EU MICROPLASTICS BAN:

HOW INDUSTRY PRESSURE LED THE EUROPEAN CHEMICALS AGENCY TO DILUTE ITS PROPOSALS

An analysis by the European Environmental Bureau
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Introduction

Plastic pollution is a global concern. Today, plastics are everywhere in the environment, including in wildlife and in our own bodies. The urgent need to tackle this ubiquitous plastic pollution has been recognised and voiced by numerous actors. The European Parliament called for a ban on microplastics in cosmetics by 2020 and EU member states demanded a significant reduction in plastic pollution by 2020. Under the Plastics Strategy, the European Commission determined to tackle the risks posed by microplastics by banning intentionally added microplastics. In this regard, the European Chemicals Agency (ECHA) was tasked by the Commission in 2018 with preparing a restriction proposal. The draft proposal is currently being assessed by the experts of the ECHA's Risk Assessment Committee (RAC) and Socio-Economic Analysis Committee (SEAC).

Prepared by the European Environmental Bureau (EEB), this report documents how corporate lobbyists have been able to influence and effectively water down the ambition of this long-expected restriction on intentionally added microplastics already at its drafting stage, before it even reaches EU governments, policymakers and elected officials. The main way in which lobbyists have managed to influence the draft proposal is by securing an exemption for nanoplastics, despite a growing body of evidence that nanoplastics may actually be more toxic and worse for public health and the environment than larger microplastic particles. This could lead to the perverse situation if a ban kicks in under these terms that dangerous microplastics are replaced with even riskier nanoplastics. Lobbyists have also been able to delay the entry into force of the ban which will begin to be effective in reducing releases (by 50%) after 2028 and only reduce most releases after 2030. They have also convinced ECHA to propose a derogation for the use of microplastics in sport pitches.

About the actors of a restriction process under REACH

Dossier submitter (DS): is the institution making the proposal to ban or restrict the chemical or use of a chemical. It can be a Member state or ECHA in the name of the Commission. ECHA is the dossier submitter for the microplastics restriction. They presented their proposal (called restriction report or Annex XV dossier) in January 2019. Since then they have changed it several times to accommodate industry asks.

RAC (Committee for Risk Assessment): is a Committee formed by independent experts proposed by the Member states. RAC shall assess if the suggested restrictions are appropriate in reducing the risk to human health and/or the environment

SEAC (Committee for Socio-economic Analysis): also formed by independent experts proposed by the Member states. It's role is to

give its opinion on the socio-economic impacts of the restriction (including costs and benefits).

Commission: prepares a draft legal text with the conditions of the restriction.

Member states: vote on the proposal from the Commission

Timeline: https://echa.europa.eu/hot-topics/microplastics

Process where ECHA is the Dossier Submitter: after ECHA presents its proposal (called Annex XV dossier or restriction report), the RAC & SEAC give their opinions. Meanwhile stakeholders can comment on the proposal through public consultations, the last of which ends on 1 September 2020. The ECHA Secretariat can update the restriction proposal on an ongoing basis in light of stakeholder comments and RAC and SEAC opinions. Updates will be recorded in a Compiled RAC and SEAC Opinion document. This document is due to be finalised by December 2020 and then submitted to the European Commission. The Commission can make further changes before sending it to the European Parliament and Member States, which will vote whether it should become EU law. Page 1-4 represents the latest version of the legal text. This largely repeats the original ECHA proposal, but now includes industry loopholes. We know most these loopholes came from industry because of reactions by the ECHA secretariat to stakeholders detailed in the RCOM document and because EEB has official observer status in RAC and SEAC meetings.

Below we show some examples of how the ECHA secretariat changed the original proposal in order to accommodate industry demands. We first describe the original ambition with the text that was included in the initial proposal. Then we show the demands from industry to change this proposal and finally we show the changes to the initial restriction proposal made by ECHA secretariat in response to industry's demands. These changes are visible when comparing the Annex XV dossier, stakeholders' comments, RCOM documents describing whether comments are taken into account, and the actual proposed restriction described in the RAC and SEAC opinions.

Definition of microplastics: Size limits

Original ambition

Microplastics were defined in the restriction report p. 16 as: "solid polymer-containing particles, to which additives or other substances may have been added, and where ≥ 1% [weight to weight] of particles have (i) all dimensions 1nm ≤ x ≤ 5mm, or (ii) for fibres, a length of 3nm ≤ x ≤ 15mm and length to diameter ratio of >3.

Industry asks

ECHA received an incredibly high number of industry comments (response to comments received in PC (RCOM) p6) and requests to change the definition RCOM p8. to increase the lower size limit of 1nm (particles) and 3nm (fibers).

For example CEFIC comments to the public consultation and CEFIC's position paper[1] "In order to keep the coherence of the regulation, as mentioned in the Q&A document prepared by ECHA, the same interpretation should be adopted for microplastics and a higher minimum size should be set and must be clearly stated in the restriction."

Changes introduced by the ECHA Secretariat

Microplastics should be defined as particles with a size between 100nm and 5mm or fibers with a length between 300nm and 15 mm.
This size is 100 times higher than the original proposal.

Justification for the changes

ECHA's response to comments from the public consultation p9: " The Dossier Submitter has considered the concerns. As a result of this consideration, the Dossier Submitter considers that while the size limits for the definition of Microplastic should remain as they have been outlined above, there should be a consideration how the restriction proposal can be enforced. Therefore, for the purpose of enforcement the Dossier Submitter proposes that the size limits would be set as follows: ≥ 1% w/w of particles have (i) all dimensions 0.1µm ≤ x ≤ 5mm, or (ii) a length of 0.3µm≤ x ≤ 15mm and length to diameter ratio of >3. More details on the revision is provided in Section 2.2.1.1 of the Background Document."

1 CEFIC Position Paper. Industry views on microplastic definition issues: Practical examples. August 2019.

Also reflected in RAC opinion page 14-15
"During the consultation on the Annex XV report, several stakeholders stated that this lower limit was not enforceable and proposed an alternative, larger, limit of 1 µm… Taking into account these comments, and based primarily on enforceability/practicality considerations, the Dossier Submitter proposed to increase the lower size limit from 1 nm to 100 nm for particles and from 3 nm to 300 nm for fibre-like particles recognising the significant practical concerns linked to the originally proposed limits (e.g. particle characterisation at the nanoscale)."

Impact on the effectiveness of the restriction

Increasing the lower size limit will allow industry to continue using or switch to nano particles that are both more toxic and more easily absorbed by living cells.

See RAC opinion page 15: "RAC considers that increasing the lower size limit to 100nm may lead to regrettable substitution to particles with smaller size, potentially compromising the effectiveness of the proposed restriction. The toxicity of particles is expected to increase with the reduction of its size linked to an increase in the surface/volume ratio."

As RAC states (response to comments from the public consultation, p13): "The omission of polymer nanoparticles <100 nm from the scope of the restriction could potentially allow the continued use of nano-scale polymer particles consistent with the microplastic concern, or promote innovation to smaller particle sizes to circumvent the restriction. Taking into account hazard and analytical practical issues RAC considers that the lower limit established for the purposes of a restriction should be the smallest size which can be measured today and, assuming analytical progress, the future. In this case, a lower limit is not appropriate and RAC has concluded that no lower limit should be set for particles and fibres in the microplastics definition (more details on RAC analysis can be found in the opinion document). "

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Pollution from sport pitches

Tyres are ground-up into rubber granules and used as infill material for sport pitches. This use is considered the single greatest source of intentionally added microplastic pollution, running from 2,000 to 52,000 tonnes per year or 16,000 on average.

Ambition of the original proposal

Sports pitches were not considered originally, but ECHA identified them as a major source of pollution and added **four options**:
1. A full and immediate ban on selling of rubber granules.
2. A full ban of granules after 6 years.
3. No ban, but user instructions to limit pollution, plus reporting requirements.
4. No ban, but with concrete measures to limit pollution, with a three year transition period

Industry asks

Industry made a lot of comments (see the response to comments from the public consultation, p 49-50), with the rubber sector, tyre recyclers and pitch manufacturers asking not to ban this use.

SEAC draft opinion page 17: "During the consultation, stakeholders from the (rubber) infill industry (tyre recyclers, pitch manufacturers) as well its downstream users indicated that a full ban of infill material, which is covered by the microplastics definition, is not proportionate in their view."

ECHA Secretariat response:

So far, ECHA has provisionally selected option 4 (see SEAC draft opinion p 3. Table 1. Proposed derogations by the Dossier Submitter). RAC is of the opinion that this use should not be derogated and backed option 2. "RAC has a clear preference, from an emissions reduction, practicality and enforceability perspective, for a ban on the use microplastics as infill material on synthetic sports turf pitches to be implemented as soon as possible. RAC concludes that the use of [remediation measures] over the longer term would be unlikely to result in an adequate control of risk." (RAC opinion p.57)

In our opinion, the ECHA Secretariat is now trying to undermine RAC's opinion through the public consultation to the draft SEAC opinion (See SEAC PC Specific Information Requests 1.b and 1.c) by asking for further information to try to demonstrate that alternatives may not be available and asking for further information on the impacts of the option favoured by ECHA (derogation).

Impact on the effectiveness of the restriction

The options considered in the proposal included:

- Ban (with or without delays before entry into force). This would mean that rubber granules can not be sold anymore for use in sport pitches.
- Derogation (no ban) with instruction for use and monitoring requirements. This would mean that rubber granules can be sold and used in sport pitches. But the tyre recyclers would have to provide users with recommendations on how to reduce releases and sport pitches would need to report to ECHA yearly their releases.
- Derogation (no ban) with concrete measures to reduce annual releases of microplastic to a maximum of 7g/ m^2 (50k/year er pitch)

If the rubber industry's proposal to avoid a ban backed by ECHA is finally accepted, microplastic releases will continue across Europe (ECHA microplastics restriction background document p. 351, mentions that 13,000 full-sized synthetic turf pitches and 47,000 so-called mini pitches were used for football in the EU in 2016). Mitigation measures (retention devices, filters , equipment cleaning, changes in players behaviour, etc.) are difficult to implement, in particular by non professional pitches and impossible to enforce by local authorities. In any case, they will never stop all microplastic loss and in the best scenario this option will continue to allow at least 1600 tonnes of microplastic to be lost from pitches every year.

It will also maintain other health and environmental impacts posed by this use, such as:

- Exposure of players to the carcinogenic substances released from tyres (PAHs);

- Huge granule spills generated during tyre grinding and granule transport (see image in the study).

- Impacts of waste landfilling and incineration of spent sport pitches once they finish their life-cycle.

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Reporting requirements

Ambition of the original proposal

Restriction report p. 83 and 84. Paragraph 8 of the restriction proposal establishes reporting requirements for industrial and other permitted uses of microplastics. 12 months after the entry into force (EiF) of the restriction, the following information should be sent to ECHA annually:
- the identity of the polymer(s) used in the previous year,
- a description of the use of the microplastic,
- the quantity of microplastics used in the previous year, and
- the quantity of microplastics released to the environment, either estimated or measured in the previous year.

Industry asks

Over 80 industry stakeholders asked ECHA to modify the reporting requirements (response to the comments page 53). Industry asked to exempt pellets from the restriction (including reporting obligations) and to ease the reporting obligations for other uses.

CEFIC comments to the public consultation: "The restriction proposal introduces an extensive set of reporting requirements to a very large number of derogated uses, creating significant additional administrative burden without significant added value."

PlasticsEurope comments to the public consultation: "PlasticsEurope strongly advocates that plastics raw materials such as pellets should not be regulated under the proposed REACH restriction for intentionally added microplastics. We are therefore calling for a full exemption i.e. exclusion, from the current Annex XV proposal for a restriction on intentionally added microplastics for plastics raw materials since these will be covered more adequately by the OCS certification scheme which is currently under development."

ECHA Secretariat (acting as dossier submitter) response:

ECHA watered down the reporting obligations in their own proposal (as evidenced in the RAC opinion p. 4):

"36 months after EiF, the information to be reported should be:
a) a description of the use(s) of microplastic in the previous calendar year,
b) For each use, generic information on the identity of the polymer(s) used,
c) For each use, an estimate of the quantity of microplastic released to the environment in the previous calendar year."

If approved, the reporting obligation is delayed by two extra years, companies are no longer obliged to report the precise identity of the polymers they use or the precise quantity used or released.

Impact on the effectiveness of the restriction

The best estimate for total emissions of pellets across Europe is probably from Eunomia 2018 with a range estimate of 16,888 – 167,431 tonnes per year. This doesn't factor in how many of these 'lost' pellets actually end up in the sea, but instead any pellets escaping the standard processes of containment at sites.

As highlighted by the RAC committee, pellets are already well-evidenced to contribute significantly to the microplastic pollution problem across Europe. The aim of the reporting requirement is to monitor "the effectiveness of the restriction and indicate if there is a need for further action related to those uses that are derogated, including for industrial uses"... (Restriction report p91). This is, to support further parallel measures that should be implemented as soon as possible to address losses. This objective will not be met until the law requires mandatory supply chain accreditation with certification to verify whether or not containment measures are working. Industry routinely underestimates use of microplastic, according to a report for the European Commission.

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DELAYS

Ambition of the original proposal

The original proposal already included long delays for the ban of several uses:

- Rinse-off cosmetics: 4 years
- Leave on' cosmetic products (make-up, lip, nail care): 6 years
- Fragrance encapsulation: 5 years
- Pesticide encapsulation: 5 years

Fragrance encapsulation

The cosmetics industry submitted thousands of pages of comments seeking derogations and delays for multiple product categories, see the RCOM (page 40). ECHA details one of the main demands from industry, to grant a derogation for a widely used function of microplastics: fragrance encapsulation.

Industry asks: Although the original proposal already included long delays for the ban of microplastics in cosmetic and detergent products (4 years for its use in rinse-off cosmetics, 5 years for fragrance encapsulation and 6 years for leave on cosmetics), industry asked for further delays, including a delay of 10 years to ban the use of microplastics in fragrance encapsulation (response to the comments pages 39 and 40).

ECHA Secretariat response: ECHA changed its proposal from 5 to 8 years, which would mean the restriction would come into effect in approximately 10 years from now (response to the comments page 40).

Pesticide encapsulation

Industry asks: Numerous comments were submitted by large sector organisations (the European Crop Protection Association, Euroseeds, and Fertilizers Europe) as well as individual companies asking for a longer transitional period for the use of microplastics in pesticides encapsulation. They argued that alternative biodegradable pesticide capsules would have to go through a lengthy re-approval process required by the EU plant protection products regulation (EC) No 1107/2009 before they could be placed on the market (response to the comments page 26 and 27).

ECHA Secretariat response: ECHA changed its proposal from 5 to 8 years: "Considering ECPA's detailed explanations, and after confirming with DG Santé, the Dossier Submitter revised its proposal for the transition period for capsule suspension plant protection products from five years to eight years after entry into force." (response to the comments page 27).

Impact on the effectiveness of the restriction

The following table created by the EEB from the latest restriction proposal shows the expected emissions if the delays proposed by ECHA are approved. We use the figures on emissions per source and year as estimated by the Dossier Submitter in the restriction report. As it can be seen, the restriction will only begin to be effective in reducing releases (by 50%) after year 2028 and only reduce most releases after 2030 .

			Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	After year 9
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Emissions (tonnes)	cosmetics	microbeads	55	0	0	0	0	0	0	0	0	0
		Rinse-off 4y	3100	3100	3100	3100	3100	0	0	0	0	0
		Leave-on 6y	600	600	600	600	600	600	600	0	0	0
	detergents	microbeads	50	0	0	0	0	0	0	0	0	0
		Fragrances (8y)	200	200	200	200	200	200	200	200	200	0
		other uses 5y	8285	8285	8285	8285	8285	8285	0	0	0	0
	medical devices 6y		1100	1100	1100	1100	1100	1100	1100	0	0	0
	fertilisers 5y		5000	5000	5000	5000	5000	5000	0	0	0	0
	Pesticides (8y)		500	500	500	500	500	500	500	500	500	0
	Other agriculture uses 5y		4500	4500	4500	4500	4500	4500	0	0	0	0
	Infill sport pitches (if ban with 6y delay)		16000	16000	16000	16000	16000	16000	16000	0	0	0
	Derogated uses		3010	3010	3010	3010	3010	3010	3010	3010	3010	3010
	Total including derogated		42400	42295	42295	42295	42295	39195	21410	3710	3710	3010
Releases reduced (tonnes)				**105**	**105**	**105**	**105**	**3205**	**20990**	**38690**	**38690**	**39390**

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