances or preparation in concentrations which are listed in Annex 1 to Directive 67/548/EEC and must be classified or marked with(relevant danger criteria/symbols)” to the wording ““The products must not contain any substances or preparation in concentrations which are listed in Annex 1 to Directive 67/548/EEC and are assigned or may be assigned any of the following risk phrases...”, supplemented with the relevant risk phrases). The wording “may be assigned” can be seen as a weak formulation, but is in practice used to ensure that manufacturers follow the obligation to classify the substances they use even though they are not mentioned in Annex 1 to Commission Directive 67/548/EEC.

The concern for public health is of course appreciated, but it is also suggested to include impacts on the environment, e.g. by specifying that the products shall not contain substances that are or may be classified as R50 + 53 (“very toxic to aquatic organisms and may cause long-term

adverse effects in the aquatic environment) or R 51 + 53 (toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment)". This suggestion takes into consideration that some plasticisers and probably also other ingredients that shall be classified as above probably are prone to be released to the aquatic environment since this is where the products actually are used.

The development of a "standard" recommendation regarding the content of dangerous and hazardous substances can be seen as a proactive element in the work of the EHD, making it possible to put an environmental fingerprint on the standardisation work already at a very early stage of the process. The final choice of wording of requirements relating to chemicals should, however, first be taken after careful consideration of the different possibilities, their weaknesses and strengths. In this context, eco-labelling criteria may be of great help, because they are the result of a consensus process with many of the same elements as used in standardisation and with wordings that have been approved legally.

It is remarked that the suggestions made in this case are very similar to those made regarding "Impact protection helmets for young children" (see 3.17). It is thus an example of the possibility of a horizontal approach, re-using requirements developed earlier for different product groups.

In conclusion, the EHD comments to this standard are seen as one of a few examples of normative suggestions that are easy to take into consideration in the draft standard, possibly after discussion in the TC. The wording of the EHD in its suggestions may be improved/enhanced in order to provide more protection to the consumer and the environment, and at the same time be easier for users of the standard (manufacturers). The EHD could with good reason devote some of its efforts to a horizontal approach, which is important and relevant for most of the standards where chemical substances are addressed.

3.24 TC 175 – WI 00175100. Wood flooring – Characteristics, evaluation of conformity and marking

Environmental relevance of the standard

The volume of wood flooring is regarded as high, while the potential environmental impacts are medium, being related primarily to release of formaldehyde. The improvement potential is assumed to be relatively low.

EHD comments to the TC

The EHD comments addresses two aspects of wood flooring, i.e. the release of formaldehyde and content of PCP.

With respect to release of formaldehyde, the EHD asks the TC to take up at least a note, saying that the formaldehyde content in wood flooring panels should be as low as possible (e.g. 0.05 ppm).

With respect to PCP, the EHD points to Directive 1999/51/EEC relating to restrictions in marketing and use of certain dangerous substances, including PCP, and asks the TC to consider the Directive, at least by making a reference to it.

Discussion

With respect to formaldehyde release the request for a note saying that the formaldehyde content should be as low as possible (e.g. 0.05 ppm) is superfluous, because it is an informative, non-binding note and because the wording “as low as possible” is not clear (it could possibly be 0!).

It is remarked that the standard falls within the scope of the Construction Products Directive (CPD), where special arrangements have been made regarding the treatment of dangerous substances. The intention to have a low level of formaldehyde through normative requirements may not be compatible with the CPD-approach, but it is outside the scope of the report to examine this in any detail.

The recommendation of making a reference to Directive 76/769/EEC is well-founded, although the suggestion to include a note saying that “PCP in principle is not used anymore” seems to be meaningless. Instead, it could be pointed out that PCP is unwanted because of its environmental properties, followed by the citations from the Directive. It should also be noted that more stringent regulations may apply in some Member States.

The EHD comments also address the content of substances, which are classified as “very toxic” (T+), „toxic“ (T), „carcinogenic“, „mutagenic“ or „teratogenic“. Again, a precise phrasing, e.g. by using risk sentences as suggested previously for “Impact protection helmets” and “Buoyant swimming aids”, will provide a more stringent input to the users of the standards if a consistent horizontal framework is developed. It is, however, emphasized that the Construction Products Directive may have a different approach to dangerous substances and that the efforts of the EHD in relation to construction products not necessarily can be covered by the same framework as used for “common” consumer products.

Finally, the EHD points out that “the VOC content could be dealt with in the standard”. Obviously, such a suggestion is of little or no value without further substantiation.

3.25 TC 183 - WI 183034-039. Mobile waste containers – part 1-6.

Environmental relevance of the standard

The volume of waste containers is judged to be high, the potential environmental impacts are low to medium, and the improvement potential is regarded as medium.

EHD comments to the TC

The EHD primarily puts focus on the recycling aspects of waste containers. It first remarks that the suggested wording regarding marking of containers is far too vague, and provides a much more specific and operational wording, i.e. that plastic parts of containers, lids and wheels shall be marked in accordance with EN ISO 11469.

The second comment from the EHD concerns promotion of the use of recycle in production of waste containers. A wording is suggested, simply pointing out that “the use of recycle is allowed, presuming that all requirements of this standard can be complied with”.

Discussion

Obviously, the EHD suggestion to include a normative reference to the ISO standard 11469 is easily adhered to and will help significantly in the future disposal of waste containers.

The suggestion to point out that “the use of recycle is allowed, presuming that all requirements of this standard can be complied with” is in principle constructive. However, it is questionable whether it makes a big difference in practice. With or without the sentence the use of recycling material is allowed anyway if the requirements of the standard are complied with.

A third suggestion, “It is recommended to choose the most environmental sound surface treatment” is judged to be of little value, giving users of the standard no indication of how the choice can actually be made.

3.26 TC 191 - WI 00191123 + 00191124. Fire extinguishing media – Foam concentrates – Part 5 and 6 Specification for foam concentrates for non-aspirated application to water-immiscible (Part 6: water-miscible) liquids

Environmental relevance of the standard

The amount of fire extinguishing media is judged to be high, the potential environmental impacts are also high, and the improvement potential is judged to be medium to high.

EHD comments to the TC

The draft standard concerns a special issue, namely that it is necessary to use substances with unwanted or unknown environmental properties in order to avoid large damages on nature and humans in case of fires. It is therefore a very difficult task to suggest normative requirements that are operational to the users of the standard.

The EHD has therefore consulted experts from research institutions, environmental protection agencies and fire brigades and draws the conclusion that a number of aspects should be taken into consideration, e.g. disposal of test media, information on dilution rate for disposal of specific foams, information on areas where foams should not be used, use of surfactants and preservatives, and information on potential environmental impacts of foams, avoidance of the use of fluorotensides, and an additional note saying that synthetic foam concentrates should be replaced by film-forming concentrates until environmentally friendly substitutes on the market.

Discussion

The EHD suggestions to include informative notes are relevant, but due to their missing normative nature they will probably not make a big difference in practice. So, although the suggestions are well-founded, the

scope of the standard is so important that an in-depth study as fire extinguishing media and their environmental impacts is rewarded, especially if it can be used to establish normative requirements. The expertise for such a study cannot be expected to be present in the EHD, and the best option would probably be to ask the experts already consulted to make such a study.

3.27 TC 205 - WI 00205086/087. Transfusion and infusion equipment for medical use

Environmental relevance of the standard

The amount of transfusion and infusion equipment covered by the standard is high. The seriousness of the potential impacts are low to medium and the improvement potential is regarded as medium.

EHD comments to the TC

The EHD suggests to include information regarding information about the packaging material and how to dispose of it and a new chapter with information on how to store and dispose of the different components of transfusion and infusion equipment after their usage. These suggestions are seen as being in line with the Healthcare sector guidelines for the environment.

Discussion

The EHD suggests to include information about the packaging material and how to dispose of it. However, such recommendations in a standard can be ignored and a better suggestion would probably be to suggest that packaging shall be labelled according to appropriate standards like the EN ISO 11469. This normative requirement can be dealt with easily by manufacturers, and at the same time it provides the user of transfusion/infusion equipment with improved possibilities for recycling.

The EHD also suggests a new chapter with information on how to store and dispose the different components of the equipment following their usage. This suggestion will theoretically give a better basis for recycling as source separation is often a precondition for recycling. It is, however, doubtful if it is relevant for hospital wastes that have been in contact with blood.

The reviewer would have welcomed a discussion of the requirement in the standard that “The transfusion set shall not release any substances which may adversely affect the patient”, to be evaluated by the test methods described in ISO 10993-1. In many of its comments, the EHD tells the TC that it appreciates that such requirements are made, but this is not the case here.

The standard has not been available during the review, and it is thus an open question whether the requirements in ISO 10993-1 include the use of plasticisers like DEHP (di-ethylhexyl phthalate) that are suspected of being endocrine disruptors. Plasticisers are widely used and are found everywhere in the environment, and it would be obvious focus for the EHD to enter discussions about their use in consumer products.

3.28 TC 205 - WI 00205141. Single-use and reusable surgical coverings, used as medical devices in healthcare facilities, for patients, clinical staff and equipment. Part 1: Information to be supplied, manufacturing and processing requirements and general guidance.

Environmental relevance of the standard

The amount of surgical coverings is regarded as high, their potential environmental impacts are medium and the improvement potential is judged to be high.

EHD comments to the TC

The EHD proposes a recommendation in the introduction to the standard, e.g. “The use of single-use surgical coverings is only recommended if necessary for medical and hygienic reasons”.

The EHD also suggests to include a sentence like “Whenever possible plastic parts should be marked in accordance with EN ISO 11469 Plastics – Generic identification and marking of plastic products”.

Finally, the EHD suggests to change the definitions of re-usable as well as single-use products. The EHD states that the definition on re-usable products gives very much emphasis on the reprocessing, but the main focus should be on the re-use. For single-use products it is stated that it is not the manufacturer who intends the product to be used for only one surgical procedure.

Discussion

The recommendation only to use single-use coverings when necessary is purely informative and can as such be ignored by the users of the standard. It is therefore regarded as superfluous.

There is little doubt that re-usable surgical coverings cause less impacts than single-use coverings. This is evidenced by a comparative LCA made for the European Textile Service Association (ETSA).

If the recommendation was formulated as a normative requirement, it is however foreseen that it will be strongly opposed by manufacturers using the requirements in the standard to produce single-use coverings. This problem cannot readily be solved, but under all circumstances the recommendation would be better placed where it reaches the target group for such decisions, i.e. purchasers and medical personnel at hospitals. This can possibly be achieved by developing a procurement guide for hospitals.

The EHD also suggests to include a sentence like “Whenever possible plastic parts should be marked in accordance with EN ISO 11469 ...”. This may be a good idea, e.g. in relation to polyester products that are reusable, but at the end of their life will have to be disposed in the best possible way. For single-use products, the informative recommendation is meaningless except for packaging, as the products are laminates that cannot be labelled according to EN ISO 11469.

The suggested modifications of the definitions of “re-usable” and especially “single-use” show that the EHD has not given much consideration to the

actual use of coverings. The remark that “it is not the manufacturer who intends the product to be used for one surgical procedure only” reflects a misperception of the EHD. The choice of materials and properties of single-use products – in combination with their use – leave no options for re-use or recycling, and was never intended to do so by the manufacturers.

3.29 TC 209 - WI 00209022. Zinc and zinc alloys – Secondary raw material.

Environmental relevance of the standard

The amount of zinc and zinc alloys is very large. The “seriousness” of the potential impact (missed recycling possibilities) is considered to be medium, and the improvement potential is also judged to be medium, because there are significant amounts of zinc and alloys that may enter the wrong circuits.

EHD comments to the TC

The EHD describes in some detail why the standard is important from an environmental point of view. Secondly, the EHD comments the scope of the standard and recommends to restrict the scope to technical specifications, which provide characteristics and requirements for different categories of zinc scrap.

The EHD also suggests a normative requirement that “shipment documents required by law have to be submitted, and points to Council Directive 67/548/EEC being relevant for the classification of some qualities of zinc scrap.

Discussion

The comments from the EHD are focused on bringing the standard in accordance with relevant EU regulation, e.g. regarding Waste shipment and classification and labelling of dangerous substances.

In doing so, the EHD helps to avoid future problems regarding the trade and shipment of zinc alloys and thereby also to increase the proper recycling of such materials.

The input is very stringent and will probably be both useful and easy to handle for the TC.

3.30 TC 215 - WI 00215074. Breathing system filters for anaesthetic and respiratory use – Part 2 Specifications for ...

Environmental relevance of the standard

The amount/volume of breathing system filters is assumed to be low, as is their potential environmental impacts and the improvement potential.

EHD comments to the TC

The EHD welcomes that the manufacturers are required to provide instructions for safe disposal following use. Secondly, the EHD proposes to incorporate a general recommendation like “It is recommended to avoid single-use BSF wherever possible”. Finally, the EHD finds it desirable to

include a requirement on the marking of plastics for packaging corresponding to EN ISO 11469.

Discussion

The EHD welcomes that the manufacturers are required to provide instructions for safe disposal following use. It is uncertain whether the term “safe disposal” also relates to environmental impacts. If so, the wording in the standard can be recommended for use in other standards. If not, it is suggested to develop a standardised requirement, which includes proper environmental considerations.

The proposal to recommend to avoid single use BSF whenever possible probably hits the wrong target group. As for surgical coverings (see section 3.28), the standard applies to both single-use and re-usable products, and the inclusion of such a recommendation in the standard will not be very fruitful. Even if it was the right target group, the recommendation would still be useless without a proper definition of when it is not possible to use re-usable breathing system filters. The final standard only prescribes information to be provided by the producer regarding instruction for maintenance and details of cleaning, disinfection and sterilisation as well as the recommended maximum time of use before disposal or cleaning, and safe disposal after use. This is not a definition, but only guidelines regarding when and how different handling procedures should be initiated.

The proposal to include marking of packaging is in place. The EHD could, however, have considered to give a more precise suggestion for the wording of the requirement. It is an environmental aspect that is relevant in a large number of standards, and it will not be very demanding to establish a re-usable requirement.

3.31 TC 217 - WI 00217028. Specifications – Synthetic surfaces for outdoor sports arenas.

Environmental relevance of the standard

The standard specifies the requirements for synthetic surfaces for outdoor sports facilities for athletics, track and field, tennis, and multi sports. The amount/volume of materials for outdoor sport arenas is judged to be medium, the environmental impacts are relatively low, and the improvement potential is low to medium.

EHD comments to the TC

The EHD suggests to add an informative annex with details concerning national and European requirements, which have to be taken into account. The EHD states that it has not been able to find details about the composition of materials used for synthetic sports areas and welcomes this information in future versions, together with further details about how to dispose of the material after use.

Discussion

The suggestion to add an informative annex with national and European requirements when planning an outdoor sports arena may be relevant, but contains no concrete proposals with respect to applicable national

regulations or with respect to the possibilities for disposal of the materials. Consequently, the comments are without any value and cannot be expected to have any potential for environmental improvement.

3.32 TC 217 - WI 00217057. Surfaces for sports arenas – methods of test – Specification for unbound mineral surfaces for outdoor sports arenas

Environmental relevance of the standard

The amount/volume of materials for outdoor sport arenas is judged to be medium, the environmental impacts are relatively low, and the improvement potential is low to medium. The above assessment is, however, very dependent on the scope of the standard.

EHD comments to the TC

The EHD finds it to be a step in the right direction that the standard combines environmental protection and health aspects with technical requirements to ensure a high quality of outdoor sports arenas in the European Union.

The EHD then discusses an informative Annex, without remarking that the Annex contains normative language, i.e. “The manufacturer shall supply to the purchaser an assurance that the sports surface, together with its supporting layers, does not contain in its finished state any substance which is known to be toxic or carcinogenic when in contact with the skin, and that no toxic or carcinogenic substance(s) will be released as a vapour or dust during normal use”.

The main suggestion of the EHD is to add an informative annex, which includes a list with the most important national legislation, which has to be taken into account, when planning an outdoor sports arena. Furthermore, the EHD suggests to include recycling considerations by adding an informative sentence saying that “During planning and construction recycled materials (as long as they meet the requirements) should be preferred”.

Discussion

The “informative” Annex apparently contains requirements regarding toxicity and carcinogenicity, and the EHD could very well have used the opportunity to suggest that the Annex be modified in order to make it a normative Annex. As it is, industry can ignore such provisions, and the suggestion is therefore without value. Normative requirements could be developed using the same framework as for consideration of chemicals in the context of “Impact protection helmets for children” (see section 3.17), “Protective clothing” (see section 3.22) and “Buoyant swimming aids” (see section 3.23), of course acknowledging the differences between the products addressed. This could potentially be combined with a declaration of the materials actually used, e.g. with respect to the content of heavy metals, ensuring that materials with less impacts are used as far as possible, and as a minimum that the potential impacts are known.

The EHD suggestion to include a sentence like “During planning and construction recycled materials should be preferred (as long as they meet the requirements)” is obviously a good idea with the perspective of

redirecting waste streams. If producers wish, they can complete ignore such provisions as long as the normative requirements as to specifications are fulfilled. The proposal thus does not make a difference in practice.

3.33 TC 218 - WI 00218087 – 088. Rubber hoses and hose assemblies for aviation fuel handling/LPG and natural gas – specifications

Environmental relevance of the standard

The amount of rubber hose and rubber hose assemblies is assumed to be low, and so is the potential impacts and the improvement potential

EHD comments to the TC

The EHD firstly discusses quality aspects and developments within the rubber industry, which have led to a reduction in environmental impacts and the disposal of rubber products by incineration or recycling.

Secondly, the EHD proposes to include a sentence to the effect that the substances of the rubber products are known when they are to be disposed of, to ensure that there are no higher emissions due to the incineration of rubber than legal requirements permit.

Finally, the EHD suggests a discussion of the possibility of providing consumers with information on the composition of rubber products without violation of company principles or company secrets.

Discussion

The EHD comments concerns the possibilities of thermal utilisation of the energy content in rubber products. The EHD have two suggestions, i.e. to include a sentence relating to the choice of compounds, and to encourage a discussion of how consumers can be provided with information on the composition of rubber hoses.

Both comments may increase the environmental awareness of producers, but will only have little (or none) effect in practice. Rubber is used as a fuel in for example the cement industry, but the main source of rubber is car tyres, being produced and disposed in amounts that outweigh the amount of rubber hoses by orders of magnitudes. It is therefore very doubtful whether a small fraction of rubber hoses in the overall amount can have any significant effect on the quality of rubber as a fuel, neither in a positive nor negative direction.

The life cycle of rubber products is very interesting from an environmental point of view, but it is concluded that the actual product group is not the best place for discussions regarding their disposal. The EHD should rather concentrate on car tires, or choose not to use its time on comments.

Furthermore, it is seen questionable whether users and owners of waste containing rubber particles are really interested in detailed information about their composition. It could, however, be of general interest to identify substances in rubber products that are unwanted in incineration processes, and subsequently to develop and include normative requirements that these should be avoided. In practice, this should not be

very difficult, given the fact that in general only heavy metals and halogens are problematic for disposal by incineration.

3.34 TC 221 - WI 00221001. Workshop fabricated steel tanks – Part 2: Horizontal cylindrical single skin and double skin tanks for aboveground storage of flammable and non-flammable water polluting liquids

Environmental relevance of standard

The volume of steel tanks for the given purpose is regarded as medium. The potential environmental impacts are regarded as low, and so is the improvement potential.

EHD comments to the TC

The main comment from the EHD is that it would appreciate further advice on the disposal of the steel tanks covered by the standard. Furthermore, the EHD would appreciate to have a table as information giving guidance on which substances can be stored in a single and which one has to be kept in a double skin steel tank.

Discussion

The EHD requests guidance on the disposal of steel tanks, as a possible rest film layer of the polluting liquid on the steel can always appear. As the standard concerns tanks for “flammable and non-flammable water polluting liquids”, establishing of such guidance will be very difficult, because it should take into consideration a very large number of liquids with significantly different properties. As a result, the guidance may be so general that it is not usable in practice.

The second recommendation, to include an informative table showing which liquids can be stored in a single, respectively double skin tank, can be useful in a few instances. The handling of this question is however probably best handled by the users of tanks fulfilling national demands with respect to storage of liquids by using the information provided by the supplier of a liquid. The recommendation is therefore seen as somewhat superfluous.

If the EHD considers the above potential impacts as important, it should have established a proposal on how the guidance could be included in the standard. The potential benefits from this are probably low, and the reviewer finds that the time necessary could be better spent elsewhere.

3.35 TC 221 - WI 00221021. Petrol filling stations – Part 3: Construction and performance of shear valves.

Environmental relevance of the standard

The amount of shear valves for petrol filling stations is considered to be low to medium. Their potential environmental impacts are low, and so is the improvement potential.

EHD comments to the TC

The EHD points to anti-corrosion agents having a potential impact on the environment and that environmentally friendly alternatives are available and should be used. Therefore reference to other relevant product standards might be considered to clarify which materials and coatings would be suitable,

Secondly, the EHD requests that production acceptance tests are performed with a frequency that takes into consideration that a realistic portion of shear valves should be tested.

Discussion

The EHD comments firstly on the choice of corrosion resistant material or protective coating of shear valves. The EHD appreciates the requirement because it prolongs the useful life of the product, but is missing the possibility of choosing a material/coating with least environmental impact. As a means to this the possibility of making reference to other standards should be considered by the TC.

If the EHD comments should have an effect on the work of the TC, two approaches could have been chosen. The first would be to identify which materials and coating that can be considered as environmentally friendly. The other would be to identify relevant product standards where guidance on the subject can be found. Neither of these approaches have been chosen, and the comments from the EHD are therefore of little value to the TC or in the greening of standards.

The second comment relates to the frequency and extent of performance tests. The environmental concerns relating to this comment are unclear to the reviewer.

Finally, the EHD also makes comments of a more editorial character. This shows that the EHD reads the standards in large detail, but it cannot be seen as a major task of the EHD in general to produce such remarks.

3.36 TC 221 - WI 00221022. Underground pipework for petrol filling stations- Part 1 General

Environmental relevance of the standard

The amount of pipework in petrol filling stations is assumed to be medium, the potential environmental impacts are medium to high, and the improvement potential is judged to be low.

EHD comments to the TC

The EHD discusses the potential hazards and impacts associated with underground pipework, pointing out that single-walled pipelines may not be enough secure and accordingly also contradictory to national legislation in some countries. The EHD also points out that materials might be affected by ageing, with an increased risk of accidents or permeation.

The EHD therefore asks the TC to reconsider which classes of pipework should be allowed for petrol filling stations and accordingly be included in the standard.

The EHD also suggest to include a recommendation that easy access to and control of fittings is provided for by the installation of underground pipework. Finally, the EHD proposes the TC to consider whether it is possible to require impermeability for all underground pipes for petrol filling stations.

Discussion

The suggestions given by the EHD can be seen as radical, asking the TC to consider whether some classes of pipelines should be excluded in the standard. The suggestion will in itself probably raise a debate on the need for adequate testing methods and therefore also lead to a higher degree of security.

The second suggestion is a recommendation that “easy accessibility and control of fittings is provided for by the installation of underground pipework”. This recommendation is also essential, and its importance could very well be underlined by making it a normative requirement. As it is, there are no obligations to provide easy access to the pipework, and the recommendation can therefore be ignored.

The final comment by the EHD, to consider whether it is possible “to require impermeability for all underground pipes for petrol filling stations” is also of environmental importance. The EHD could in this case have been less polite in the comments, e.g. by telling the TC that the EHD finds it imperative that such a clause is included in the standard.

3.37 TC 229 - WI 00229004 & 009. Heating systems in buildings, Installation and commissioning of the whole system & Design and installation of direct electrical room heating systems

Environmental relevance of the standard

The volume of heating systems in buildings is medium to high. The potential environmental impacts are medium to high and even a small improvement potential per unit can give a large overall environmental benefit.

EHD comments to the TC

The EHD would appreciate if the TC could give further guidance in the standard concerning noise level, energy conservation and reduction in air filtration. The EHD would also appreciate further guidance on the range of possible heat gains and how to use them efficiently.

With respect to WI 00229009, the EHD requests the TC to indicate a choice of installation procedures, materials, etc. how to insulate a heating system in an effective and environmental sound way. Also, the EHD asks to clarify aspects regarding system flushing and cleaning, e.g. with respect to an agreed and approved method plan and a more detailed description of the meaning of “significant signs of detritus”.

Discussion

Heating systems in buildings is one the main sources of air pollution and resource consumption in Europe today. The standards in this area are therefore very important in relation to a reduction of these problems.

The EHD seems to be well aware of this, pointing out the need for reference values concerning energy preservation, noise and air infiltration. If the standardisation subject had been considered further, the EHD might however have come to the conclusion that the area is so important that a very dedicated effort, e.g. in the form of help from external specialist, could provide better input to the TC.

It is acknowledged that the issue is very complex, with differences in requirements between most Member States, and differences between the possible technological solutions that may become available following the standard.

With respect to WI 00229009, the EHD requests further advice regarding choice of installation procedures, materials etc. in order to insulate a heating system in an effective and environmentally sound way. This is a natural request, but it is perhaps more important to stress which goals should be achieved, e.g. by developing requirements regarding heat loss from the building envelope.

The missing focus of the EHD comments is illustrated by the request of the EHD regarding the definition of significant detritus. Flushing and cleaning may be important, but in the overall picture, the efficiency of the heating system is much more important, and in the context of cleaning, requirements regarding the choice of chemicals other than a short information on their environmental impacts are more important than the definition of significant detritus.

3.38 TC 248 - WI 00248290. Textiles – Methods for detection and determination of certain listed aromatic amines derived from azo colorants. Part 2: Extraction test on coloured textiles – Detection of the use of certain azo colorants in fibres dyed with extractable dyes.

Environmental relevance of the standard

The amount/volume of materials and substances used is low, and so is the potential environmental impacts and the improvement potential.

EHD comments to the TC

The EHD welcomes that the working group has demonstrated its concern for the environment by debating the replacement of chlorobenzene. The EHD acknowledges that the substitute xylene does not provide equally reliable results, and has no further comments to the standard.

Discussion

Obviously, the TC has already taken the necessary actions with respect to environmental considerations. Given this and the fact that the impact of the standard is very small, the decision not to comment further is acceptable.

3.39 TC 248 - WI 00248302. Textiles – Laundry processed textiles – biocontamination control systems

Environmental relevance of the standard

The amount of materials processed is regarded as medium, the environmental impacts are also regarded as medium, while the improvement potential is low.

EHD comments to the TC

The EHD comments focuses on two aspects. The EHD suggests to include not only references to quality managements systems, but also a reference to environmental management systems (ISO 14001) if the RABC-system (a system of statistical processes to prove sufficient decontamination of soiled textiles from present micro-organisms) is considered suitable to reduce or control the environmental impact of laundries. If it is, then the draft standard should include the environmental management representative in the recommended multidisciplinary team being responsible for the biodecontamination management system.

If a RABC-system can be established, the EHD suggests to include different informative notes that are relevant in the overall context, e.g. relating to the cleaning plan for rooms, equipment and surfaces, and the choice of suppliers with an auditable quality and/or environmental system.

Secondly, the EHD focuses on the laundry process itself, e.g. relating to the use of phosphates, bleaches and disinfectants. The EHD suggests to promote the most environmentally friendly alternatives by adding a sentence in the general introduction to the standard, e.g. “In order to minimize the environmental impact of the laundry cycle products which are considered environmentally friendly should be used, provided that the desired level of microbiological activity can be achieved”.

Discussion

The EHD comments addresses the use of different certification systems in order to provide a high quality laundry service system for washing of textiles soiled with microorganisms.

The comments from the Helpdesk are relevant, reflecting that environmental management systems have the potential to reduce the environmental impacts from a given operation. The comments from the EHD help to adjust the structure of the standard so that it will be compatible with both ISO 9000 and ISO 14001.

The specific comments from the EHD point to a number of activities within a (environmental) management system that may give significant reductions in environmental impacts. However, the standard is a management system standard and therefore not the right place to give recommendations or even requirements for the choice of specific products like detergents. If the draft standard somehow was the right place after all, the recommendations regarding detergents and bleaches from the EHD should be stated differently. As they are, they are non-normative (using the phrase “should be used” instead of “shall be used”) and are therefore not binding. Finally, it is remarked also here that the term “environmentally friendly” is without value until a precise definition has been given.

3.40 TC 252 - WI 00252023 & 032. Child use and child care articles – Drinking equipment – Part 1 and 2: General and chemical requirements and tests.

Environmental relevance of the standard

The volume of child use and child care articles is medium (but the frequency of their use is high). The potential environmental impacts is considered to be high, because the exposed population is vulnerable, and the improvement potential is medium.

EHD comments to the TC

The EHD provides an extensive set of comments relating to different aspects.

Firstly, the EHD draws the attention of the TC to existing and upcoming test methods, which might be applicable for drinking equipment. A table of normative references is included in an Annex.

Secondly, the EHD suggests to include a note saying that specific chemicals and groups of chemicals should be reduced to the lowest practical level, e.g. vinyl chloride monomer, plasticizers, preservatives, formaldehyde and colorants.

Thirdly, the EHD suggest to include a note saying that “if applicable, single-use applications should be replaced as far as possible by re-usable applications, to reduce material use and waste”.

Fourthly, the EHD notes that under test methods, only re-usable products are mentioned, and argues that it is equally important to include single-use products.

Finally, the EHD notes that the test methods for single-use products does not prescribe that samples shall be prepared without pre-boiling in water, thereby reflecting actual use conditions.

Discussion

This is a very important standard. It is therefore seen as an important input from the EHD that it is able to give references to validated test methods for a number of chemical substances that have not been addressed in the standard.

A main comment of the EHD is to include a note that selected chemicals “should be reduced to the lowest practical level in childcare articles – Drinking equipment”. The EHD choice of chemicals is relevant, although some points should be made:

- By only suggesting an informative note and not a normative requirement, the practical effect of the suggestion may be insignificant, because users of the standard are not obliged by the note.

- The phrasing “lowest practical level” is more or less meaningless. Instead, concrete suggestions for limits with good justification should be made, preferably accompanied with suitable test methods.
- Some of the chemicals are grouped under one heading, e.g. plasticizers, preservatives and colorants. Without a clear definition, it is very difficult to prescribe validated test methods. It is therefore important to name all relevant chemicals that should be tested. It is a demanding task to establish such lists, but given the seriousness of the potential impacts on children’s health, it should be considered to devote the necessary efforts. It might be an idea to suggest a requirement that the products concerned in the standard should not migrate any substances that are or may be classified according to 67/548/EEC or other applicable Directives.

It is noted that the final standard contains limits for a number of named substances. The analytical methods specified in EN 71-3 for toys have been applied to drinking equipment. The limits set account for prolonged sucking of a feeding teat or drinking accessories in the presence of saliva in the mouth. The reviewer has not cross-checked with the analytical methods to see whether the limits specified are similar to the detection value. This should be the case, assuring that no unnecessary exposure takes place.

The EHD also addresses the issue of single-use versus re-usable drinking equipment. The suggestion to include a note under the heading of “Single-use feeding teat...” saying that “If applicable, single use applications should be replaced as far as possible by re-usable applications, to reduce material use and waste” is relevant from an environmental point of view, but is probably not very fruitful in the context of the standard.

The final suggestion, to add under the clause of sample preparations that “Samples from single-use products shall be tested without pre-boiling of water” is probably based on a misunderstanding because this is what the draft standard indirectly demanded anyway. The requirement that re-usable items are pre-boiled in water simply means that single-use products are not pre-boiled. It does not mean that they are excluded from the tests. The rationale behind this is to remove the surface coating arising from the manufacturing processes which may act as a barrier for migration assuming that re-usable products are pre-boiled in water in accordance with the instructions whereas single-use items are not. However, one could query whether it would not be more reasonable to test both types of products with and without pre-boiling.

3.41 TC 252 - WI 00252024. Child use and child care articles – Cutlery and feeding utensils – Safety requirements and tests

Environmental relevance of the standard

The amount/volume of materials used for cutlery and feeding utensils is low, but the potential exposure of a vulnerable population is high. The environmental impacts are medium and the improvement potential is considered to be relatively low.

EHD comments to the TC

The EHD is pleased to see that the TC deals with dangerous substances in child use and child care articles. However, the EHD asks the TC to give further explanation on a table with “limits of element migration” as well as to limit values for which the source of the values is not indicated.

Finally, the EHD finds that an Annex, “Background and rationale for this standard” could be useful, showing the limit values where negotiated and agreed by the TC 252.

Discussion

The standard is assumed to address among other things migration of dangerous substances from cutlery and feeding utensils.

The comments from the EHD concern the lack of information regarding the source of limit values given in the standard. More important – and of much more value – is the suggestion to include an annex where the limit values negotiated and agreed by the TC are presented with the background and rationale for them. Such an annex could be very useful in many other contexts (e.g. in relation to drinking equipment for children and impact protection helmets) where migration is a potential problem, and it can be seen as an obvious task for the TC to produce this annex. It is noted that the TC seems to be fairly well acquainted with both technical and health aspects related to migration. The EHD could, however, choose to offer its help to the TC, e.g. by specifying test methods with the lowest detection limits.

3.42 TC 254 - WI 00254031-052-053-054-058. Flexible sheets for water proofing – “five different standards”

Environmental relevance of the standard

Being a common product in building construction, the amount of flexible sheets for waterproofing is assumed to be high. The environmental impacts differs from one type of sheets to another, but is considered to be medium, as is the improvement potential.

EHD comments to the TC

The EHD comments focus on the information that can be provided by a product data sheet. The EHD identifies discrepancies between standards for different materials and suggest that a clause on mandatory information is considered for all WI's.

Secondly, the EHD suggests that environmental information is considered as mandatory information, along with information on health and safety. An alternative it is suggested to recommend inclusion of such a data sheet even if no explicit mandatory requirement exists in a given country.

As a perhaps less ambitious alternative, the EHD points to the work performed in WI 00254041, resulting in a preliminary standard for very related products. In this prEN, the user is required to comply with all relevant European legislation and national provisions relating to dangerous substances.

The EHD welcomes the inclusion of a requirement to provide instructions for the consumer how to repair sheets, but identifies that the clause is missing in one of the standards.

Finally, the EHD suggest a normative reference to enable the user of the standard to make a thorough judgement regarding the use of dangerous substances. Accordingly, the EHD suggest a note (!), pointing to Annex 1, subclauses 29-31 of Council Directive 76/769/EEC and to Annex 1 of Council Directive 67/548/EEC.

Discussion

The EHD is aware that this will be limited to mandatory information defined by national regulations. Therefore, it is suggested “to consider the introduction of a recommendation to complete data sheets containing environmental, health & safety information, even if no explicit mandatory requirements in the country exists”.

Such “Environmental and Technical Product Declarations” is seen by the EHD as a proactive element in the IPP and competitiveness for the European construction industry. In our view, the approach is promising, opening for a significant exchange of environmental information in the supply chain. It is, however, also remarked that it is only a recommendation to the manufacturers, and the chances of actually seeing an extensive product information sheet are probably more dependent on requirements from customers than on the recommendation in the standard.

As a less ambitious alternative, the EHD points to the work performed in WI 00254041, resulting in a preliminary standard for very related products. In this prEN, the user is required to comply with all relevant European legislation and national provisions relating to dangerous substances. Moreover, substances are named which the concerned bitumen sheets shall not contain. This normative approach thus provides the user with clear-cut information on both regulatory requirements and voluntary agreements, ensuring that the product does not have any unacceptable environmental properties. If the same approach can be implemented for other materials than bitumen, it can be seen as a great step forward. However, this will require a dedicated effort by the plastics and rubber industry, e.g. in order to identify substances that shall not be contained in the products.

The EHD also welcomes the requirements in WI 00254031 to provide instructions for the consumer how to repair the sheet. The EHD proposes to consider the applicability of this clause in the other standards, and suggests at the same time that a subclause in the other standards regarding storage, installation, use and disposal is included in WI 00254031. Both suggestions are useful, as they combine relevant suggestions in different WI's in order to achieve the best possible consumer information for all products.

In conclusion, the EHD has provided an extensive amount of comments, most of which will be beneficial for the environment if implemented in the standards. It is, however, an open question whether it is possible in practice. The standards will have to comply with the provisions of the

Construction Products Directive (CPD). The coverage of dangerous substances in standards relating to this directive is still under discussion and the Commission is preparing a mandate to this end. A discussion of this complex issue is beyond the scope of the current study.

However, as a matter of principle, a precondition for a successful incorporation of informational requirements into standards suggested by the EHD is that the proposals are precise enough and contains an exact description of the envisaged information to be provided.

3.43 TC 262 - WI 00262086. Metallic coatings – Autocatalytic (electroless) nickel-phosphorous coatings

Environmental relevance of the standard

The amount of metal materials being coated is medium. The environmental impacts are judged to be medium, and the improvement potential is also medium, taking into consideration that there are several processes available with significant differences in impacts.

EHD comments to the TC

The EHD primarily points to the future possibilities to take up environmental considerations concerning the coating processes in the next revision of the standard, including the possibility of writing a general standard based on an IPPC BREF document being under development.

Secondly, the EHD reminds that in terms of the life cycle of products, aspects like the disposal of alloyed products should be considered, too. The EHD therefore suggests to give further guidance on how to re-use or recycle alloyed metals after use.

Discussion

The EHD comments primarily points to a document on Best Available Technology on “Surface treatment of metals” being under development that may be relevant for the next revision of the standards. The suggestion to write a general standard about the processes and their environmental aspects holds many perspectives, not only in relation to the work of TC 262, but for TC’s in general. The EHD could be helpful in the practical implementation of this, provided that the expertise can be found within the budgetary constraints of the EHD.

The second suggestion, to give further guidance on how to re-use or recycle alloyed metals after use will – if implemented in the final standard – also increase the environmental awareness of both producers and consumers of alloyed products. The suggestion is however judged to be of little value as it is. Instead, the EHD could have prepared suggestions for normative requirements, which the TC could have used as they were, or elaborated further.

3.44 TC 267 - WI 00262027. Metallic industrial piping – Part 6: Additional requirements for buried piping.

Environmental relevance of the standard

The amount of buried metallic piping is considered to be medium, and so are the potential environmental impacts. The improvement potential is regarded as fairly low, considering that most processes are well-known, also in environmental terms.

EHD comments to the TC

The EHD focuses solely on coating processes related to buried metallic piping.

The EHD comments first points to a relevant link to another standard dealing with paints and varnishes for corrosion protection of steel structures.

The EHD secondly presents a list of environmental issues relating to surface treatment that should have the attention of the TC. Although not complete, the list is rather exhaustive.

Discussion

Without knowing the overall scope for the TC/WI it is difficult to judge whether the list of issues is targeted to the right TC.

The list of environmental aspects related to surface treatment is only descriptive and the EHD does not provide suggestions for normative requirements other than it would appreciate a detailed guidance on surface treatment and its processes from an environmental point of view.

The only concrete proposal is “Especially a note concerning the preferable use of re-usable blasting substances could prove useful” This suggestion is irrelevant, unless it can be substantiated by findings showing which blasting materials are actually re-usable under different conditions. Based on such knowledge, normative requirements can be established.

3.45 TC 289 - WI 00289055. Leather – chemical tests – determination of chromium VI content

Environmental relevance of the standard

The turnover of materials in chemical tests of leather is low. The potential environmental impacts from Cr VI are considered to be high, and the improvement potential is judged to be medium.

EHD comments to the TC

The input from the EHD points to new developments in the testing area, and suggests to reconsider the detection limit for Cr VI (3 mg/kg instead of 10 mg/kg). Furthermore, the EHD suggest to change the wording of information given to the consumer to reflect the actual results of a test, namely that “no chromium VI is detected”.

Discussion

Both suggestions from the EHD are seen as useful and are hopefully taken into consideration by the TC.

3.46 TC 292 - WI 00292007. Characterisation of waste – Halogen and sulphur content, oxygen combustion in closed systems and determination methods

Environmental relevance of the standard

Has not been assessed, but is probably not very important.

EHD comments to the TC

The EHD comments reflect that they are an element in a process in which the EHD has been previously involved.

In the present iteration, the main focus of the EHD is to give a more stringent language in the standard in form of suggestions for editorial notes, e.g. change “Sulphur content” to “Combustion method sulphur content”.

Also, the EHD welcomes the recommendation given in the draft to avoid the use of hydrazine hydrate as well as the specific safety instructions given in the standard.

Discussion

Without exact knowledge of the scope of this and related standards, it is not possible to judge whether the EHD comments will have any effects in practice. The suggested changes will probably give a more precise standard, but it is questionable whether the EHD should use its efforts in areas like this if the aim is to reduce environmental impacts through standardisation.

3.47 TC 292 - WI 00292014 and 0032. Characterisation of waste – Calculation of dry matter by determination of dry residue or water content (014)/ leaching behaviour test – Part 1: ANC test (032).

Environmental relevance of the standard

Not assessed. The standard addresses a “high-volume aspect” but the turnover of materials in using the standards is low.

EHD comments to the TC

The EHD comments on the choice of reagents and points to the possibility of adding a table with different options and their accuracy of measurement. Furthermore, the EHD suggests to include a note in the clause procedures, saying that “Solvent residues should be recovered after use (e.g. re-distillation)”.

Discussion

The proposal to add a table with accuracy data for different solvents is seen as somewhat impractical and out of line with normal requirements in standards for tests. If the test method, azeotropic distillation with toluene, is seen as problematic and other test methods of equal suitability are available, the latter should be the reference method.

The suggested discussion on the appropriate level of accuracy in measurements can reveal whether it is possible to find a better test method from an environmental point of view.

The note calling for re-use of solvents will have very limited effect, being only an informative note.

3.48 TC 292 - WI 00292025 & 026. Characterization of waste – Terminology Part 1 & Part 2.

Environmental relevance of the standard

Not assessed.

EHD comments to the TC

The EHD gives in its comments a number of corrections to the definitions proposed by the WI's.

Discussion

Its comments given are obviously of value to the TC/WI, but it is surprising that the draft is of such a poor quality that the help from the EHD is needed to such an extent.

3.49 TC 293 - WI 00293026. Remote control systems

Environmental relevance of the standard

The amount of remote control systems covered by the standard is probably low. However, the standard could be a key element in the production of electric and electronic equipment with reduced environmental impacts. The seriousness of the environmental impacts is regarded as medium and the improvement potential is likewise medium.

EHD comments to the TC

The EHD comments on a number of specific issues:

“Migration of hazardous substances” is in practice related to brominated flame retardants, recommending to “check whether polybrominated biphenyls and polybrominated diphenyl ether are used in remote control systems and to recommend to substitute them by other substances”.

A second comment concerns marking of packaging materials in order to provide the user with guidance how to dispose of it in an environmentally sound manner.

A third comment regards that it should be a requirement that “detailed information on the replaceability of components if this is not already common working practice which is described in service manuals” should be included in the information needed to install and maintain the equipment, and supplied by the manufacturer.

Fourthly, the EHD mentions that several alarms being activated at the same time might cause a considerable noise level – a problem which should be addressed in the relevant clause, audibility.

As the fifth point, the HED suggests a normative addition to the clause “labelling”, namely that the manufacturer “shall provide information

concerning integrated batteries which should be removed prior to disposal of the device”.

Finally, the EHD stresses that flame retardants and batteries are the main concern at the end of life of the products, also relating to emissions to air, water and soil, and suggests to include a note reflecting this.

Discussion

The EHD comments in this case on a standard that covers a huge variety of applications, each product being produced in limited numbers. However, as rightly argued by the EHD, the standard is a good occasion to promote good environmental practice to manufacturers and users.

The comment on migration of hazardous substances can be seen as either a recommendation to the TC to check whether it is relevant to include informative notes or clauses in the standard, or it can be seen as a recommendation to the manufacturers to check their product specifications prior to production. In both cases, it would have a much larger effect if the EHD could suggest a normative reference to a limited use of such substances instead of a general note saying that “flame retardants should be chosen which are considered safe for health and environment”, which is without any effect. A normative requirement could be similar to that used in the contexts of chemicals, saying that “flame retardants that shall or may be classified as “R XX”, etc” should not be used in remote control systems”. Guidance and examples of requirements can be found in eco-labelling criteria, and can also be extended to include heavy metals as well.

It is noted that in the final standard, the EHD comments regarding flame retardants have been taken into consideration by specifying that “Wherever possible, the use of flame-retardant materials, which are considered safe regarding health, safety and the environment should be used”. Obviously, the wording is meaningless, unless criteria regarding the classification of flame retardants is an integral part.

With respect to packaging, it should be possible to establish a normative requirement, e.g. that “packaging materials shall be marked according to relevant standards (EN ISO 11469 for plastics, EN ISO XX for ... , etc). It should, however, not be the focus the comments to this specific standard, taking into consideration that the amount of packaging is very small in the overall picture.

The suggestion to provide information concerning integrated batteries, which should be removed prior to disposal, is seen as normative, although the effect in practice probably will be limited.

The comment on requirements regarding noise levels for alarms is seen as superfluous. It is acknowledged that alarms may produce much noise, but the consideration that several alarms being activated at the same time could cause a considerable noise level, is perhaps to emphasize potential noise problems on the expense of the functionality of the product.

In the final comment to End of life considerations, the EHD points to hazards following incineration of flame retardants and batteries. Obviously, disposal of electric and electronic equipment is becoming a pronounced

problem all over the World, and a dedicated effort by the EHD in this area could be useful in many future standardisation activities. It is, however, outside the scope of the present review to propose an operational solution.

In conclusion, the EHD probably misses one of the good opportunities to include normative requirements regarding flame retardants in standardisation. The outcome of the suggestions as reflected in the final standard should be considered closely by the EHD: Is this the best way of handling such substances from an environmental point of view? Well-prepared normative requirements can be re-used over and over, and it is therefore suggested that future efforts of the EHD focus on the details of “essential” aspects, instead of trying to cover a wide range of aspects in much less detail.

3.50 TC 297 - WI 00297007. Free standing chimneys – Part 7 Product specifications of cylindrical steel fabrications for use in single wall steel chimneys and steel liners.

Environmental relevance of the standard

Not assessed.

EHD comments to the TC

In its comments, the EHD primarily points to the lack of documents dealing with planning of chimneys with regard to the plume of smoke and the distribution of flues gas in the closer environment of the chimney. The EHD therefore proposes to take up this aspect in future standards, including calculation and planning methods.

As a second comment, the EHD suggests to include information about the possibilities for disposal/recycling of the construction materials, preferably as normative requirements.

Discussion

The first comment regarding planning of chimneys in relation to distribution of flue gas and the smoke plume in the closer environment of the source makes good sense. Also, reference is given to relevant documents that the TC can consider.

The second proposal, to include information about possibilities for recycling of construction materials and/or their disposal is of little or no value. The EHD does not give any indication of how this can be done or what kind of knowledge will be relevant, e.g. in the form of creating an overview of the relation between contamination levels and recycling possibilities. This information – or some of it – may be found in other contexts, and the EHD would do both TC 297 and other TCs dealing with construction materials a favour in establishing such an overview.

3.51 TC 306 - WI 00306015. Lead and lead alloy – Scrap – Terms and definitions

Environmental relevance of the standard

Not assessed. With lead being a main pollutant, all efforts to minimize its distribution in the environment are important.

EHD comments to the TC

The EHD gives a number of specific comments relating to characterisation and definitions of lead waste, e.g.

- Suggestion to explicitly refer to specific regulations and directives in the standards. These documents are identified by the EHD.
- Consider if lead glass should be included
- Suggestion to make more precise definitions, e.g. new and old scraps, traction vehicle batteries and flue dust
-

Discussion

As for other definition standards, the EHD provides relevant and significant input regarding terminology. Again, the reviewer finds it strange that the input is necessary, taking into consideration that it is assumed to be experts that prepare the standards.

3.52 TC 309 - WI 00309065. Footwear – ecological criteria – Requirements and test methods

Environmental relevance of the standard

The amount of footwear being produced is medium, the potential impacts are medium to high and so is the improvement potential. It is therefore of special interest to see a draft standard that deals with ecological criteria.

EHD comments to the TC

The EHD comments on a number of environmental aspects, related to both the overall life cycle concept, terminology, and testing.

Firstly, the EHD points to inconsistencies in the terms chosen for the life cycle activities and mentions that distribution and packaging also should be addressed.

Secondly, the EHD suggests to include normative requirements concerning azo dyes, similar to those in the EU ecolabel criteria or alternatively Council Directive 76/769/EEC.

Thirdly, the EHD suggests the TC to reconsider the application of a lower limit for heavy metals, similar to the others stated in the standard and the European ecolabel.

Fourthly, the EHD appreciates that hexavalent chromium shall be detected, but points to the fact that the EHD has recommended that a lower detection limit has been proved and quantified without doubt, and therefore should be applied.

Discussion

All the comments from the EHD are meaningful. They also show that previous work can be re-used, e.g. in the case of testing for hexavalent chromium. It is also noted that ecolabelling criteria are used actively, and the reviewer would like to point out that this possibility is also available for many other standards, although not as obvious as in this case.

The reviewer has only had access to one part of the draft final standard, dealing with test methods for the assessment of ecological criteria. It is not possible to see the actual requirements regarding e.g. azo dyes, heavy metals and hexavalent chromium. It is, however, possible to see that the suggestion to use the lower detection limit for hexavalent chromium (3 mg/kg instead of 10 mg/kg) has been followed. The suggestion to change the accompanying wording to “hexavalent chromium not detected” has been followed.