Draft revised wording of scope of the restriction on NPE in textiles

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From dossier submitter

In response to the question why NP should or should not be included in the scope of the restriction

As for a vast majority of precursors it is possible that small amounts of NP are found in the finished textile due to degradation of NPE. Studies show that only traces of NP are detected in textiles (Klif 2011, Danish EPA 2013, Greenpeace 2012a). These small quantities are assumed to be negligible compared to NPE and also not included in the calculations in the background document.

NP was included in the scope in the BD to be consistent with the current restriction in Annex XVII entry 46, which the DS now understands is not necessary.

Moreover, it is not clear if NP will be included in the up-coming CEN-standard and if not it may imply a need for additional analysis when testing for NP. Testing any textile articles for both NP and NPE by separate analysis would most likely result in higher compliance control costs. Given the low concentrations of NP detected in textiles, the proposed limit value of 100 mg/kg textile would likely not contribute to the risk reduction capacity of the restriction – but it could cause extra costs of compliance control which does not appear proportionate.

Therefore the DS believes it is logical to exclude NP from the scope. The background document would then have to be revised in all sections were NP is mentioned to be in the scope of the restriction.

Draft revised wording of scope

In response to the Draft Forum advice, which asked for definitions for textile clothing, fabric accessories and interior textile articles, and having NP removed from the scope of the restriction. Section A.1.2 in the BD may appear as below. If this revised scope is judged appropriate as basis for RAC/SEAC opinion-making, the corresponding revisions will be made throughout the background document. The revisions, compared to the BD delivered 31 Jan 2014, are shown as track changes.

A.1.2 Scope and conditions of restriction(s)

Based on the justifications summarised in section A.2 the following restriction is proposed regarding ~~nonylphenol and~~ nonylphenol ethoxylate in textile articles. The article group "textile articles" shall comprise[1]:

a) Textile clothing and accessories clothing and accessories consisting of at least 80% by weight of textile fibres in a woven, non-woven or knitted form. The latter shall include handkerchiefs, shawls, scarves and bags;

b) Interior textiles: textile articles for interior use consisting of at least 80% by weight of textile fibres in a woven, non-woven or knitted form,

~~a)~~

Kommentar [DL1]: This would respond to the Forum comment about raw, semi-worked, semi-manufactured or semi-made-up textile articles. Not that the condition 'that can be washed in water' still applies.

~~Textile clothing, fabric accessories and interior textile articles~~ that can be washed in water. These textile articles shall not be placed on the market 60 months after entry into force of the restriction if they contain ~~nonylphenol or~~ nonylphenol ethoxylate ~~alone or in combination~~ in concentrations equal or higher than 100 mg/kg textile. The limit value includes prints on the textile articles covered by the proposed restriction since the printed surface can be seen as an integrated part of the textile material itself. Textile prints in this context means colour pigments applied on the textile by different printing techniques such as e.g. block printing, flat printing, rotary printing or gravure.

~~The proposed restriction covers nonylphenol and nonylphenol ethoxylates and is thus in consistence with the current restriction in REACH Annex XVII, Entry 46.~~

The standards adopted by the European Committee for Standardisation (CEN) shall be used as test methods for determining the content of nonylphenol or nonylphenol ethoxylate for demonstrating the conformity of the restriction. There will be at least one CEN standard available when this proposed restriction entries into force. For instance there is an ongoing work to develop a new CEN standard for textiles to detect and quantify APEOs (Posner 2012).

A proposal for an addition in REACH Annex XVII, Entry 46 in is compiled in Table 1.

In the RMO and in the Registry of Intention a restriction covering nonylphenol and nonylphenol ethoxylate in textiles and leather articles was announced. Since leather articles are not normally washed in water, the release to the waste water from this source is very limited. Leather articles are therefore not included in the restriction proposal.

~~Although nonylphenol (NP) is not used in the manufacturing of the textile it could be unintentionally added to the textile as a contaminant in low concentrations from the degradation~~

[1] Similar to the definition proposed in Article 1.1 a-c in criteria document (final clean version for EUEB vote) for Commission decision of XXX establishing the ecological criteria for the award of the EU Ecolabel for textile products (available at http://susproc.jrc.ec.europa.eu/textiles/whatsnew.html)

~~of nonylphenol etoxylates in the manufacturing process.~~ Nonylphenol ethoxylate (NPE) could be unintentionally added to textiles during the manufacture process by using contaminated water in the washing processes, by leakage from lubricants in the process equipment or by contamination by other fabrics during transport or storage. The limit of detection in analytical methods used to determine the content of NPE in textiles is 1 mg/kg. However, in order to balance the need for a reduction of the discharge of ~~NP/~~NPE to the environment and to ensure a margin between intentionally and unintentionally added ~~NP/~~NPE to the textile but also to avoid a conflict with the current REACH regulation (Annex XVII, Entry 46) which allows the use of 0,1 % ~~NP/~~NPE in the textile processing, the limit value 100 mg/kg textile is proposed (see section E.2.1.2). Depending on the function of the NPE in the manufacturing of the textile the length of the chain varies. Short-chained (< 10 ethoxylates) NPE are used as detergents in different steps of washing. NPE with chains of medium length (between 10 and 30 ethoxylates) are used as emulsifiers e.g. during the dying process (see section C). The test methods used thus need to have the capacity to analyse chain lengths of NPE up to and including 30. There is an ongoing work to develop a new CEN standard for textiles to detect and quantify APEOs adressed “Detection and determination of APEO in textiles by HPLC-MS” (Posner 2012).

The definition of textile articles within the scope of the restriction is based on the definitions used in the proposed criteria document for Commission decision establishing the ecological criteria for the award of the EU Ecolabel for textile products. The EU Ecolabel criteria document has been developed through extensive stakeholder consultation and targets the most significant consumer facing textile products. The textile articles defined above are judged to correspond well to the types of textiles that have been found in this report to contribute to the emissions of NP/NPE.

The wording textile is a wide and dispersive term which includes all kind of textile materials. Since the main route of discharge to the environment of NPEs in textile articles is by washing in water, the proposal for restriction is therefore limited to apply only to textile articles that can be washed in water i.e. textiles that due to its content of fibres, shape and/or size are washable in water. The proposal will thereby not affect suppliers of textiles not washable in water. Examples of textile articles comprised by the restriction are given in a non-exhaustive list in the proposal for an extended scope of REACH Annex XVII, Entry 46. The examples and the specification of the scope applying to textile clothing, ~~fabric~~ accessories and interior textiles market are further elaborated in section E. 2.1.

Technical textiles are included by the proposed restriction if they are submitted to washing in water and hence contribute to the release of NPE to waste water. Technical textiles are however a heterogeneous group of textiles of which primarily Clothing textiles and Sports textiles are assumed to be washed in water (see section B 9.3.4.1 “Technical textiles manufactured in the EU“).

A transitional period of 5 years is proposed enabling the market to adjust in terms of possibility to place on the market articles in stock, inform and educate EU-suppliers as well as non EU-suppliers about the regulation and establish a system for control of compliance. The non EU-suppliers will
during this period have time to test and implement alternatives also in applications where the replacement of NPE by suitable alternatives not yet is in place (see section E.2).

Since NPE is a non-ionic surfactant, easily dissolved in water, most NPE is likely to be washed out after repeated washing, regardless type of textile (Månsson et al. 2008). In the light of a transition period of 5 years, used textile articles that enter the "second hand market" could be assumed to be washed for a couple of times and thus have a content of NP/NPE below the limit value in the restriction. Taking this into account the proposed restriction is not assumed to imply any consequences for the sale of textile articles on the "second hand market". A need for a derogation covering textiles sold on the "second hand market" is therefore not considered as necessary.

~~In order to facilitate the interpretation and the practical application, the proposed restriction includes a definition of the term "textile articles" as meaning textile articles defined in article article 3.1 a–f of the REGULATION (EU) No 1007/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 September 2011 on textile fibre names and related labelling and marking of the fibre composition of textile products. The regulation includes a procedure for the inclusion of new textile fibre names in the Annex II where requirements regarding applications by manufacturers or other persons acting on their behalf for new textile fibre names can add those.~~

Kommentar [DL2]: The reference to the Regulation on textile fibre names and related labelling and marking of the fibre composition of textile products now seems unnecessary given the definitions inspired by the proposed criteria document for EU ecolabel for textile products.

Table 1 Proposal for an addition in REACH Annex XVII, Entry 46 in

Groups of substances	**Proposed restriction**
~~Nonylphenol~~ ~~($C_6H_4(OH)C_9H_{19}$)~~ Nonylphenol ethoxylate ($(C_2H_4O)_nC_{15}H_{24}O$)	1. Textile ~~clothing, fabric accessories and interior textile articles,~~articles (textile clothing, accessories and interior textiles) such as: tops underwear, nightwear, hosiery bottoms jackets dresses suits gloves sportwear swimwear scarves, shawls, ties and handkerchiefs bags curtains

	bed linen table linen towels blankets, throws, mats and rugs that can be washed in water shall not be placed on the market after [insert date 60 months after of entry into force of this Regulation] if they contain these substances alone or in combination in concentrations equal or higher than 100 mg/kg textile. The limit value includes prints on the textile articles mentioned above. 2. For the purpose of this entry 'textile articles" shall mean a) Textile clothing and accessories clothing and accessories consisting of at least 80% by weight of textile fibres in a woven, non-woven or knitted form. The latter shall include handkerchiefs, shawls, scarves and bags; b) Interior textiles: textile articles for interior use consisting of at least 80% by weight of textile fibres in a woven, non-woven or knitted form; ~~textile products as defined in: Article 3.1 a–f of the REGULATION (EU) No 1007/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 September 2011 on textile fibre names and related labelling and marking of the fibre composition of textile products.~~ ~~2.~~3. The standards adopted by the European Committee for Standardisation (CEN) shall be used as test methods for demonstrating the conformity of the articles in paragraph 1.

A.2 Targeting

The restriction proposal targets ~~nonylphenol (NP) and~~ nonylphenol ethoxylate (NPE) in textile articles (clothing, ~~fabric~~ accessories and interior textiles) ~~articles~~ that can be washed in water in if the concentration alone or in combination is equal or higher than 100 mg/kg textile based on the endocrine disrupting properties of nonylphenol and the combined toxicity of nonylphenol, nonylphenol ethoxylates and nonylphenol ethoxycarboxylates which typically exist together as mixtures in WWTP effluents and in the environment.. According to the endocrine disrupting properties it is difficult to quantify a safe level for nonylphenol in the environment and therefore also the risks, using traditional risk assessment methods.

NP enters the aquatic compartment directly as NP or as breakdown products from NPE. NP and NPE are released to the waste water from a number of sources of which the release from washing of textiles contributes to approximately ~~half~~ 30% of the estimated amount.

The use of NP and NPE in concentrations equal or higher than 0,1 % is restricted within the EU since 2005 in products for among others the processing of leather and textiles, industrial and institutional cleaning, metal working (if not used in close systems), domestic cleaning and cosmetics (REACH Annex XVII, Entry 46).

NP and NPE are however still used outside the EU as detergents and auxiliaries in the manufacturing of textile articles. According to EU statistics on the import of textiles the annual NP_{equ} release is estimated to approximately 21-234 tonnes from washing textiles annually which corresponds to 53-585 tonnes NPE and an average of 320 tonnes NPE (see section B.9.3.4.1). After imported to the EU, the textile articles will be washed within the EU and the residues of NP and NPE will be released into the environment via waste water treatment.

Other sources contributing to the release of NP and NPE are cleaning agents, plastic products, paints and adhesives. Based on data from the Swedish Product Register[2] the annual contribution from these sources is estimated to 249 tonnes NP_{equ} on an EU level[3] (see section B.9.3.4.2).

[2] The Products Register is a national registry maintained by the Swedish Chemicals Agency (KemI). Companies intending to start an operation in Sweden involving manufacture or import of chemicals are obliged to report this to the Products Register.
[3] Based on population the factor 53 is used for scaling of statistics for Sweden to an EU level.