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Microplastic Consortium presents key findings to IEC toward a standardised measurement method

Brussels, 21 April 2023 - **Today, world's leading standardisation body International Electrotechnical Committee (IEC) met in Tokyo to discuss the key findings of the joint study conducted by APPLiA-led Microplastic Consortium to assess the release of microplastic particles and fibres in household washing processes. This meeting marks a landmark step toward the development of a reliable, repeatable, and reproducible measurement method for household washing machines.**

The Consortium on microplastics release during household washing processes which concluded its roughly 2-year-work in March 2023, brought together 21 signatories ranging from washing machines, detergent and filter manufacturers to test institutes and facilities, with an eye to establish basic elements towards a harmonised test method to measure the behaviour of washing machines and the release of microplastics during a real household washing cycle.

One of the main findings of the study was that intentionally added plastic particles and synthetic fibres to the washing machines only *partially* find their way to the drain. Analyses show a big variability of results even in a laboratory-controlled environment. While the study attempted to bridge the gap between lab and real life, the Consortium faced several challenges in developing a fully repeatable, reproducible, and consumer-relevant protocol. "There are still many parameters of influence and open points to be studied and analysed," explained IEC Convenor and BSH Senior Expert Gundula Czyzewski addressing IEC technical experts. These include the problem of non-synthetic fibre fragments such as wool and cotton, the use of powder detergent and washing machine load amount among others, "that could possibly affect filter clogging and remain an open issue to a comprehensive analysis." Therefore, from the measurements done in the Consortium, it was possible to only calculate a few individual performance factors, triggering the need for further investigation. In this sense, workshop participants convened that standardisation bodies are the right place to continue the discussion for the development of an accurate test procedure that could verify the performance of any solution.

Setting minimum performance requirements on microplastics filters without a repeatable and reproducible method would result in a non-verifiable, ineffective legislation. Concern about the potential impact of microplastics has gathered momentum during the past few years. The number of scientific investigations has increased, along with public interest and pressure on stakeholders. "Understanding the magnitude of the issue is key to ensuring an effective solution," said APPLiA Energy & Environment Policy Manager Giulia Zilla, who was responsible for the coordination of the Consortium activities on behalf of the Association, and contributed to the draft of the final report. The issue of microplastic pollution has escalated the EU political agenda to translate into a number of



different regulations currently being discussed at national and international level. There, the study plays a key role in substantiating the need for the adoption of “a lifecycle-based approach to identify the most cost-effective solution to a global issue.” In this sense, the deployment of washing machine filters into European homes has been identified by some countries as a possible mitigation strategy to microfiber emissions. “While filters can contribute to halting the journey of microplastics before they reach the environment, a more comprehensive and long-term solution, reconsidering the very use of plastics, is needed,” commented Zilla. Mandating the equipping of all household washing machines with a filter does not seem to represent a conclusive solution to tackle the microplastics issue, as fibres will always find their way into the environment, if present in textile products themselves. Before setting any legislative requirements on washing machines, a number of technical considerations must be addressed. Among others, the filter can cause clogging of the machine but what is more, the burden of maintenance to keep the machine running would fall on consumers, from cleaning to replacement and disposal, in order to prevent the rinsing off of fibres in the sink. Even in the case of integrated filters, it would be very problematic to deal with the maintenance of the filter itself while ensuring the best performance of the machine. Research is currently ongoing to evaluate the benefits of EU-wide legislation. A proposal is expected later this year.

While it is difficult to estimate a timeline by when a measurement method could be available to use for the verification of the requirements, **the role of policymakers remains crucial to follow standardisation activities and set measurable targets in the law.** As a next step, the joint study conducted by the Consortium will be reviewed in detail by IEC and used as a starting point to the development of a standardised measurement methodology.

APPLiA - Home Appliance Europe represents home appliance manufacturers from across Europe. By promoting innovative, sustainable policies and solutions for EU homes, APPLiA has helped build the sector into an economic powerhouse, with an annual turnover of EUR 53 billion, investing over EUR 1.6 billion in R&D activities and creating nearly 1 million jobs.

