# EU ECOLABEL FOR TEXTILES AND BED MATTRESSES

BEUC and EEB comments on the criteria proposal to be voted on 22 November

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# Summary

The European Commission has presented two proposals on Ecolabel criteria for Textiles[1] and Bed Mattresses[2] to be voted by Member States on 22nd of November. This position paper includes final comments to the criteria documents.

EEB and BEUC acknowledge that improvements have been made to the criteria proposed for textiles, taking into account some of the comments that EEB and BEUC provided on 5th of July. However, we consider that important changes are still needed so that NGOs can endorse the proposals for textiles and bed mattresses.

EEB and BEUC acknowledge progress in the criterion for the origin of the cotton in textiles, as the revised proposal provides better guarantees for restricting the use of most harmful pesticides in the entire share of cotton used. However, EEB and BEUC still consider that promoting the use of organic cotton is more consistent with the objectives of the EU Ecolabel than the use of IPM cotton[3], and recommend to request 100% organic cotton for at least clothing for babies, T-shirts, nightwear, underwear and socks. We also suggest to introduce a requirement for the origin of the cotton in the case of bed mattresses.

EEB and BEUC demand additional restrictions for hazardous chemicals including perfluorinated compounds, nanomaterials, phthalates (textiles and bed mattresses) and biocides (bed mattresses).

EEB and BEUC recommend that textiles and bed mattresses impregnated with hazardous flame retardants are not awarded the EU Ecolabel. In addition, EEB and BEUC strongly oppose the derogation granted to Antimony Trioxide for its use as flame retardant synergist in textiles and bed mattresses. This substance may cause cancer (H351) and the derogation is not justified when safer alternatives are available.

[1] http://susproc.jrc.ec.europa.eu/textiles/stakeholders.html
[2] http://susproc.jrc.ec.europa.eu/mattresses/stakeholders.html
[3] Cotton grown according to the Integrated Pesticides Management principles.

**Origin of the cotton (textiles and bed mattresses)**

EEB and BEUC appreciate the work that has been done by the JRC to integrate the manifold comments regarding this essential criterion in the EU Ecolabel for textiles. We acknowledge that progress has been made to restrict the use of pesticides in all the cotton used. The approach to split the product group in more simple and more complex textiles and adapt the cotton requirements accordingly is innovative and may be a transitional solution to allow for major flexibility and to increase applications.

Nevertheless, EEB and BEUC still consider that promoting the use of organic cotton is more consistent with the goals of the EU Ecolabel as a voluntary tool of environmental excellence. In this respect, we recommend that the split of the product group allows for setting a criterion for 100 % organic cotton in clothing for babies less than 3 years old, T-shirts, nightwear, underwear and socks. EEB and BEUC recommend to include in the statement accompany the decision a reference that during the next revision it will be considered to set more ambitious demands for organic cotton.

Bed mattresses

EEB and BEUC recommend to include a criterion on the origin of the cotton for bed mattresses.

Since the yarns used for such casing are coarser, there is hardly any competition between the fibre types for textiles and mattress casings, because the latter one can be made of shorter staple lengths.

**Flame retardants (textiles and bed mattresses)**

The EEB and BEUC strongly recommend that products that are impregnated with hazardous flame retardants to meet fire safety standards are not awarded the EU Ecolabel, as they should not be labelled as green products of environmental excellence. Fire safety is needed but hazardous substances that may affect human health and the environment should be avoided in EU Ecolabel products, and in particular given that safer alternatives to meet the requirements are available. In this respect, EEB and BEUC recommend the introduction of a wording similar to the Blue Angel requirements for textiles requiring that:

The flame-retarding effect should preferably be achieved by use of flame-resistant fibres or by means of the fabric structure.

This specification could accompany the derogation conditions for flame retardants, so that the manufacturer should justify that for the specific application under consideration these alternatives are not available.

Furthermore, EEB and BEUC is strongly against the derogation granted to antimony trioxide. Antimony Trioxide is a classified substance which may cause cancer (H351) and has only relevance as synergist in combination with aromatic flame retardants. According to article 6.7 of the Ecolabel Regulation, derogations shall be adopted when it is not technically feasible to substitute hazardous substances as such, or via

de use of alternative materials or designs. However, less hazardous alternatives are available for textiles applications and for bed mattresses as concluded by different studies such as ENFIRO[i]. Alternatives include flame inherent fibres, intumescent systems or fabric structure design.

The derogation may be inconsistent with the Ecolabel Regulation as it disregards the existence of safer alternatives and could be contrary to the aim of the EU Ecolabel to promote products which avoid use of harmful substances and are inherently safer through the entire life cycle, including workers exposure.

In addition, exposure to antimony trioxide from consumer products during the use phase may be critical. The most common pathways are dust and liquid migration from consumer articles so when we tear and sweat we may be directly exposed to antimony trioxide. Although levels of exposure to antimony trioxide from textiles vary in different references[ii], the risk for humans in direct contact with certain consumer products such as mattresses, where we spend at least 30% of our lives, cannot be excluded.

**Biocides (bed mattresses)**

EEB and BEUC strongly recommend to further restrict the use of biocides that are used to impart a primary biocidal function to the bed mattress, e.g. antibacterial or odour-inhibition function. As bed mattresses for medical devices are excluded from the scope, this should not be a problem, considering that the Ecolabel focusses on bed mattresses as article of daily use which do not need any specific health properties. We suggest to add the following wording:

*"Bed mattresses shall not be treated with biocides in order to impart a primary biocidal function, e.g. antibacterial or odour-inhibition function".*

For material preservation, we can endorse the requirement that the biocidal active substances must be approved for such purposes according to the Biocides Regulation (EC) No 528/2012 AND criterion 10 on hazardous substances shall be respected. However, nanosilver and other substances that can cause bacterial resistance like silver should be excluded. The main biocidal ingredients used in textiles and bed mattresses are silver and silver-ions.

Biocides are by definition hazardous substances and there are scientific concerns that these substances may increase the resistance of bacteria (as concluded by the Scientific Committee on Emerging and Newly Identified Health Risks[4]) which may consequently put human health at risk. The website on effects of biocides on antibiotic resistance established by DG Health and Consumer Protection[5] based on the SCENIHR opinion points out that "the possibility that the use of biocides could lead to the development of antibiotic resistant bacteria has already been indicated by several laboratory studies" and that "biocides could pose a direct threat to

[4] SCNIHR, Effects of the Active Substances in Biocidal Products on Antibiotic Resistance, 19 January 2009.
[5] Link to website "Effects of Biocides on antibiotic resistance": http://ec.europa.eu/health/opinions/en/biocides-antibiotic-resistance/index.htm

human health if they lead to the survival of some harmful bacteria which are resistant to antimicrobial products". A current scientific review concluded that "the potential for bacterial resistance to silver (in any of its forms) seems to be of the greatest concern"[6].

EEB and BEUC strongly call for the exclusion of nanomaterials in general and nanosilver in particular. The latest should be possible at least to achieve similar criteria as those set for the EU Ecolabel for textiles.

**Nanomaterials (bed mattresses and textiles)**

Considering existing concerns on potential hazardous properties of nanomaterials, methodology gaps to assess their safety, regulatory loopholes and the large use of nanoparticles in textiles[7], EEB and BEUC strongly call for restricting the use of **nanomaterials** until a proper toxicological and ecotoxicological assessment framework for nanomaterials is in place and the manufacturer can prove that the substances have been adequately assessed and are safe for the environment and health.

References provided in earlier comments[8] show evidence that nanomaterials are used in bed mattresses. Although the use may be less broad compared to textiles, based on the JRC analysis, EEB and BEUC recommend to apply the same above proposed restrictions to bed mattresses.

**Perfluorinated chemicals (textiles and bed mattresses)**

EEB and BEUC welcome the restriction of perfluorinated carbon treatments to achieve water, stain or oil repellency in the Ecolabel for textiles.

We strongly recommend to further restrict the use of **fluorinated surfactans** in textiles and bed mattresses, by avoiding the use of C4 perfluoroalkyl-sulfonates and C6 perfluorocarboxylic acids, as we do not see core functions of textiles hindered by their non-use and feasible non fluorinated alternatives for surface treatments exist[9]. Furthermore, EEB and BEUC would like to raise two major concerns to avoid the use of this chemistry in EU Ecolabelled products:

[6] Reidy B., et al. (2013): Mechanisms of Silver Nanoparticle Release, Transformation and Toxicity: A Critical Review of Current Knowledge and Recommendations for Future Studies and Applications. Materials 2013, 6, 2295-2350;

[7] See articles: http://www.nanowerk.com/spotlight/spotid=19451.php; http://www.azonano.com/article.aspx?ArticleID=3129 and Danish Eco Council database: http://nano.taenk.dk/products

[8] See EEB and BEUC comments on bed mattresses from 5th of July. http://docshare.beuc.org/Common/GetFile.asp?ID=45459&mfd=off&LogonName=Guesten

[9] References for alternatives to perfluorinated chemicals: http://www.norden.org/sv/publikationer/publikationer/2013-542 http://www.oecd.org/ehs/pfc/ http://www.subsport.eu/wp-content/uploads/2012/11/UNEP-POPS-POPRC.8-INF-17.English.pdf

- There are no pure short chain PFCs in reality[10]. Technical PFC preparations integrate cocktail of fluorocarbons from C4 to C10 and in some cases higher homologues.
- All perfluorinated PFCs indicate some degree of toxicity, as shown in the report: Per- and polyfluorinated substances in the Nordic Countries. Use, occurrence and toxicology[11]. Although a further need for more in-depth studies is acknowledged, there are sufficient indications to avoid the use of these substances in EU Ecolabelled textiles.

Finally, as regards coatings of membranes in textiles, EEB and BEUC would recommend to further avoid the use of higher homologs and related PFOA substances. There are membranes on the market that are made of mikropourus polyurethane and not polytetra fluoroethane (PTFE) that do not contain PFOA and higher homologues.

**Phthalates (textiles and bed mattresses)**

EEB and BEUC would recommend to expand the list of phthalates restricted for use in coatings, laminates and membranes in textiles to include also DINP and DIDP.

As regards the phthalates that shall not be used in any plastic accessories in textiles, we do not support the differentiation made with DINP and DIDP, which should be restricted for all type of Ecolabelled textiles.

DINP and DIDP should be restricted for all bed mattresses and not only for baby mattresses.

**Interpretation of derogation framework under article 6.7 (textiles)**

EEB and BEUC call for the deletion of the following wording used in several requirements of the proposal for textiles, as it is not consistent with article 6.7 of the EU Ecolabel Regulation:

*Art. 13 (b)*

*No derogation shall be given concerning substances that meet either of these two conditions (…) unless there is no alternative that can provide the same technical function or the product has a significantly higher overall environment performance…*

*Restricted Substance List (reference (f)(i) page 49)*

*Unless there is no technically and economically alternative available that can provide…*

END

[10] As indicated by Stefan Posner, co-author of the Nordic report on Per- and polyfulorinated substances.

[11] http://www.norden.org/en/publications/publikationer/2013-542

[i] Studies on alternatives to Antimony Trioxide:

- The ENFIRO project (funded by the European Commission) has identified intumescent systems as safer alternatives to ATO/BFR. The ENFIRO project successfully applied intumescent systems based on Ammonium Polyphosphate, Melamine Polyphosphate and Pentaerythritol on coated textiles as a "dispersive paint" that dried and had good bounding to the textile. Neither of these chemicals are classified as they were assessed as safer than the combination of ATO/BFR. No leaching of the intumescent compounds in the coated textile studied was seen, evaluation the risk scenario as not critical. In the ENFIRO project we assessed a wide range of parameters, technical toxicological, environmental etc. One very important parameter is smoke release. During the research it was found repeatedly that the smoke release was substantially higher and dense for textiles treated with ATO/decaBDE than for textiles treated with intumescent systems where almost no smoke was released at all. This is significant since it is critical in a real fire if the smoke release is substantial in the try to rescue lives. It is also a very important argument not to use ATO/decaBDE of similar aromatic brominated flame retardants where ATO works as a synergist.

  http://www.enfiro.eu/
  http://cordis.europa.eu/result/report/rcn/56829_en.html
  http://www.bfr2013.com/upload/abstract-download/2013/Poli/11266_BFR2013%20-%20abstract%20Leonards.pdf

- Other studies provided in earlier comments by EEB and BEUC describe the use of fire barriers or intumescent systems, flame inherent fibres and combination of fibres are:

  *Decabromodiphenylether: An Investigation of Non-Halogen Substitutes in Electronic Enclosure and*
  *Textile Applications (2005: p.42-43)*
  http://www.sustainableproduction.org/downloads/DecaBDESubstitutesFinal4-15-05.pdf

  This study provides a good overview of the use of flame resistant fibres and flame resistant fibres in different types of applications. According to the conclusions the International Sleep Products Association (ISPA), which represents a number of U.S. manufacturers, all of ISPA's members are using fire-resistant barriers made from synthetic fibres and thereby avoiding the application of fire-retardant chemicals to the filling material.

  Posner, S 2004 *Survey and technical assessment of alternatives to decabromodiphenyl ether (deca*
  *BDE) in textile applications*
  http://www.kemi.se/Documents/Publikationer/Trycksaker/PM/PM5_04.pdf
  In addition to intumescent systems, flame inherent fibres are described in this studies.

[ii] Studies on exposure to Antimony Trioxide:

- Environment Canada - Screening Assessment for the Challenge Antimony trioxide (Antimony oxide) http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=9889ABB5-1. The so called low level doses that are referred to as not meet the criteria of CEPA are old. New findings point out to a new understanding of low doses that may over time be critical for the recipient especially when exposed regularly and over a long time.
- NIOSH; NOES. National Occupational Exposure Survey conducted from 1981-1983. Estimated numbers of employees potentially exposed to specific agents by 2-digit standard industrial classification (SIC). Available from: http://www.cdc.gov/noes/ (as of Sept 2012). Peer reviewed. Has statistically estimated that 209,773 workers (56,911 of these were female) were potentially exposed to antimony trioxide in the US. Occupational exposure to antimony trioxide may occur through inhalation and dermal contact with this compound at workplaces where

antimony trioxide is produced or used. Use data indicate that the general population may be exposed to antimony trioxide via dermal contact with consumer products containing antimony trioxide (SRC).