

# Materials and products in contact with drinking water:

## Evaluation criteria, proof of conformity and expanded transitional arrangements for plastics and other organic materials due to COVID-19

The evaluation criteria (Bewertungsgrundlagen – BWGL) issued by the German Environment Agency (Umweltbundesamt – UBA) specify requirements regarding the hygienic suitability of materials and substances coming into contact with drinking water. In connection with the coronavirus pandemic, the UBA has expanded the transitional arrangements for the required proof of conformity for products in contact with drinking water.

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**Protecting the health of consumers** is of utmost priority in drinking water supply. This protection must under no circumstances be reduced by the materials used in the abstraction, treatment, storage and distribution of drinking water. All materials in Germany that are in direct contact with drinking water must therefore not adversely affect its odour and taste or compromise the protection of human health, e.g. by releasing more harmful substances than necessary.

These general requirements are laid down in the German Drinking Water Ordinance (Trinkwasserverordnung – TrinkwV) and apply to all materials that are intended to be used in new installations or for repair works or reconstruction in existing installations. However, the Drinking Water Ordinance does not stipulate specific requirements for the different groups of materials since any technical change would have to be subject to the regular and often lengthy procedure of amending the Ordinance. Instead, the Federal Environment Agency (UBA), as the competent federal authority, is authorised to detail the material- or

substance-specific requirements by issuing so-called evaluation criteria (BWGL). The Federal Environment Agency unit in charge of specifying the content of these criteria is the "Drinking Water Distribution" team in the "Drinking Water and Swimming Pool Water Hygiene" department located in Bad Elster, Saxony.

### Requirements are specified in evaluation criteria

These evaluation criteria are prepared for different groups of materials such as metals, plastics or ceramic materials and include test specifications and criteria as well as positive lists of starting substances that are used to evaluate the hygienic suitability of materials. The specifications defined in the evaluation criteria are just as legally binding as the specifications directly stipulated in the Drinking Water Ordinance. To enable product manufacturers and operators of drinking water systems to adapt to possible changes in good time, evaluation criteria only become binding once a transitional period of two years after their publication in the Federal Gazette has passed.

In this context, it must be noted that in Germany similarly strict specifications for materials in the form of guidelines were in place even before the evaluation criteria existed. Test certificates according to these guidelines enable consumers to see that many water-related products meet the strict safety requirements with regard to hygienic suitability. However, these test certificates become invalid from 21 March 2021.

Although at present only the evaluation criteria for metallic materials have become legally binding as their transitional period has ended, this will gradually apply to evaluation criteria for the remaining material groups in the coming months and years as well. **Table 1** summarises the current status of the evaluation criteria.

### No legally binding regulation for product requirements yet

In contrast to evaluation criteria, which only apply to materials, no legally binding procedure for verifying the hygienic safety of products made from these materials and substances

Table 1: Overview of the status of the UBA assessment basis	
Material group	Status evaluation criteria
Metallic Materials	Published, legally binding.
Enamels and ceramic materials	Published, legally binding from 12 September 2021.
Cementitious materials	Not yet published; currently in preparation.
Plastics and other organic materials	Published, legally binding from 21 March 2021.
Elastomers	Not yet published; currently in preparation, will fall in the regulatory scope of the evaluation criteria for Plastics and other organic materials.
Coatings	Published, legally binding from 21 March 2021 (in the regulatory scope of the evaluation criteria for Plastics and other organic materials).
Silicone	Not yet published, transitional regulation.
Lubricants	Published, legally binding from 21 March 2021 (in the regulatory scope of the evaluation criteria for Plastics and other organic materials).
Thermoplastic elastomers	Not yet published; currently in preparation, will fall in the regulatory scope of the evaluation criteria for Plastics and other organic materials.

Source: the authors

## Significant effects of COVID-19

Given the measures required to contain the coronavirus pandemic, in early 2020 the certification bodies were forced to suspend all initial inspections, external monitoring and test specimen collection from product manufacturers until further notice. It was therefore no longer possible to issue attestations of product conformity in accordance with the recommendations of the Federal Environment Agency due to the lack of initial inspections. However, since many products contain organic materials for which binding requirements (evaluation criteria) will enter into force in March 2021, many manufacturers and the accredited certification bodies involved felt that it was no longer possible to issue the required attestations of conformity in due time. This has prompted some industry associations in April 2020 to issue a joint letter calling for legislators to extend the transitional period before the evaluation criteria become legally binding. This proposal was rejected by the responsible Federal Ministry of Health on the grounds that the amendment to the Drinking Water Ordinance required for this purpose could not be implemented in time. Instead, legislators indicated that the Federal Environment Agency would work out an equivalent extended transitional arrangement and present it to the parties involved. In order not to waste any more time, the German Association of Companies for Gas and Water Technologies (figawa) and the VDMA's Valves trade association, together with the certification bodies involved and supported by the DVGW (TZW - The German Water Centre and DVGW CERT GmbH) jointly prepared a proposal for an extended transitional arrangement and discussed it with the Federal Environment Agency in early June 2020. Fortunately, the authorities included the proposals when discussing the required solution, which was then published at the beginning of July 2020. In the amendments published on 10 July 2020, sections con-

has been established yet. Neither at European nor at national level. However, in the coming years a binding procedure is likely to enter into force for the entire European Economic Area in the wake of recasting the EU Drinking Water Directive. In Germany, previous proof of product suitability in the form of voluntary certificates or test certificates will lose their validity once legally binding evaluation criteria are in place. From this point on at the latest, the Federal Environment Agency recommends that manufacturers use a procedure corresponding to the 1+ system from the EU Construction Products Regulation to confirm the hygienic suitability of their products. This recommendation reflects the intended harmonisation within the EU internal market and the effort to have EU-wide regulations in place. The UBA has issued a recom-

mendation for the attestation of conformity of product hygiene suitability for drinking water. In a first step, an accredited certification body (or an accredited inspection body commissioned by it) must carry out an "initial inspection" to check factory production controls and production conditions directly at the product manufacturer. The certification body (or contracted inspection body acting on its behalf) must also take an on-site sample of each product to be assessed. In exceptional cases, a representative test specimen may be produced and subjected to a type test. Only if the products comply with the hygienic specifications and both factory production control and production conditions meet the requirements does the manufacturer receive an attestation of conformity for their product.

cerning COVID-19-related, extended transitional arrangements were added, both in the UBA INFORMATION "Replacement of German Environment Agency (UBA) guidelines by evaluation criteria for plastics and other organic materials in contact with drinking water" (KTW-BWGL Transitional regulation) and in the UBA RECOMMENDATION on the conformity attestation of product hygiene suitability for drinking water. These specify that test reports prepared in connection with issuing KTW test certificates under certain conditions may still be used for assessing the hygienic suitability of products until 21 March 2023. However, such test reports must have been issued after 21 March 2013. This will ensure that an orderly procedure for attesting the conformity of product hygiene suitability for drinking water is possible despite the serious effects of the COVID-19 pandemic.

From the point of view of figawa and the VDMA, it was absolutely necessary to create transitional arrangements for the industry in order to avoid undue hardship, which would have affected small and medium-sized businesses in the drinking water industry in particular.

### Outlook

The EU Drinking Water Directive, which originally came into force back in 1998, is currently being revised with the aim of adapting it both to the current state of the art and to the current political and economic environment. The EU Drinking Water Directive is expected to be adopted at the end of the year after in-depth discussions. This is a further step on the way of replacing with harmonised EU-wide regulations what currently are only national requirements that for the most part have not been harmonized among the EU member states. These regulations are expected to contain specifications for a new and EU-wide uniform marking of products suitable for use in contact with drinking water that will replace or at least supplement the current national markings.

Volker Meyer, figawa's Managing Director and Chairman of the "European Drinking Water" (EDW) industry initiative, sees the industry in particular as having a duty to provide information: "As soon as it is foreseeable what exactly the specifications for such a marking will be, all parties involved must be fully in-

formed, especially the trades and retailers. As a representative of the businesses in Germany and Europe, figawa will play its part in this context."

Gabriele Schmidt, Managing Director of DVGW CERT GmbH: "For products that come into contact with drinking water, the binding regulatory framework in Germany is based on two essential building blocks: the recommendation regarding attestation of conformity of product hygiene suitability for drinking water and the current evaluation criteria. Together with the technical requirements for products in contact with drinking water and their consistency of performance as stipulated in the product-specific standards and regulations, this ensures that consumers can rely on the products certified accordingly. Overall, this is a model that should also serve as a template for Europe." ■

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