Introduction

Water is an invaluable resource and society must take all necessary precautions to ensure accessibility, while implementing the highest health and safety standards. Plastics (and its applications) provide numerous solutions for ensuring a sustainable and safe water supply.

For instance, in high-quality purity applications, plastic pipes are resistant to corrosion, abrasion and chemicals, and inhibit microbiological growth. With long-term durability, plastic pipes protect the environment through leakage prevention. PlasticsEurope and FCA highlight the important contribution of plastics in providing solutions for efficient water management, preservation and sustainable supply.

Migration is a natural and unavoidable phenomenon that occurs in all materials; when two materials come into contact with each other, substances can migrate from one material to another. This also happens with drinking water and all materials used to bring the water from the purification station to individual homes. A thorough risk assessment of substance migration ensures materials used in contact with drinking water are safe.

Materials compliance for a safe water supply

EU regulation on the use of materials coming in contact with potable water is being amended towards harmonisation, while reflecting scientific developments and progress in analytical capabilities. Additionally, strides have been made in transparency on quality standards applied to drinking water with PlasticsEurope, FCA and plastics manufacturers closely collaborating with regulatory bodies.

In Germany, the Drinking Water Ordinance (TrinkwV) and the Bewertungsgrundlage (evaluation criteria) detail the general requirements for materials coming into contact with drinking water. These specify the evaluation criteria and provide guidance for the different materials. Furthermore, to demonstrate the conformity of the materials and products according to the new evaluation criteria for plastics and other organic materials in contact with drinking water (KTW-BWGL), a recommendation document, describing a procedure to certify hygiene requirement conformity for the materials in the product that come into contact with drinking water, is available.

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1 Food Contact Additives (FCA) – A Sector Group of the European Chemical Industry Council (Cefic)
3 https://www.umweltbundesamt.de/sites/default/files/medien/1/dokumente/20200407_ktw-bwgl_1._aenderung_en.pdf
This allows manufacturers to demonstrate that their products meet the requirements of § 17 Section 2 and 3 (TrinkwV) and is aligned with the “1+ system”. This system certifies the conformity of hygiene suitability for a future “CElabelling” and is stipulated in Commission Decision 2002/359/EC. Therefore, the UBA sets forth detailed procedures for technical assessment of the safe usage of materials used in drinking water applications.

When put in practice, this new certification process has been designed for finished articles manufacturers, not raw materials manufacturers. When applied to plastic raw materials, this process becomes complex, lengthy and difficult to implement. Hence, according to the TrinkwV, there is no obligation for an external certification step. In § 17 Section 5, it states that “...it is assumed that products and processes meet the requirements ... if this has been confirmed by a certifying body accredited for drinking water”.

Consequently, in addition to a certification of an accredited certifier, the new regulation also allows a self-monitoring procedure to be carried out by the manufacturer. This procedure includes the same steps as the certification procedure, with the only difference lying in the final document: an external certificate or a self-declaration of conformity shared with the supply chain.

In particular, starting from a certificate or a self-declaration related to the raw polymeric materials used, producers of finished articles falling under groups P1 and P2 will in any case have to go through the whole certification process, including checking that the raw material formulation is compliant with the regulation as well as a full migration and microbiological growth testing. Only finished articles falling under group P3 producers will benefit from a previous certificate of the polymeric raw materials used; however, they only represent a minor group of product manufacturers.

Industry initiative

PlasticsEurope and FCA have developed a template for the self-declaration of conformity, which is in line with the German legal requirements and aims to provide all the information needed to facilitate the certification process of final article manufacturers. This template can be used by plastics and additives manufacturers to provide uniformity and transparency to the public and manufacturers of finished articles coming in contact with drinking water.

PlasticsEurope, FCA and plastics manufacturers continue to ensure the highest quality standards are applied to drinking water in Europe.

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