Verband der Chemischen Industrie e. V. (VCI - German Chemical Industry Association)

Working plan for the Ecodesign Regulation: Polymers too complex for standardised criteria under Ecodesign

Introduction

The Ecodesign for Sustainable Products Regulation (ESPR) entered into force in July 2024. The European Commission will now work on its implementation by establishing product-specific ecodesign rules through secondary legislation.

In addition to end products such as tyres, iron and steel, chemicals are also listed as a priority product group. The VCI already commented on this during the consultation on product prioritisation in 2023 and spoke out against the inclusion of chemicals as a separate product group. According to the latest information, there will also be a separate product group for polymers under the ESPR and this will already be integrated into the first work plan.

In this setting, the VCI opposes the inclusion of polymers in the working plan. Chemicals and polymers are highly diverse groups of materials that are used in numerous applications and industries. A blanket regulation would therefore lead to considerable challenges and unintended consequences for the entire value chain.

Reasoning

Multiple regulations within the value chain

The ESPR provides for chemicals (but not polymers) to form a separate product group in the first working plan (2025-2028), unless the EU Commission deviates from this with good reason. This means that chemicals as such could be regulated via ecodesign in addition to REACH. Furthermore, their use in products is to be regulated through the introduction of the substance class "Substances of Concern". In the case of polymers, there would also be regulation of the polymer in the end product, for example via the recycled content.

Diversity and complexity - disproportionate burdens

Polymers are an extremely diverse and complex group of materials that differ greatly in their chemical structures, physical and chemical properties and applications. This diversity makes it difficult to develop standardised ecodesign criteria, as the requirements that may make sense for one polymer may be completely unsuitable or even counterproductive for another.

According to an earlier study by Wood et al.[1] , it is estimated that there were around 200,000 different polymers on the European market in 2020. This is around ten times more substances than are currently registered under the existing European chemicals legislation (REACH).

At present, there is no regulatory definition of how *one* polymer can be distinguished from another. Such aspects are currently being discussed in relation to REACH - a conclusion to these discussions is not foreseeable.

There is also a fear of a disproportionate administrative burden for companies, authorities, monitoring institutions, testing laboratories and distributors. The complexity of complying with regulations for a category as broad and diverse as polymers will be particularly overwhelming for small and medium-sized enterprises operating in sectors where polymers play a crucial role.

Different environmental profiles

Polymers have very different environmental profiles depending on their chemical composition and application. In addition, the polymers are optimised for the applications, so a simple substitution is often not possible. For example, some polymers are biodegradable, while others are very durable and stable. Some are made from fossil raw materials and others are of non-fossil origin (biogenic, recycled or CO_2 -based). A blanket regulation could lead to polymers with a lower environmental impact being subject to unnecessarily strict requirements.

Polymer additives

Polymers are often used in combination with additives to achieve specific properties in the product. In practice, these combinations can vary greatly and lead to a variety of end products, which in turn can have different ecological and health effects and differ in terms of recyclability and life cycle. A regulation that treats polymers in a generalised way will not take these differences sufficiently into account.

[1] https://publications.europa.eu/resource/cellar/1cc811ff-d5fc-11ea-adf7-01aa75ed71a1.0001.01/DOC_1 (Wood report)

Recyclability and life cycle

The recyclability of polymers depends heavily on their chemical structure: some polymers are easily recyclable, while others are difficult or impossible to recycle. Especially polymers that are durable, resistant and therefore reliable - ecodesign requirements explicitly mentioned in Article 5.1. of the ESPR framework regulation - can also positively influence other ecodesign requirements such as energy, water and resource consumption due to their long life cycle, while they may fulfil the recyclability aspect less well.

Innovation potential and barriers to innovation

Polymer chemistry is an area where continuous innovation is taking place to develop more sustainable and environmentally friendly materials. Premature and inflexible regulation would limit this innovation potential in Europe by preventing, at worst, the development of new polymer materials that could potentially have better environmental profiles. As polymer chemistry is constantly evolving, it is important that the regulation provides flexible mechanisms to avoid stifling innovation towards more environmentally friendly materials.

Lack of valuation standards

There are currently no uniform, scientifically based standards for assessing the ecological impact and resource consumption of all types of polymers. The chemical diversity of polymers makes it difficult to develop a universal assessment system that is fair and effective and also takes into account the application phase. Without such standards, regulatory measures could be arbitrary and lead to undesirable side effects.

Europe's competitiveness in danger through disproportionate administrative burden

Regulating polymers under the ESPR would create a disproportionate administrative burden for companies and authorities and would jeopardise Germany and Europe as a production location. Polymers are indispensable in many key industries (e.g. automotive, construction, electronics). Overly early and comprehensive regulation could put European companies at a disadvantage in global competition, especially compared to regions with less restrictive rules. The EU should drive its innovation leadership in the field of sustainable polymer materials instead of creating obstacles through rigid regulation.

Conclusion

The planned regulation of chemicals and polymers under the ESPR would pose considerable challenges. The complexity and diversity of chemicals and polymers, their different environmental profiles and applications as well as the technical and economic hurdles make blanket regulation problematic.

A differentiated approach is necessary in order to avoid undesirable side effects such as hampering innovation, double regulation and disproportionate administrative burdens. A hasty and inflexible introduction of ecodesign requirements could hinder the development of sustainable chemicals and polymer materials and applications for existing polymers and create further unnecessary barriers for companies. Therefore, the VCI opposes regulating polymers as a and chemicals as product groups under the ESPR.

Questions currently being discussed on the handling of polymers in the REACH context should be clarified before new activities are launched in parallel.

In conclusion, we are in favour of coordinated and well thought-out regulation that does not stand in the way of innovation and takes appropriate account of the diversity of polymers.

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