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Restriction proposal on intentionally-added microplastics – questions and answers

ECHA's restriction proposal on intentionally-added microplastics is the most comprehensive in the world. As there are many uses of microplastics, it is not proposed to ban all of them immediately as this would have a large adverse impact on society. In these cases, a 'transitional period' for substitution, after the adoption of the restriction, has been proposed based on socio-economic analysis. Transitional periods can be used to align with other regulatory requirements.

This document clarifies some of the points a green NGO has raised about the updates made to the restriction proposal in response to the information gathered during the six-month consultation.

Why was the lower size limit for the definition of a microplastic revised?

The lower size limit was revised upwards from 1nm to 100nm (3 to 300nm for fibres) to ensure that the restriction could be enforced if adopted. A restriction must be considered enforceable before it can be approved under REACH – this is a legal requirement.

The revision in the size limit was done because, during the six-month consultation, stakeholders raised concerns about the initial limits as there were no analytical techniques that could be used to identify, characterise and quantify nanoscale 'microplastic' particles in complex mixtures. To ensure that the proposed restriction can be duly enforced, including in imported mixtures, and after receiving complementary advice from experts at the European Commission's Joint Research Centre (JRC), ECHA proposed to raise the lower size limits.

ECHA considered that this change would have a very limited effect on the effectiveness of the restriction as it had only identified very few uses of microplastics in which the particles are smaller than 100nm. Some applications do exist, but these are not common. It is also important to take into account that ECHA's proposal includes a cut-off based on a particle size distribution with a 1 % weight-by-weight threshold. This means that if 1 % w/w or more of the particles are above the proposed limit, all particles would be considered as microplastics. The following analogy can help grasp the concept: If a basket of 100 balls has 99 tennis balls and one table tennis ball, ECHA would treat it as a basket of table tennis balls. That said, the majority of uses (<100 nm) are likely to fall under the scope of the proposed restriction in any case.

In addition, ECHA, as the dossier submitter, notes that raw materials containing microplastics that are smaller than 100 nm should not be intentionally added to products if they can be reliably characterised. More details are available in the draft background document – starting from page 87.

After evaluating ECHA's revised proposal, the Committee for Risk Assessment (RAC) recommended that no lower size limit is needed as enforcement does not necessarily need to be solely based on the analysis of final products. Further details of RAC's reasoning can be found in its opinion.

The draft opinion of the Committee for Socio-economic Analysis (SEAC) recommends a *temporary* lower size limit of 100 nm to make sure the restriction can be enforced immediately. This draft opinion is under consultation until 23:59 Helsinki time (EET) on 1 September 2020. All stakeholders have been invited since 1 July to submit further evidence for SEAC to take into account in their final opinion, which is expected by the end of 2020. As the lower size limit is related to the enforceability of the proposal, the SEAC opinion is relevant.

How will the environmental risks of rubber granules in artificial turfs be managed?

ECHA's updated proposal recommends **either** the ban on the placing on the market of polymeric infill material for artificial turf after six years from entry into force of the restriction or mandatory use of risk management measures, such as fences and brushes, where such infill is used. In its opinion adopted in June, RAC has expressed a clear preference for the ban after six years.

Altogether, ECHA had evaluated four options: 1) a ban at entry into force; 2) a ban after six years; 3) mandatory use of risk management measures to prevent the emission of granules; and 4) labelling/instructions for use.

The option of an immediate ban was dismissed as counterproductive from a socio-economic perspective. This would have meant replacing pitches at a quick pace as refill material were no longer available and leaving hundreds of fields empty and players without a field to play on. Premature replacement does not only result in high costs to communities and sports clubs but causes also additional CO_2 emissions. The labelling and reporting option was dismissed as ineffective.

Why were the reporting requirements, for example for pellets, updated?

To clarify, plastic pellets (or nurdles) are raw materials that are used to produce various plastic products (articles). Once melted into the product they are no longer microplastics. However, while in the supply chain in a microplastic form, they are within the scope of the proposed restriction. Specifically, the requirements for providing instructions for use to downstream users and reporting apply.

The reporting requirements aim to help gather more information on the pellet losses in the environment, so that actions can be taken on the EU-level, if necessary. This also supports the objectives of the EU Plastics Strategy related to plastic pellets.

The reporting requirements for pellets were updated to take into account various issues raised during the consultation. One of the issues identified was the fact that one pellet could be reported two or even three times, depending on how many actors are involved in the supply chain until the pellet ends up in the final product. This would distort the estimates reported to ECHA.

The revised requirements still provide the necessary information to monitor the effectiveness of the instructions for use and disposal requirements, and will improve the quality of information to assess the risks from uses of microplastics in the future. The reported information would allow uses with high releases to be identified and prioritised for further regulatory risk management.

What about the transition periods for intentional uses in cosmetic products?

ECHA has assessed the impacts of the potential restriction and its proposal is considered to be proportionate after taking into account the costs and benefits for both the environment and society as a whole.

When ECHA proposed the transition periods, to the aim was to strike a reasonable balance between the effectiveness in reducing microplastic pollution and the resulting costs to society. Transitional periods can be shorter or longer, but would have correspondingly different impacts to society. In general, where a substance is commonly used in products, the shorter the transitional period is, the greater the costs to society.

Specifically, the different transition periods proposed for cosmetics products take into account factors such as the number of reformulations needed to comply with the restriction and the current availability of alternatives. For example, microbeads in cosmetics (microplastics used as an abrasive) are not foreseen to have any transition period. This is because microbeads can be easily replaced by natural alternatives such as ground almond, coconut shell or olive seeds.

For rinse-off and leave-on cosmetics, ECHA proposed four and six-year transition periods respectively. This was because of the very large number of formulations affected (and associated costs), and the time needed by the reformulation process itself. As alternatives for rinse-off products are more available than for leave-on products, and the reformulation of a rinse-off product is less complex than a leave-on product, a shorter transition period for rinse-off products than for leave-on products has been proposed.

In general terms, as cosmetic products are regularly reformulated by industry (to take into account consumer trends and preferences) the longer the transitional arrangements proposed the lower the costs resulting from the restriction as products would have been reformulated anyway in the absence of a restriction (and reformations can be 'co-ordinated'). No transitional period for rinse-off and leave-on products would result in very large impacts for society as many existing products could no longer be placed on the market as 'drop-in' alternatives to microplastic containing formulations (with identical product performance/cost) are not widely available.

Finally, a transition period of five to eight years is proposed for polymeric fragrance encapsulates in detergents and cosmetics as there are no alternative materials available yet. Uses of fragrance encapsulates in cosmetics are, however, minor compared to uses in detergents.

…And for pesticide encapsulation?

Some transition periods have been proposed to be extended to align with other regulatory requirements. An example of this is the transition period for plant protection products (PPP) and biocides where microplastics allow lower quantities of active substances to be used (capsule suspension formulations). The encapsulation ensures a better protection of operators and the surrounding environment compared to conventional formulations.

Should the originally proposed transition period for these uses be adopted, capsule suspension formulations would no longer be available on the market. Our analysis suggests that formulators and downstream users would not cease the use of PPPs and biocides, but would revert to non-encapsulated formulations that may have less advantageous safety profile than encapsulated formulations. ECHA concluded that it would be better for the restriction to avoid regrettable substitution of non-encapsulated PPPs and biocides and allow greater time for substitution of non-biodegradable to biodegradable capsules.

Specifically, the originally proposed transition period of five years did not take into account the approval required under the EU Plant Protection Products Regulation. An extension to eight years has now been proposed to make sure that the re-approval processes required under this regulation could be concluded before a potential ban on non-degradable microplastic encapsulations would enter into force. It is important to note that biodegradable alternatives do not yet exist for the encapsulation of plant protection products and research and development is necessary to bring them to market.

The transition periods, in general, are set as time-limited, phase-out periods. The purpose is to minimise the costs to society while not causing undue delays to the reduction of emissions. In many cases, transition periods are proposed to give time to develop biodegradable alternatives which currently do not exist for certain uses.

All updates made by ECHA are detailed in the draft background document.