



February 15, 2023

To Whom It May Concern,

As proponents of the green transition, sustainable innovation and climate change mitigation, the signatories of this letter would like to raise **their specific concern about the proposed definition of “natural polymers” and their impact on biopolymers in the context of the REACH restriction of microplastics.**

Our members industrially produce solutions based on renewable carbon that are continuously improving the sustainability footprint of many sectors by replacing fossil-based plastic and providing biodegradable materials. Their innovation increasingly enables them to make ‘nature-identical’ biopolymers. Such innovation efforts should be encouraged in policy, to support the EU’s objectives for a green transition.

As such, the signatories to this letter ask that in the adoption of the text of the **Synthetic Polymer Microparticles restrictions** (REACH Microplastics Restriction), **the European Commission should not use the definition of ‘natural polymer’ which refers to a polymerisation process that takes place in nature.**

Consequently, in the Commission’s draft Regulation we propose to change the proposed amendment entry 1 to Annex XVII, as follows:

Commission Proposal	Proposed Amendment
<p>„...<i>The following polymers are excluded from this designation:</i></p> <p>(a) <i>polymers that are the result of a polymerisation process that has taken place in nature, which are not chemically modified substances; ...“</i></p>	<p>„...<i>The following polymers are excluded from this designation:</i></p> <p>(a) natural polymers that are the result of a polymerisation process that has taken place in nature, which are have not been chemically modified substances; ...“</p>

Given that there are many ongoing policy processes in the field of plastics, bio-based plastics, packaging and in the Circular Economy more broadly that may introduce a different approach, the introduction of such a definition would be **premature** (since discussions at the EU level are still ongoing in the context of different legislative initiatives, e.g. the Packaging & Packaging Waste Regulation, the Policy Framework for Biobased, Biodegradable and Compostable Plastics, and the further development of the Bioeconomy Strategy). It is also based on an **inappropriate legal basis, and is discriminatory and disproportionate**, hindering innovation, and thus jeopardizes meeting EU policy goals. Furthermore, our **recommendations are strongly supported by scientists**, as shown already in the open letter to DG Environment from 2019 “Which polymers are natural polymers” that was signed by 20 internationally renowned experts in the field.¹

¹ <https://renewable-carbon.eu/publications/product/open-letter-to-dg-environment-which-polymers-are-natural-polymers-in-the-sense-of-the-single-use-plastic-ban-%e2%88%92-full-version/>

Below are our justifications for this request.

1. This proposed definition is **not necessary and is disproportionate**, because of the risk targeted by the restriction, i.e. the use of final particles and their fate in the environment. **This risk is not related to where the polymerisation process has taken place.** And, the place where the polymerization process has taken place has no impact on biodegradation.
2. Distinguishing between polymers just based on where the polymerisation process takes place would appear **discriminatory, without a legitimate reason**. Their impact on the risk targeted by the restriction is exactly the same, independent of their place of polymerisation and extraction method, since their molecular structures, properties, and biodegradation are identical. There is no scientific evidence that would legitimize such a distinction.
3. While the exemption on the grounds of biodegradability would allow such biopolymers to be exempted from the microplastics restriction, **biopolymers which are nature-identical should be treated as natural polymers from the outset**, rather than having to rely on any additional exemptions.
4. The European Commission should therefore use the term 'natural polymer', without further specifications regarding the polymerisation process. This would be in line with the current approach in the Commission's proposal for the new Packaging and Packaging Waste Regulation and other EU legislation.
5. The problematic natural polymer definition currently used in the draft of the REACH restriction of microplastics (**referring to the specifics of the polymerisation process**) is based on a notion in the 2012 version of ECHA Guidance for Monomers and Polymers². There are arguments available that this is an **inappropriate legal basis**. First, the respective Section 3.2.1.3 in the Guidance was exclusively aimed at clarifying the applicability of REACH registration exemptions. Second, as compared to the 2008 version of the Guidance, it is clear that the 2012 provision was aimed at extending the scope of the 2008 definition of 'naturally occurring polymer'³ (to make it clear that any extraction methods can be used), rather than to narrow it. Third, the part of the definition relating to the polymerisation process that takes place in nature is merely an introductory statement that has no relevance to the purpose of this provision (which is to provide details on extraction methods). It is also only a subjective, generic description (*"natural polymers are understood..."*). Fourth, the ECHA Guidance is also not legally binding⁴, thus it cannot create any binding precedent for any legislative act. **The Single Use Plastics Directive (SUPD) Guidance** document unfortunately adopted the problematic definition too, **but this guidance is not legally binding either, is controversial and not applied consistently by all EU member states**.
6. Putting this definition directly into a legal act in the Microplastics restriction proposal would set a **legal precedent** that could compromise ongoing legislative initiatives under circular economy and bioeconomy policies (in the field of plastics, bioplastics and packaging).
7. Since 2012 (the date of initial appearance of the problematic definition), the **innovation in the sector** has been significant and it is enabling the development of an entire range of

² Section 3.2.1.3., first sentence: "Natural polymers are understood as polymers which are the result of a polymerisation process that has taken place in nature, independently of the extraction process with which they have been extracted."; available at https://echa.europa.eu/documents/10162/2324906/polymers_en.pdf/9a74545f-05be-4e10-8555-4d7cf051bbed

³ Version 2008, Section 3.2.1.3., first sentence: "A manufacturer or importer of a naturally occurring polymer is exempted from any registration provisions under Title II, provided that the polymer fulfils the definition of a naturally occurring substance (according to article 3(39)) and that the polymer has not been chemically modified and does not meet the criteria for classification as dangerous in accordance with Directive 67/548/EEC."; available at <https://www.cirs-group.com/Uploads/soft/140612/Guidance-for-monomers--and-polymers.pdf>

⁴ See also "legal notice" on page 4 of the Guidance.

natural-identical polymers at commercial scale, by simply upscaling what already occurs in nature, with exactly the same properties.

8. Innovation in industrially-made biopolymers and other bio-based products is a **cornerstone for meeting the goals of both the circular economy and the bioeconomy**, by providing sustainable alternatives to the plastic problem. These are derived from renewable resources and can be inherently biodegradable and compostable thereby also contributing to minimizing the impact of littering when it occurs for certain targeted applications, and in particular marine litter. Integrated circular biorefineries which produce such biopolymers and valorise all agriculture streams in the production chain, **provide the EU additional benefits** in terms of rural development and job creation in agricultural rural areas.
9. While there are some discussions at the EU level on how to best manage the advantages of such biopolymers, including issues related to current waste processing infrastructure, and consumer information, these issues will be resolved by EU Legislation. These challenges should not deter the EU from using these innovative biopolymers – and more broadly **industrially-made bio-based products** – as part of the solution for EU objectives.
10. Industry has responded to the need to develop more sustainable materials through years of significant investment in research and development to meet performance requirements and sustainability targets. However, **this restriction will create roadblocks to the investment necessary** to make these materials available at scale in the EU.
11. The current approach may have additional **serious socio-economic consequences such as** (i) loss of economic growth opportunities, regional and rural jobs and overall competitiveness for EU polymer and materials business, (ii) loss of investments made as a response to the need to develop more sustainable materials, (iii) perpetuating the use of established fossil-based plastics in the EU, when it is a clear policy objective to reduce it (iv) reducing the number of innovative materials available on the market thereby, impacting competition, (v) loss of volumes for some applications where biopolymers are mandated (e.g. tea bags that must be compostable), and for many important day to day products. These are serious consequences for the prospering bioeconomy in which the EU has invested billions of Euros to support innovation: in the EU, more than 17 million jobs are linked to the bioeconomy – a sector that generated 2.4 trillion Euros in turnover in 2019.⁵⁶ These values represent 4.7% of the EU's gross domestic product and 8.3% of its labour force.⁷ A significant share of jobs generated in the bioeconomy are in rural areas in agriculture and forestry (more than 50%)⁸, which favours rural development.
12. This approach may also have a negative effect of creating a **technical barrier to trade**, while ongoing preparatory works on a **UN Global Treaty on Plastics Pollution** will likely lead to further development of biopolymers worldwide.

Considering the significant fast pace of innovation in the field of bio-based and biodegradable materials, the notion of **natural polymers should be clearly defined in future policy**, since industry will continue to innovate through cutting edge technologies to deliver polymers which are identical to those found in nature. A new and scientifically accurate definition of natural polymers is hence of great importance to establish the future regulatory frameworks correctly – whether in future EU policies or in the context of the global treaty negotiation on plastic pollution – and to drive forward innovation.

⁵ Porc, O., Hark, N., Carus, M., Carrez, D. 2022: The European Bioeconomy in Figures 2008–2019. <https://biconsortium.eu/downloads/european-bioeconomy-figures-2008-2019>

⁶ European Bioeconomy Alliance 2022: How the Bioeconomy contributes to the European Green Deal.

⁷ European Commission website, Knowledge Center for Bioeconomy: https://knowledge4policy.ec.europa.eu/bioeconomy/topic/economy_en

⁸ see Porc et al. 2022.

We hope that you will consider our arguments seriously and are at your service for any further clarification. The signatories of this position are ready to work with the Commission to develop the best policies to address the microplastics challenge, while continuously innovating for better alternatives to meet society's needs.

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