

To:

All Lenzing PROFILEN® customers and other interested parties

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Information on PFC (perfluorinated chemicals)

PTFE and Fluoropolymers in general are nowadays sometimes mentioned as environmentally critical chemicals. However, in the discussion different details are mixed up. PTFE as a polymer is highly biocompatible (e.g. used in heart valve manufacturing) and chemically very stable and not soluble in water. So the polymer is considered as not incriminating the environment.

Other Fluor chemicals are soluble in water and therefore used in surface-active substances. (e.g. Paper, leather and textile coatings as well as surfactants). These substances are the ones considered potentially dangerous.

Long chain perfluorinated chemicals (PFCs) are found world-wide in the environment, wildlife, and humans. They are bioaccumulative in wildlife and humans, and are persistent in the environment. To date, significant adverse effects have not been found in the general human population; however, significant adverse effects have been identified in laboratory animals and wildlife. Given the long half-life of these chemicals in humans (years), it can reasonably be anticipated that continued exposure could increase body burdens to levels that would result in adverse outcomes.
(Source: US environmental protection agency; www.epa.gov)

In relation to PTFE (Polytetrafluorethylen), the base of our Lenzing PROFILEN® products, the main concerns are the two PFCs, PFOA (Perfluorooctanoic acid) and PFOS (Perfluorooctane sulfonic acid). PFOS is already forbidden in the European Union and not used in the whole process of our suppliers since several years. PFOA was used in the past in the production (polymerization) of PTFE as emulsifier. Already in 2008 the first one of our suppliers replaced those chemicals in his process by other substances. Today all major PTFE polymer suppliers around the world replaced PFOA in their production processes with other emulsifiers. In our end-products PFOA and PFOS were already in the past not detectable. Today we can say that not only all Lenzing PROFILEN® products are not containing PFOA/PFOS but also the whole supply chain is not using PFOA or PFOS anymore.

See also final report dated 2015 of the joint program of major fluoropolymer producers together with EPA: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/and-polyfluoroalkyl-substances-pfass-under-tsca#tab-3>

Greenpeace started a campaign in 2011 to eliminate the use of PFC in clothing and other textile applications. In the meantime it was communicated clearly from Greenpeace, that PTFE is NOT considered a hazardous PFC.

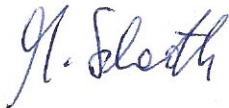
*“Following an intense scientific discussion, Greenpeace and Gore have agreed that there is a distinct set of properties that constitute a PFC of Environmental Concern. Based on these criteria, **PTFE is not a PFC of Environmental Concern.** PTFE is an extremely large stable molecule and is therefore not bioavailable.*

Greenpeace agrees that PTFE is not a source of hazardous PFCs throughout its lifecycle, if made without PFCs of Environmental Concern (e.g. fluorosurfactants) as processing aids and without releases of PFCs of Environmental Concern”

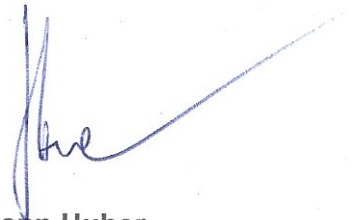
<http://www.detox-outdoor.org/en/faq#gore-commitment>

Today our Lenzing PROFILEN® yarns and fibers are used in class 3 Medical devices because of its excellent biocompatibility and low risk of any even long term effect on the human body. Also in skin contact applications our yarns are tested and used for critical applications of patients with skin diseases. In the technical field, our Lenzing PROFILEN® yarns are often used in food contact applications, also because of its very low contamination risk.

For any further questions please do not hesitate to contact us!



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