



### *Concrete examples of impacts on companies, supply chains and products*

## VCI-POSITION TO ECHA PROPOSAL FOR A RESTRICTION OF POLYMERS AS “INTENTIONALLY ADDED MICROPLASTICS”:

**At the request of the European Commission, the European Chemicals Agency (ECHA) submitted, according to the REACH Regulation and within a so-called Annex XV dossier, a restriction proposal entitled “Proposal for a Restriction “Substances Names: Intentionally added Microplastics”. This VCI paper wants to demonstrate the impact on companies by way of concrete examples.**

The title of the restriction and almost all statements in the dossier (e.g. statements on substance identity or risk assessment) suggest that this is a restriction of “microplastic”. In fact, the proposed restriction addresses all polymers and virtually all polymer-containing and polymer-coated materials and, therefore, not only “microplastic”.

Requirements, definitions and scope of the restriction are so complex and comprehensive that it is unclear and incomprehensible what precisely is to be covered. As fully explained in the VCI position paper on ECHA Annex XV, the restriction proposal thus does not comply with important provisions of the REACH Regulation.<sup>1</sup>

Across industries, major legal uncertainty arises as to which products are affected.

The cost and work-intensive labelling obligations and annual reporting requirements to ECHA, as demanded in the proposal, are problematic too.

The problems and implications of the restriction proposal are outlined below:

### **Distortions of competition and enforcement**

Comparable competitive conditions presuppose that supply chains operating inside the EU are not put at a disadvantage, as compared with importers from outside the European Union.

Within supply chains in the EU, detailed information on polymers can be checked by the competent authorities. By contrast, for imports from outside the European Union, the authorities cannot check documents and stated compositions at the manufacturers (non-EU countries). Imported substances and mixtures have to be analysed analytically for polymers if they are particulate substances or mixtures in the stated dimensions.

---

<sup>1</sup> <https://www.vci.de/vci-online/themen/chemikaliensicherheit/produktverantwortung/vci-position-to-echa-reach-annex-xv-restriction-report-restriction-of-microplastic.jsp>

For the authorities, this brings the task of having comprehensive analytical methods available for an unknown number of chemically totally different polymers and to use these methods. Not only is it unfeasible to work towards a possibly unknown analytical goal; moreover, the potential lower limits that the analytical methods would have to demonstrate are so low and might be far below the ppb range (trace range) that the standard methods, which exist today and might become available tomorrow, are far from coming up to this requirement. In fact, import control is not possible for unnamed polymers. This opens the door to distortions of competition from uncontrollable imports.

### Legal certainty for non-solid polymers

Products from numerous sectors of industry (cosmetics, paints, cleaning agents, plant protection products etc) contain polymers as components, e.g. to dissolve other ingredients or to turn low viscosity solutions into more viscous products fit for application. For example, viscosity modifiers turn an aqueous formulation into a shower gel or a cream that can be applied. The impact assessment carried out by ECHA and the product examples in the restriction dossier suggest that it is not intended to affect these materials. However, the definition of microplastic is so broad that this is not clear in our understanding. For example, with 1 nanometre the lower limit for a microplastic is so small that an individual molecule would be impacted. In the published Q&A document<sup>2</sup>, ECHA states that “*Single molecules are not considered to be particles.*” However, “*The question is whether or not the potential particles consist of polymers as defined under REACH ...*” (question 2.22). This results in a contradiction and in legal uncertainty in the lower size range of the definition (nanometre range). Also, the term “solid” is not clearly worded in the restriction proposal and, in the proposed form, it cannot be verified for individual polymer molecules. Thus, the restriction proposal could concern almost all polymeric materials. This causes considerable legal uncertainty across all industries.

Example: Polymers are integral parts of many formulations. One example are solvent-based paints which contain dissolved polymeric binder. These polymers will adsorb to the surface of the inorganic pigments present in the paint. It is analytically not feasible to determine in the product whether the polymer-containing particle fulfils the complex definition of a “microplastic” proposed by ECHA. Isolating the particles from the formulation will have an impact on the properties: a particle which may not have fulfilled the “microplastics” definition in the original formulation may do so when isolated – and vice versa. Hence, the microplastics restriction proposal creates substantial uncertainty for formulations containing both inorganic materials and polymers. How should these questions be addressed?

### Cosmetic products

The share of cosmetic products in the total environmental exposure to microplastic from various sources is comparatively low (0.1 - 1.5%). Synthetic polymers falling

---

<sup>2</sup> [https://echa.europa.eu/documents/10162/13641/rest\\_microplastics\\_qa\\_v1.0\\_en.pdf](https://echa.europa.eu/documents/10162/13641/rest_microplastics_qa_v1.0_en.pdf)

under ECHA's definition of microplastics have a wide range of functions in cosmetic products. Therefore, the particles used differ considerably from each other in size, chemical composition and physico-chemical properties.

It is the cosmetics industry's understanding that, the restriction should be limited to solid microplastic particles which are incorporated as such in cosmetic products and released into the aquatic environment after use.

For cosmetic rinse-off products (e.g. shampoo and shower gel), the quantity of microplastic particles with peeling function in rinse-off cleansing and peeling products was already reduced by 97% on a voluntary basis in the period from 2012 to 2017. The full substitution of microplastic in all rinse-off products has already been initiated. Thus, the industry's voluntary activities have largely anticipated the proposed rules for these products.

For leave-on products (e.g. make-up and lipstick), we think that a restriction of synthetic polymer particles would be unjustified for the following reasons:

- Leave-on products are characterised by their complex formulations. There are relatively low tonnages of different synthetic polymer particles on the one hand and large numbers of different formulations on the other. This makes substitution a highly complex and time-consuming endeavour. Moreover, in most cases there are no alternatives to synthetic polymer particles available.
- Leave-on products are emitted into the environment only to a small extent. A large share is disposed in household waste after make-up removal etc.
- Synthetic polymer particles in leave-on products contribute only 2% to the total "microplastic" emission (intentionally added particles) while they would account for 80% of costs of the overall restriction.<sup>3</sup> For this reason, a restriction of synthetic polymer particles in leave-on products is disproportionate.

Furthermore, from the cosmetics industry's perspective the labelling and reporting requirements of the restriction proposal are neither workable nor proportionate for some polymers along the industrial supply chain. These requirements apply for a range of different polymers in a variety of products, whereby these polymers are used in small amounts.

**Conclusion:** Restricting synthetic polymer particles in leave-on products will have serious socio-economic impacts on the cosmetics industry but above all for society. The phase-out would be truly cost-intensive with a very limited benefit for the aquatic environment. Therefore, we see a restriction of synthetic polymer particles in leave-on products as disproportionate.

From the cosmetics industry's viewpoint, labelling and reporting requirements are neither workable nor proportionate for some polymers along the industrial supply chain.

---

<sup>3</sup> Cosmetics Europe input to ECHA's public consultation on the microplastics restriction proposal from 19.07.2019: <https://echa.europa.eu/documents/10162/df8a93f2-9464-dfca-a0e3-7922c0b9b56a>

For rinse-off products, the proposed restriction largely corresponds to the voluntary activities already launched by the cosmetics industry.

### **Agriculture: plant protection products and fertilisers**

In agriculture, polymers play an important role for seed coatings, plant protection products and mineral fertilisers. Basically, polymers are applied to improve the transport, storage and targeted and efficient use of these resources, with the purpose to avoid unwanted exposure.

Treated seeds, containing polymer coatings reduce dust abrasion during sowing and therefore reduce exposure of plant protection products to operators and non-target organisms e.g. like bees. They contribute to a better protection of seedlings in their early growth stage.

Plant protection products consist of one or more active substances and several formulation auxiliaries (co-formulants) with various functions. For example, polymeric co-formulants are used, inter alia, to improve the uniform distribution and the bioavailability of the active substance, and ensure product stability. The FAO/WHO Manual on Pesticide Specifications<sup>4</sup> lists over 30 formulation types. Many of them contain polymeric co-formulants which are likely to fall under the microplastic definition. These include, inter alia, suspensions, emulsifiable pellets or tablets. Moreover, quite often only the suppliers of co-formulants have the technical information to assess whether the supplied polymer mixtures fall under the “microplastic” definition or not.

A representative survey among leading manufacturers of plant protection products (PPPs) shows that substituting polymeric co-formulants with biodegradable polymer alternatives is not a straightforward matter. Affected products would need to be reformulated to replace synthetic polymers falling under the proposed definition of microplastics and would need to be authorised again. PPPs are subject to a strict and complex EU-wide authorisation procedure which usually takes at least two years. This timespan does not even include the time that is needed to carry out regulatory studies. Furthermore, the number of impacted plant protection formulations is significantly higher than assumed in Annex XV to the ECHA restriction proposal.

- Over 50 capsule suspension products distributed in the EU
- Over 180 treated seeds formulations distributed in the EU
- At least 480 other plant protection formulations that contain polymeric co-formulants might be impacted

The sheer number of necessary reformulations would cause enormous cost and effort for both manufacturers and competent authorities. The search for substitutes, tests regarding application technology, efficacy, environmental safety and toxicology and the subsequent authorisation of a new PPP can take a total period of ca. 10 to 15 years. Given the complexity of the authorisation procedure, major delays could be expected.

---

<sup>4</sup> <http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/jmps/manual/en/>

**Conclusion:** In order to prevent further limitations of farmers in the choice of available solutions, it is essential to ensure that authorised products remain allowed for marketing during an adequate transitional period, i.e. a transitional period of 10 to 15 years is required.

Regarding mineral fertilisers, various polymers are used for two purposes: First, as formulation additives to improve graining and abrasion resistance and to reduce dustiness. Second, as coating polymers for “controlled release” specialty fertilisers to enable a uniform nutrient release over long periods of time.

**Conclusion:** Fundamentally, the new EU Regulation 2019/1009 on fertilising products calls for biodegradability criteria for polymers to enable a further use of these substances. A 5-year period is intended for introducing such criteria. Moreover, a transitional period of further 2 years should be planned for implementation. With a view to avoiding unnecessary duplicate regulation, consistency of the fertiliser legislation and the chemicals legislation should be ensured.

### Medicinal products

Due to the proposed, very broad definition of microplastic, in the future many excipients for pharmaceutical products (e.g. for solid oral dosage forms such as tablets, capsules, dragées etc) will fall under this definition. Pharmaceuticals do not contain plastic materials but e.g. modified celluloses which are present in almost all solid drug formulations as binders, disintegrants, fillers and/or tablet coating materials. These polymers are needed for efficient and effective functioning of the medicinal product.

In fact, medicinal products for human and veterinary use are exempted from the marketing ban but they are to be subject to the described labelling and reporting requirements – additionally to the existing labelling obligations for the disposal of medicinal products.

**Conclusion:** Under the European pharmaceutical legislation, package leaflets for medicinal products for human and veterinary use include information on the disposal of unused medicines (e.g. EMA QRD Annex I), e.g. *“Do not dispose of medicines into the water supply or in household waste. Ask your pharmacist how to dispose of medicines you no longer need. This will help protect the environment.”* Here, a REACH requirement would cause duplicate regulation for medicines. Relevant requirements are already laid down in existing pieces of legislation. Therefore, the exemption from the microplastic restriction for medicines should be extended to the labelling and reporting obligations.

### Medical devices

Added synthetic polymers which fall under the definition of microplastic particles have manifold functions in medical devices and in-vitro diagnostic products. They are used e.g. in polymer filters, adsorbents for blood treatment, dental filling materials and ultrasound gels.

There is a highly regulated legal framework for medical devices, particularly with the Medical Devices Regulation which newly entered into force.

The transitional period of 2 years after entry into force of the marketing restrictions under REACH Annex XV is too short for medical devices and in-vitro diagnostic products. This transitional period is not long enough for reformulations substituting added synthetic polymers, as such reformulations need to be subsequently tested in clinical trials. Reformulated products have to undergo a conformity assessment procedure with final certification by a notified body. As there is currently a shortage of notified bodies, a 2-year transitional period is by far not sufficient.

**Conclusion:** The proposed transitional period of 2 years is irreconcilable with the requirements of the Medical Devices Regulation. Should this period not be extended, it must be expected that medical devices with added synthetic polymers will disappear from the market. Extending the transitional period to at least 6 years (entry into force + 6 years) is essential.

### **Food supplements and other foodstuffs**

The proposed broad definition of microplastic also covers certain food additives. Ingredients used as excipients in solid dosage forms of medicinal products (e.g. modified celluloses, polyvinylpyrrolidone (E 1201) or polyvinylpolypyrrolidone (E 1202)) are also used for the same technological purpose in food supplements. Furthermore, modified celluloses are used in foodstuffs as stabilisers, anti-caking agents and bulking agents (e.g. in table-top sweeteners as powders or tablets).

Food additives are added to foodstuffs in very small quantities to fulfil desired technological functions. Moreover, the use and the authorisation of food additives are usually highly specific, e.g. limited to food supplements. Consequently, the release of synthetic polymers such food additives into the environment is very low as compared with the release from other sources.

Food additives are only authorised if there is a reasonable technological need that cannot be achieved by other economically and technologically practicable means (Article 6(2) of Regulation (EC) 1333/2008). Frequently, there are no alternatives and developing alternative solutions is time- and cost-intensive.

If the restriction of microplastic enters into force as proposed, many safe food supplements and other safe uses of food additives will be lost.

Some products can have a different regulatory status in different member states i.e. food supplement in one member state and medicinal product in another member state. Should the restriction proposal become effective, it would cause inequality inside the European market.

**Conclusion:** The use of synthetic polymers, which fall under the microplastic definition, as food additives in food supplements and other foodstuffs is already subject to an authorisation reservation according to Regulation (EC) 1333/2008. Environmental factors are to be considered in authorisation (Article 6(1) of the said Regulation). A restriction of microplastic that includes food additives would result in a contradiction and bring duplicate regulation.

For these reasons, food supplements and food additives in their entirety should be exempted from the planned restriction of microplastic, including the labelling and reporting requirements.

Apart from that, the same applies to feed and feed additives. All substances for this area are audited by EFSA in accordance with Regulation (EC) No 1831/2003 and included in a positive list with the approval.

### **Paints, coatings and printing inks**

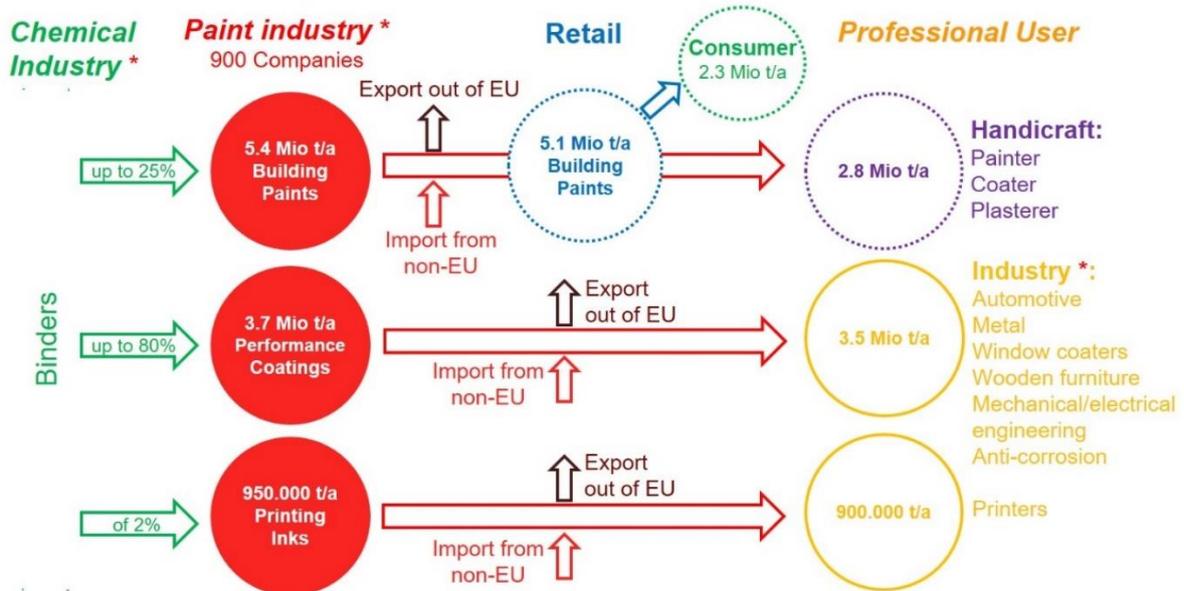
Paints, coatings and printing inks contain numerous constituents covered by the definition. This affects, for example

- Pigments and fillers that can be after-treated with polymers. This is usually done for reasons of occupational health and safety (dust prevention) and material efficiency (better dispersibility).
- Polymeric binders (film formers) which are needed for paints, coatings and printing inks to form a solid film. This concerns all solvent-free emulsion paints which are covered by existing VOC regulations and occupational health and safety.
- Polymeric additives (e.g. thickeners or UV protectants) which are added in small quantities to paints, coatings and printing inks in order to improve or modify their properties.

According to the restriction proposal, these materials can continue to be placed on the market if they are permanently incorporated into a solid matrix when used or if they no longer fulfil the meaning of a microplastic.

Consequently, for each individual constituent that fulfils the meaning of the term “microplastic”, each individual industrial user along the value chain will have to report to ECHA in the future (see below). In Europe, this affects 900 paint producers as well as industrial users such as automotive finishing plants, print shops and furniture manufacturers. The comprehensive reporting requirements for the industry, which only accounts for a fraction of microplastics used, are ineffective and disproportionate, also because craftsmen and consumers – who use around half of the building paints – do not fall under the reporting requirement. A considerable amount of extra bureaucracy is caused for impacted businesses while the foreseeable benefit for the environment is only small.

**"Reporting obligations\* (closed circles) for approx. 340.000 companies in the value chain for paints, varnishes and printing inks in Europe"**



Source: Verband der deutschen Lack- und Druckfarbenindustrie e.V.

The European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE) has assessed the reporting costs for the supply-chain downward from the paint and printing ink producer more than 6.7 Billion Euro p.a.<sup>5</sup>

**Conclusion:** Regarding industrial plants, comprehensive European, national and regional rules are in place for water protection and the disposal of industrial wastes; these existing rules already effectively prevent a release of microplastics into the environment. An environmental hazard that would justify reporting and labelling requirements beyond these existing obligations is neither discernible nor provable.

Furthermore, the data to be reported on the identity and quantity of polymers used in paints, coatings and printing inks are usually not available to the manufacturers. Generally, their upstream suppliers do not disclose such details relevant to formulations, holding that these are confidential business information.

### Dispersions for coatings and adhesives

In their original form and particle size, certain raw materials for coatings and adhesives (e.g. polymer dispersions) fall under the proposed microplastic definition. But after use, closed films are formed which are themselves no longer microplastic and, therefore, do not contain microplastic. Thus, dispersions fall under the exemption according to 5(b). In addition, adhesives remain invariably after their application between two joint parts so that there can be no abrasion. Polymer dispersions are produced in industrial plants

<sup>5</sup> CEPE input to ECHA's public consultation on the microplastics restriction proposal from 17.05.2019  
<https://echa.europa.eu/documents/10162/1c2aa07d-cbed-c8ca-abfb-88ea6683d0ed>

which are frequently located in the integrated infrastructure of chemical parks. This ensures extra protection against emissions into the environment.

The plants for the production and use of both dispersions and coatings and adhesives are subject to strict legal rules at national and local levels. This holds true, in particular, regarding plant safety and waste water treatment. In normal operation, there are no uncontrolled emissions into the environment. Already now, reporting requirements and controls are in place for accidents with product release.

Dispersion paints and adhesives, which enter waste water at the users prior to curing or film-forming (e.g. in cleaning processes) or adhesive films which can, to a small extent, disintegrate back (redisperse) into their original particles during recycling processes (e.g. detached labels), are filtered out according to the state-of-the-art in conventional municipal and industrial sewage plants. Next, the sewage sludge is disposed in line with existing legislation. Modern recycling and proper waste management ensure that no adhesive components are released into the marine environment.

The reporting requirements mainly impact paints and adhesive manufacturers with small and mid-sized structures. Also impacted are industrial undertakings which fall under the 4(a) exemption and use very small amounts of adhesives falling under 5(b) or (c). The VCI holds that these reporting requirements are highly disproportionate and inappropriate – especially in view of the fact that the quantities of microplastic released into the environment are virtually zero, for the above explained reasons.

Conclusion: There is no environmental risk that calls for additional regulatory measures. Therefore, the annual reporting requirement, as proposed under the restriction, would not improve environmental protection. Instead, the reporting requirement would cause high additional costs and an enormous amount of bureaucracy, especially for SMEs.

### **Construction chemicals – Concrete additives**

The construction chemicals industry produces, inter alia, additives and admixtures for use in concretes. Without such additives/admixtures, modern concrete technology and sustainably designed concrete structures would be unthinkable. The following concrete additives/admixtures would have to be treated as microplastic under the proposed restriction:

- (Micro-) polymer fibers for concrete
- Micro hollow spheres as concrete admixtures
- Water-soluble superplasticizer for concrete in powder form

The construction chemicals industry supplies the above additives/admixtures to the concrete industry. Concrete containing these additives are produced under industrial conditions and then either delivered directly to the construction site as ready-mixed concrete or used for the industrial manufacture of precast concrete.

Concrete admixtures are not released into the environment in their use. Therefore, they do not fall under the marketing ban. These exemptions apply:

- In their use, (micro-) polymer fibres and micro hollow spheres are permanently incorporated into a solid concrete matrix, so that the exemption under 5(c) can be resorted to.
- Water-soluble concrete superplasticizers in powder form dissolve in the concrete mixing water and then react with the cement surface. After the hydration phase with the hardening of the concrete, the primary microplastic particles no longer exist and can no longer form either. Given this conversion, the exemption under 5(b) applies.
- Manufacturers of precast concrete (articles) use the above-mentioned concrete additives/admixtures or concretes containing them (mixtures) under industrial conditions, i.e. the exemption under 4(a) applies.

In the outlined exemptions, the annual reporting requirements address several actors at the lower end of the supply chain in the construction sector:

- Parties placing the mentioned concrete additives/admixtures on the market
- Manufacturers of concrete containing them (e.g. ready-mixed concrete or concrete for precast concrete)
- Manufacturers of precast concrete

#### Conclusion:

- Several consecutive actors in a supply chain need to report data to ECHA. It must be expected that the amount of microplastic would be significantly overestimated due to multiple reporting along the supply chain.
- SMEs at the end of the supply chain are unnecessarily affected by the reporting requirement. These companies are usually not familiar with “REACH reporting tools” (e.g. IUCLID) and the legislation behind the reporting obligations. This would cause additional cost and effort in implementation (e.g. for manufacturers of ready-mixed concrete and precast concrete).
- Actors at the end of the supply chain (practically exclusively SMEs) usually do not have sufficient information about the identity of polymers to provide the details to be reported under 8(a). This holds true in particular for polymers that are not classified as hazardous.

#### **Plastic pellets**

Plastic pellets are typical intermediates for industrial processes in the production of standard and engineering plastics – between manufacturers of polymer raw materials and plastic processors who, for example, produce masterbatches and subsequently process the pellets e.g. by way of extrusion or injection moulding and thus manufacture plastic articles (e.g. automotive headlights, films, boards, casings, ski boots, pipes etc).

The size of plastic particles in the form of pellets, flakes, fines or powder is in the typical range of 1 - 5 mm; it is determined by the requirements regarding flowability, transport in piping systems (e.g. by means of compressed air) or machinability (e.g. in extruders).

In view of the necessary machinery and infrastructure, plastic processing is carried out in industrial plants (for example, plastics production, colouring, conversion or processing e.g. by way of extrusion, injection or blow moulding) are already subject to strict regulatory requirements and controls at national and local levels. In particular, this holds true for waste water treatment. Therefore, plastic pellets and masterbatches, as far as they are deemed microplastics, are not intentionally manufactured particles but only intermediates<sup>6</sup> in existing and established processes and controls.

Many plastics manufacturers and downstream processors have already joined the international initiative „[Operation Clean Sweep](#)“. This initiative aims to prevent any pellet loss in waste water and the environment through technical and organisational measures. To achieve this goal, PlasticsEurope has developed in 2012 a “Zero Pellet Loss” campaign, which has been implemented by the German plastics manufacturers in 2013 with the Responsible Care practice project “Zero Pellet Loss” as part of the VCI’s Responsible Care initiative<sup>7</sup>.

Already today, accidental losses of materials must be reported at national and local levels. They are also subject to the above-mentioned stringent conditions and controls by the competent authorities.

The association of European Plastic Converters, EuPC, has assumed the costs of the reporting of pellets on the basis of their membership survey. The estimates result to a cost range between 0.5 - 1 bn € p. a..<sup>8</sup> This example from only one part of just plastics industry, namely the European converters, alone demonstrates that the administrative burden related to enforcement are not as minor as argued by ECHA e.g. in section 2.5.3 of the restriction proposal. Cost burdens of further value chain industries as well as further industrial sectors need to be taken into account, too.

**Conclusion:** Industrial plants for the manufacture and processing of polymers in the form of pellets, flakes, fines and powder are no environmental risk that calls for further regulatory measures in order to reduce emissions into the environment. In particular, a general reporting requirement for industrial manufactured pellets has no discernible influence on possible intended or accidental releases. Therefore, a reporting

---

<sup>6</sup> Also see the definition „large microplastic“ in the international standardisation report ISO/TR 21960 (in print).

<sup>7</sup> Also see: [www.vci.de/nachhaltigkeit/responsible-care/rc-in-der-praxis/kunststoffherzeuger-wollen-granulat-verluste-minimieren-projekt-null-pelletverlust.jsp](http://www.vci.de/nachhaltigkeit/responsible-care/rc-in-der-praxis/kunststoffherzeuger-wollen-granulat-verluste-minimieren-projekt-null-pelletverlust.jsp) and [www.plasticseurope.org/en/resources/publications/1132-operation-clean-sweep-report-2018](http://www.plasticseurope.org/en/resources/publications/1132-operation-clean-sweep-report-2018)

<sup>8</sup> EuPC input to ECHA’s public consultation on the microplastics restriction proposal from 20.05.2019: <https://echa.europa.eu/documents/10162/06a13ee4-93fd-988b-adf0-bdcb34d9ce63>

requirement for plastic pellets as intermediates does not serve the given purpose and should be deleted from the ECHA proposal.

### **Infill pellets for artificial turf of sport fields**

Soft, elastic plastic pellets are used as infill products for artificial turf on sport fields. They determine essential properties, e.g. the risk of injury (head impact and slipping behaviour) and the bounce behaviour of the ball. The very possibility to adjust material properties in a targeted manner and the well-known durability of plastics enable long use cycles (up to 10 years) with reliable playing characteristics.

At the end of the use phase, the pellets can be easily and cleanly separated from the equally used sand and the artificial turf. Next, the pellets can be reused or channelled into proper treatment operation. Such artificial turf pitches are both more efficient and less costly than natural turf, as they can be used all year round and more intensively and their maintenance is less expensive (e.g. no need to mow). Moreover, no environmental and resource-relevant maintenance with water or fertilisers is necessary. Only artificial turf can ensure the availability of playing fields for professional and amateur sports in all geographical regions and in an environmentally sound and favourably priced way. This holds true especially for conurbations.<sup>9</sup>

The microplastic release into the environment is extremely low, given the specific properties of the pellets (heavier than water, i.e. no washout e.g. in downpours of rain) – or a release is effectively prevented by technical retention measures (e.g. gutter filters with sedimentation stretches at runoffs, dirt trapping mats, shoes brushes at exits) and organisational measures in the operating of sport fields (e.g. regular cleaning of field edges, collecting sieves) (source: position DFB/DOSB).

Regarding alternatives to plastic pellets, no long-term data are available (infill-free systems). Moreover, as in the case of cork, the properties (“crumbling”) during the use phase of the field and the washout behaviour of such lighter weight material – and thus the release into the environment – are far from being as satisfactory as for infill plastic pellets.

**Conclusion:** Substituting infill plastic pellets for sport fields by alternative concepts causes a deterioration of the long-term properties and reduces safety of the sport fields. Moreover, providing sports fields for amateur sports becomes more expensive. Already now, the release into the environment is minimal and can be further reduced by rather straightforward measures. All in all, there is no environmental risk that would require additional regulatory measures.

---

<sup>9</sup> Also see the joint position of the German Olympic Sports Confederation (DOSB) and the German Football Association (DFB) of 14 May 2019:

[https://cdn.dosb.de/user\\_upload/Sportentwicklung/Stellungnahme\\_DOSB\\_DFB\\_-\\_ECHA-Beschraenkungsvorschlag\\_Mikroplastik\\_20190514.pdf](https://cdn.dosb.de/user_upload/Sportentwicklung/Stellungnahme_DOSB_DFB_-_ECHA-Beschraenkungsvorschlag_Mikroplastik_20190514.pdf)

Contact Dr. Denis Pahlke, Referent, Dept. Science, Technical and Environmental Affairs  
Phone: +49 (69) 2556-1637  
E-Mail: pahlke@vci.de

Internet: [www.vci.de](http://www.vci.de) · Twitter: <http://twitter.com/chemieverband> · Facebook: <http://facebook.com/chemieverbandVCI>

Verband der Chemischen Industrie e.V. (VCI)  
Mainzer Landstraße 55, 60329 Frankfurt/ Germany

- Registration no. in the EU Transparency Register: 15423437054-40
- The VCI is registered in the public listing of German Parliament on the registration of associations and their delegates (“öffentliche Liste über die Registrierung von Verbänden und deren Vertretern” des Deutscher Bundestages).

*The VCI represents the politico-economic interests of around 1,700 German chemical companies and German subsidiaries of foreign businesses. For this purpose, the VCI is in contact with politicians, public authorities, other industries, science and media. The VCI stands for more than 90 percent of the chemical industry in Germany. In 2018, the German chemical industry realised sales of 203 billion euros and employed ca. 462,500 staff.*