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Contribution to TRIS Notification 2020/487/L provision 10(1) on Microplastics

Summary

APPLiA would like to comment on the TRIS Notification 2020/487/L (Luxembourg) with regard to Draft Law amending the amended Law of 21 March 2012 on waste. In particular, we would like to raise concern on the provision 10(1) which refers to the obligation of fitting new washing machines with a filter to retain microfibres as from 1 January 2025 onwards. We call for an appropriate discussion at EU level to ensure the well function of the Internal Market and the free movement of goods principle.

1. Free movements of goods principle

Home appliances manufacturers are highly concerned with regard to the inclusion of provision 10(1) in the draft law amending the amended Law of 21 March 2012 on waste in Luxembourg. APPLiA members fear that this requirement will create obstacles and burden that will endanger the free movement of goods within the EU Internal Market.

Our sector strongly benefits from the free movement of goods and the possibility to exchange commodities within EU member states ensuring minimum common requirements that apply in all 27 member states. We are concerned that this provision notified by Luxembourg will create diversification of rules on the market, establishing high burdens for washing machine manufacturers and failing to ensure a fair level playing field for industries.

Lastly, we are highly concerned that the requirements cannot be measurable, reliable, reproducible and therefore, won't be enforceable on the market opening the latter to possible loopholes and circumvention.

We call all the interested parties to preserve and guarantee the well-functioning of the internal market by ensuring an equal level playing field.

2. A close look to microplastic

Researchers have identified about 70 different sources of primary and secondary microplastics. While the origin of these plastics is clear, (e.g. vehicles tyre dust, pellet spills, textiles, building paints, road paints, cosmetics and marine paints), the amount of emissions of microplastics in marine and non-marine environment is still a matter of discussion. An additional element that amplifies the significant complexity to the issue, it is the particle size of microplastics per se (see Figure 1). As a matter of fact, plastics can deteriorate to micro and nano particles making it extremely difficult to assess the quantity of microplastics in the environment.

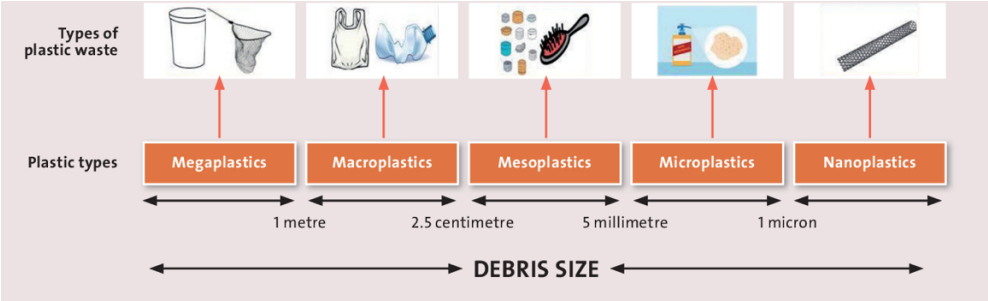

Figure 1. Diagrammatic representation of different types of plastics and their effect on marine organisms

If we specifically look at a single source, the textile contribution to the release of microplastics is still not fully known. Different studies and researches indicate that synthetic microfibres released from textile clothes as a result of washing processes (among others), correspond to a minor part of the overall pollution caused by plastics[1]. Therefore, policy measures targeting the home-appliances sector would not substantially contribute to managing the overall microplastics' issue.

In addition, more recent researches[2] conducted with regular washing machines under conditions closer to real-life demonstrate that the overall release of microplastic fibres in the water may be drastically lower than indicated by many relying on lab tests.

We acknowledge that due to precautionary principle, policy makers feel the urgency for actions. However, as any measure at the same time needs to be proportionate and overall effective, we call for caution in terms of regulation.

In order to guarantee a sound scientific basis for any decision, more research is needed. Therefore, the home appliance (HA) industry has been supporting various publicly funded research projects such as Minshed, RUSEKU, TextileMission.

3. The role of home appliances in the fight against microplastics release

Taking in consideration the full life cycle of textiles, washing and drying are inevitable parts of a textile's use phase. Therefore, APPLiA is aware that the release of microfibers in the environment might be limited by household washing machines and washer-dryers in comparison to the current state of the art.

[1]Such as "Plastics in the Marine Environment", Eunomia, 2016.
[2]Studies conducted for example by M. Sillanpää (2017), C. Jönsson (2018) or F. De Falco (2017)

Nevertheless, since the root cause of microfibers emission is the use of such fibres in textiles, the home appliance industry strongly believes in the necessity of **upstream policy measures** as this approach has been working well in many sectors (i.e. home appliances sector). Otherwise, the burden from the major source of the problem, which is a sector largely located outside Europe, i.e. textile industry, will shift to an industry well-based in Europe.

Although APPLiA acknowledges that microfiber emission reduction technologies such as filtration are in infancy and may overcome problems in due time, there are severe constraints when it comes to the mechanical and maintaining functions of washing machines and washer-dryers (see point 4.2). The **retention measures** such as filtration **will come at an environmental cost**, impacting water and energy consumption, and creating additional waste. Lastly, even by facilitating all necessary communicational and educational resources, it cannot be taken for granted that **consumers** will be willing to change their habits in using washing machines and washer-dryers.

4. Solutions

4.1 Solution on the market

In the last years, several companies developed and put on the market **retrofit filters** and some APPLiA's manufacturers have announced to introduce machines equipped with a filter for microplastics on the market.

However, equipping all household washing machines with a **microfibers filter** does not seem to represent an efficient and solid solution to tackle the microplastics issue, as these fibres are released also at other stages (e.g. production, wearing, storage, line drying phases) and will find their way into the environment through other pathways.

Furthermore, technological development should aim at reducing the emission of microplastics to the environment rather than developing a specific single technology (i.e. a filter). It is the reason why we believe that if there should be a requirement, it must be **technologically neutral** to allow further technological development. Any retention or elimination method that serves the purpose should be in scope for the reduction of microfiber release into the environment.

Finally, in a report for the Swedish environmental authority[3], an **emission limit** has been seen as an alternative requirement to a filter requirement in the Ecodesign Regulation. However, this alternative would work only if measurement standards on the emission of textiles under real washing conditions were in place.

All options need to be very well assessed before concluding the need for a filter requirement introduction.

4.2 Technical side effects of the filter technique

A major issue with the application of specific filters in washing machines is the problem of **clogging**. Clogging can lead to disable the machine to drain the suds causing an interrupted washing process. During the process of laundering, washing machines remove dirt, skin scales and adherent fibres from textiles. The suds can also contain sand, handkerchiefs, food

[3]Brodin et al (2018), Filters for washing machines - Mitigation of microplastic pollution

remainders, natural textile fibres (e.g. cotton sheds a lot) and powder detergent. A filter cannot distinguish between the targeted fibres and all the other suspended solids in the effluent water. Thus, there is a fine line between the mesh size of the filter fine enough to remove the majority of the textile fibres and maintaining operational performance of the washing machine.

Other problems concern the nature of the Ecodesign Directive and its purposes. Not only the efficiency of the filter is yet not fully assessed (it is not practicable and could result in incorrectly disposing of microplastic)[4], but mostly this requirement could result in **burden shifting**. The current ecodesign requirements for washing machines include energy use, water consumption and washing ability. The increase of energy usage due to high pressures needed to pump water through a partly clogged filter is a possible negative synergy effect of the policy instrument and it could conflict with other EU targets in the areas of energy and climate.

Finally, **consumers** would play an essential role in applying the filtering technique. They need to adopt new habits in maintaining their appliances way more often than is necessary today. As a matter of fact, filters would need to be cleaned or replaced regularly, which constitutes a discomfort to consumers and bears the risk of lacking willingness to accept and deploy these filters. Furthermore, replacing filters would imply creating a lot of waste for removing/filtering out a small amount of other waste. Also, handling wet disposable that potentially is likely to produce odour due to fouling, could be an additional element of discomfort for consumers. Moreover, there is no guarantee that consumers dispose of the microplastics properly and do not rinse them off in the sink.

5. Requirements for an effective regulation

It may at first seem appealing to require mandatory filters for washing machines and washer-dryers. However, a filter is a complex component that's installation, operation and maintenance have to be ensured to properly function as intended. **A requirement for filters without the necessary further specifications has a significant risk to miss its intended effect.**

In addition, the functionality of filters will not be possible to be enforced by the authorities without the necessary technical specifications.

If any legislation would be introduced for washing machines and/or washer-dryers, **technical requirements** should be considered. Herewith some examples:

- A performance requirement for filters specifying the filter efficiency in % and a lower limit for the particle size to be removed;
- Specifications relating to possible handling of the filters by consumers (e.g. whether it would be possible to reuse the filter after cleaning it by consumer and therefore, having the risk that the microfibers are rinsed under running water in the sink, or if it shall be required that filters are disposed of after replacing them);
- Consider whether washing machines shall be functional when the filter is clogged;

[4]RISE, ENVIROPLANNING, "Filters for washing machines – Mitigation of microplastic pollution" (link), for The Swedish Environmental Protection Agency, December 2018.

- Consider safety issues by preventing the filter from being bypassed at installation;
- Specification, if the filters should be inside or outside of the washing machines and/or washer-dryer, as external items bear the risk of being removed by consumers at installation;
- Whether the washing machine can operate without the filter cartridge installed in a filter unit;
- Energy efficiency and other performance requirements for washing machines will potentially need to be revised to take the impact of retention solutions into account;
- It should also be noted that currently ecodesign requirements are mainly based on cotton fabric clothes. Before introducing any filtering requirement, it should be fully assessed on what type of fabric this should be applied (e.g. synthetic cycle or others);
- A measurement methodology enabling the measurement of the efficacy of technological solutions for the retention of microfibers and microplastics.

6. Conclusion and APPLiA proposals

As a conclusion, APPLiA would like to provide the following recommendations:

- First and most important, this issue must be discussed at the European level to ensure the best effective results.
- The legislators should have **more clarity** on the magnitude of microplastics emissions to wastewater and natural water bodies before imposing any regulation.
- APPLiA believes that the problem should be first **addressed at the source** – i.e. targeting at the textile sector to influence the way textiles are manufactured or to enable consumers to make informed choices.
- Other and additional policy approaches were the extensive installation of **Wastewater Treatment Plants (WWTP)** all over Europe with sludge incineration. This would help significantly to tackle many more sources of microplastics pollution. The base to this is laid by the urban wastewater treatment directive.
- When considering a policy measure, all the impacts need to be thoroughly investigated (i.e. through an LCA-based approach) in order to assess side effects on costs, energy and water consumption, overall environmental impact and avoid inappropriate consumer behaviour.
- Any **requirement** must be measurable, verifiable and enforceable, ensuring the level playing field.
- Lastly, if the policy makers are willing to regulate washing machines and washer-dryers, APPLiA sees the need for the EU to prepare a **standardisation request to the European Standardisation Organisations**. The manufacturers of home appliances are willing to collaborate in the preparation of such a standardisation request. In the meantime, APPLiA is committed to continue to collaborate proactively in the ongoing relevant standardisation work in CEN TC248 and actively cooperating with CENELEC TC59X.

APPLiA remains committed to engage in future discussions to find efficient solutions to tackle the release of microplastics.

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 44 billion, investing over EUR 1.4 billion in R&D activities and creating nearly 1 million jobs.