

EURATEX 2nd contribution to the ECHA public consultation September 2020



Comments for the meeting of RAC and SEAC

EURATEX, the European Apparel and Textile Industry Confederation, wishes to convey its second round of comments on the proposed restriction for PFHxA, its salts and related substances.

- **Essential uses of PFAS across all types of Textiles**

Fine tuning the input provided in May, EURATEX is pleased to share the enclosed Database of information collected with a direct consultation with manufacturers of textiles products through substantial efforts of the EURATEX Members and stakeholder experts.

The Database contains a list 135 entries elaborating on the following points:

- Category: it indicates the type of textiles application as usually identified in the industry, e.g. apparel (including PPE), medical, mobility, industrial, geotextiles etc.
- Use: it indicates typical application as Professional uses, Industrial, consumers or others
- Subcategory-uses: it further details the use and provide examples
- Technical function: it specifies required performances as oil-repellence, water-repellence, flame retardancy, stain-resistance, soil protection
- Comment: it provides additional information and clarification
- Standards / Approvals/Test methods: it specifies which standards must be fulfilled to guarantee the requested performances; test methods and approval procedures may also be included.
- What PFAS: indicates what substances or PFAS-group is used
- What is the minimum concentration of PFAS that is necessary to maintain function (to be in accordance with standards or customer need)

A number of specific questions attempt to investigate companies' experiences with substitution, alternatives, etc. namely:

- “Did you try to substitute PFAS? [...] “
- “Do you have data or other experiences for reduced service life (alternatives)?”
- “Please explain shortly the technic for the waste water management [...] ”

The Database is not exhaustive and it shall be considered as a living document as it is expected to further evolve based on new inputs collected.

The information included in the Database is here referred as essential use as it indicates most (but not all) textile products for which based on the available inputs there is no suitable alternative to the use of PFAS. In the absence of appropriate derogations in the restriction process, these products would not be able to guarantee the requested performances, including those for health and safety, and therefore they would not be produced.

- **Emissions of PFHxA from Textiles**

EURATEX observes that the available estimations of emissions of PFHxA from textiles appear significantly overestimated. This may be linked to general assumptions about the type and quantities of PFAS treated textile products and by an overestimation of PFHxA releases in production process.

Concerning the largest amount of textile products available in the market notably garments, it can be pointed out that apparel products for consumers amount at 647,277 tons EU productions and 2,290,800 tons for extra EU imports, whereas EU-exports amount at 208,782 tons¹.

Regarding PPE products no PPE-specific classification exists in Eurostat, however the official statistics monitor the production, import and export of products which can be impregnated and thus conventionally include PPE and may include some outdoor but also include other treatments unrelated to PFAS such as coating². These data for 2018 indicates the EU production amounted at 50 million pieces (production data in tons not available), and imports from extra EU amounted at 160,191 tons whereas exports amounted at 20,270 tons in 2018 (trade figures in number of pieces not available). Regarding Outdoor products, it shall be stressed that a large part of those provides light-water protection through laminating and coating hence the automatic use of PFAS in this category cannot be assumed.

As regard to use/ consumption of any type of garment, to our knowledge no reliable statistical data exist.

As most consumer goods products would normally not be treated with PFHxA a sound estimation of emission from textiles shall be differentiated based on the type of products and it shall consider the disposal of discarded textiles. On the latter, incineration is a common practice in many member states whereas the revised legislative proposal on waste foresees a binding landfill target to reduce landfill to maximum of 10% of municipal waste by 2030 and a ban on landfilling of separately collected waste. As for textiles waste, the Waste Framework Directive (EU) 2018/851, foresees mandatory separate collection of textiles waste (including discarded garment) as of 31 December 2025.

With regards to production processes, the European textile industry has reached a significant decrease of these emissions by implementing technical solutions through voluntary emission reduction measures in the initial textile finishing. These include reuse of impregnation liquor, separate equipment-rinsing water disposal and others both for PFOA / RS and PFHxA / RS reducing emission from a few grams in 2010 to close to zero. Accordingly, the PFHxA-Emission in initial textile finishing to wastewater, before wastewater treatment, are below 0,020 Kg/a.

Modern low-volume chassis are designed, among other things, to minimise the residual liquors in such a way that only the amount of liquors that is actually required for the desired effect is provided in the chassis. The filling volume is minimised by displacement bodies and low distances of the chassis walls to the fabric. Residual impregnation liquors and if necessary, the first rinsing water are not drained, but pumped into a container and reused or discarded as waste. This system has reduced emissions over 95%.

In the 1990s the wastewater treatment plants connected to textile sites have been subject to intensive surveillance by the authorities regarding fluorinated substances. Despite low thresholds of 300 ng/L the wastewater treatment plants are for several years no topic any more regarding relevant emissions of fluorinated substances. A proposal for best-available technology (BVT) in the context of the BREF process is enclosed (Annex II).

¹ Reference EURATEX Elaboration on EUROSTAT data 2018, referred to PRODCOM codes 14111000- 14391090; for EU-made products average weight per item is assumed of 0,128 Kg

² Reference Eurostat, Prodcome code 14193200: Garments made up of felt or non-wovens, textile fabrics impregnated or coated

ANNEX II

Proposal for best-available technology (BVT) in the context of the BREF process textile industry

Description

Technical solution for the retention of residual padding liquors to avoid emissions into waste water.

Technical description

In the pre-treatment, dyeing and finishing of textiles is often done by impregnating the fabric with a padding liquor. If this liquor contains particularly wastewater-related substances, discharge into the waste water may not be possible. The liquor must then be retained and possibly disposed of. Better and more resource-efficient, however, is re-use provided that the remaining liquor is stable in storage and is not contaminated by lint or dyes.

Modern low-volume chassis are designed, among other things, to minimize the residual liquors in such a way that only the amount of liquors that is actually required for the desired effect is provided in the chassis. The filling volume is minimized by displacement bodies and low distances of the chassis walls to the fabric. This narrow design causes that residual liquors cannot be extracted from above these must be pumped out via the drain. However, the arrangement of the piping, valves and pumps must be designed in such a way that after the pumping and rinsing, no residues remain in the piping, which may contaminate the liquors of the follow-up processes.

Figure 1 schematically shows the arrangement of the pipes and pumps.

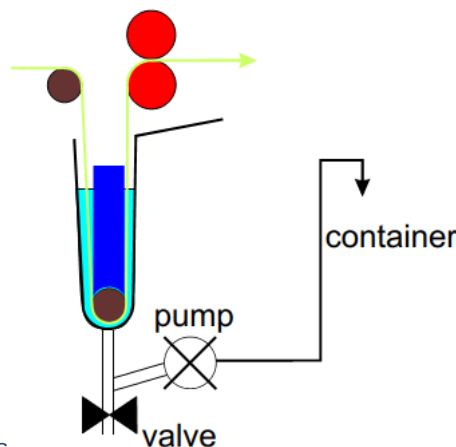


Figure 1 Schematic drawing retention residual liquors

At the end of the process, the pump is switched on and conveys residual liquor and if necessary, the first rinsing water into a container. The pipe piece rising towards the pump prevents that liquor remains in the pipe system which can contaminate the liquor of subsequent processes. when the pump is shutdown. For further cleaning, the pump is switched off and the valve is opened so that the lowly contaminated rinsing water can be drained.

Achievements for the environment

Concentrated, low-volume partial streams can be quantitatively removed from the wastewater stream. The operation for the machine personnel is simple.

Environmental benefits and operational data

Irrespective of the pollutants contained in the liquor, the described technology allows the waste water to be discharged. Depending on the amount of rinsing water used, so an almost quantitative retention of pollutants is possible. In addition, the process is conserving resources, as under certain conditions the separated residual liquor can be re-used for the next process. However, this requires a separate collection of different residual liquors, which is only possible if there is sufficient storage space available for several containers.

Impact on other environmental media

The retained residual liquors are reused or disposed of as waste.

Technical framework conditions for applicability

In principle, the technology is applicable to all padding processes found in the textile industry.

In the case of swing chassis, which are turned to the side for cleaning under the pressing unit and travel a long way, it may be difficult to implement the piping of the pump in such a way that residues do not contaminate the liquors of the follow-up processes. Especially with fixed chassis, the described system is easy to integrate.

Economy

The purchase and installation of the pump and the pipes incurs only low costs, maintenance and operating costs (i.e. electricity for the pump) are low. The reuse of the residual liquors can bring financial benefits for expensive textile agents.

The disposal of the remaining liquors is sometimes associated with considerable costs.

Causes of application

By retenting the concentrated residual padding liquors in low volume flows, pollutants in the waste water can be avoided efficiently.

Literature

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Date of implementation

The technique has been used for over ten years

Comments