



EEA position on the presence of HfO₂ in enamel coatings in contact with drinking water

In August 2021, the Federal Environment Agency (UBA) published the document "Evaluation criteria for enamels and ceramic materials in contact with drinking water (enamel and ceramic assessment criteria)". In this document, a positive list of accepted constituents of enamel composition is given.

Hafnium oxide HfO₂ is not included, and the limit value for zirconium oxide ZrO₂ is 30 m-%.

The raw material zircon used for melting enamels containing ZrO₂, always contains HfO₂. For this reason, an enamel containing 30 m-% ZrO₂ always contains small amounts of HfO₂.

The fact that HfO₂ was not included in the positive list was a mistake, and the EEA is asking that the positive list be updated adding HfO₂.

The most important evaluation criterion for enamel is the leaching test. UBA has already introduced a limit value for the leaching of hafnium from enamel: The leaching limit is 0.1 ppb. Thus, the inclusion of HfO₂ in the positive list does not affect the leaching criteria.

The German Enamel Association DEV, a member of the EEA, has sent UBA the official request for the inclusion of HfO₂ in the positive list of accepted constituents of enamel.

ECHA, the European Chemical Agency, is preparing **European positive lists of starting substances, compositions and constituents**. In the draft document of the EU commission AP7 (b)_Draft 2.IA_annexes, HfO₂, the by-product in the used raw material zirconium oxide, is not included in the European positive lists of compositions of enamels, ceramics and other inorganic materials. Consequently, EEA also requests the addition of HfO₂ in this draft document.

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