

# The EU Ban on Microplastics

March 2023

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## Background to EU Action

- A number of EU member states started to adopt their own bans on microbeads;
- Cosmetics Regulations are harmonised in the EU – different rules in Member States threatens the EU ‘Single Market’.
- Other countries around the world were also adopting microbeads bans (USA, Canada, Brazil..)
- In 2016, the EU asked ECHA to prepare a Restriction under the EU Chemical legislation (this is controversial). This would apply in all EU Member States.
- But while most national and international bans targeted Microbeads in Rinse Off Cosmetics, the EU aims to regulate **all** microplastics in any products where they are intentionally added (fertilisers, paints , detergents, cosmetics....)
- In 2021, ECHA made recommendations to the EU Commission. The EU Commission published its legal proposal in August 2022.

## EU Commission microplastics proposal for cosmetics

With regard to cosmetics, the Commission proposes:

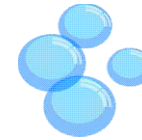
- to ban **microbeads** in rinse off products as soon as the Restriction comes into force (EIF)
- to ban other microplastics in **rinse off** 4 years after EIF
- except for make-up, lip and nail products, ban microplastics in leave on cosmetics **6** years after EIF
- ban microplastics in make-up lip and nail products **12** years after EIF, provided that after 8 years, such products still containing microplastics should be labelled 'Contains Microplastics'

# Economic impact on the cosmetics industry

**LEAVE ON PRODUCTS**

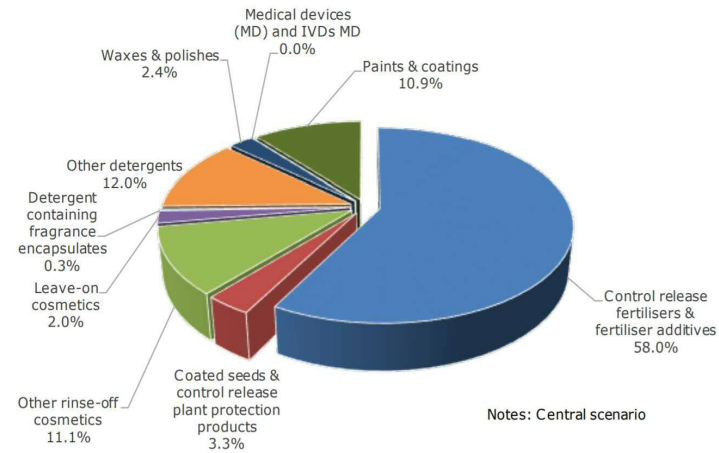
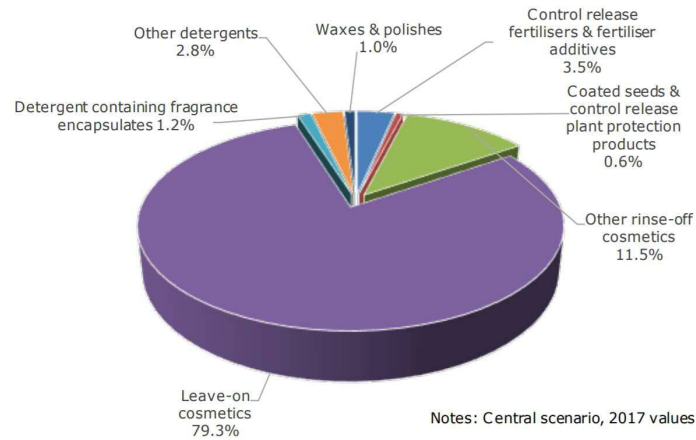


Bear **79,3%** of the costs



Represent **2%** of the overall emissions

ANNEX XV RESTRICTION REPORT – MICROPLASTICS



ECHA publication on all restrictions  
 54% of restriction costs = microplastics of which leave on 79.3%  
 43% of all EU restrictions on leave on cosmetics  
 Make up lip and nail contribution 0.22% of total emissions



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# Consumer habits use & disposal leave on cosmetic products

## CE survey

1 Down the drain Rinse off cosmetic products

2 Trash Disposal Wipe off cosmetic products

- ❖ Make-up category: **75%** wipe off (wipes/ cotton pads.) **93%** of those users throw wipes/pads in bin therefore to municipal trash
- ❖ Nail-varnish and nail-varnish remover category: **76%** remove nail varnish/remover using cotton pads/ wipes. **95%** of those users throw wipes/pads in trash
- ❖ Lipstick category: 69% of users remove with cotton pads/wipes only. 94% of them throw in the bin.

3 To the environment either immediately on use or after a period of time

Skincare

by category  
wipe off

sun lotion

13%  
wipe off

Deodorant  
Antiperspirant

8%  
users remove  
using cotton  
pads/wipes

Hair styling

6%  
users remove only  
by cotton  
pads/wipes

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## The challenge of finding alternatives

- Product performance is key for consumers, as Kantar survey showed;
- No known alternatives for many critical functions of Microplastics used in leave on cosmetics;
- No known alternatives in 85.5% of formulations, the vast majority are leave-on products;
- One to one substitution of ingredients is not feasible. Redesign of core technologies with the same level of performance;
- Alternatives have been explored but failed to meet performance, safety and environmental standards;



- ECHA did not study the **technical and economic feasibility** of alternatives.

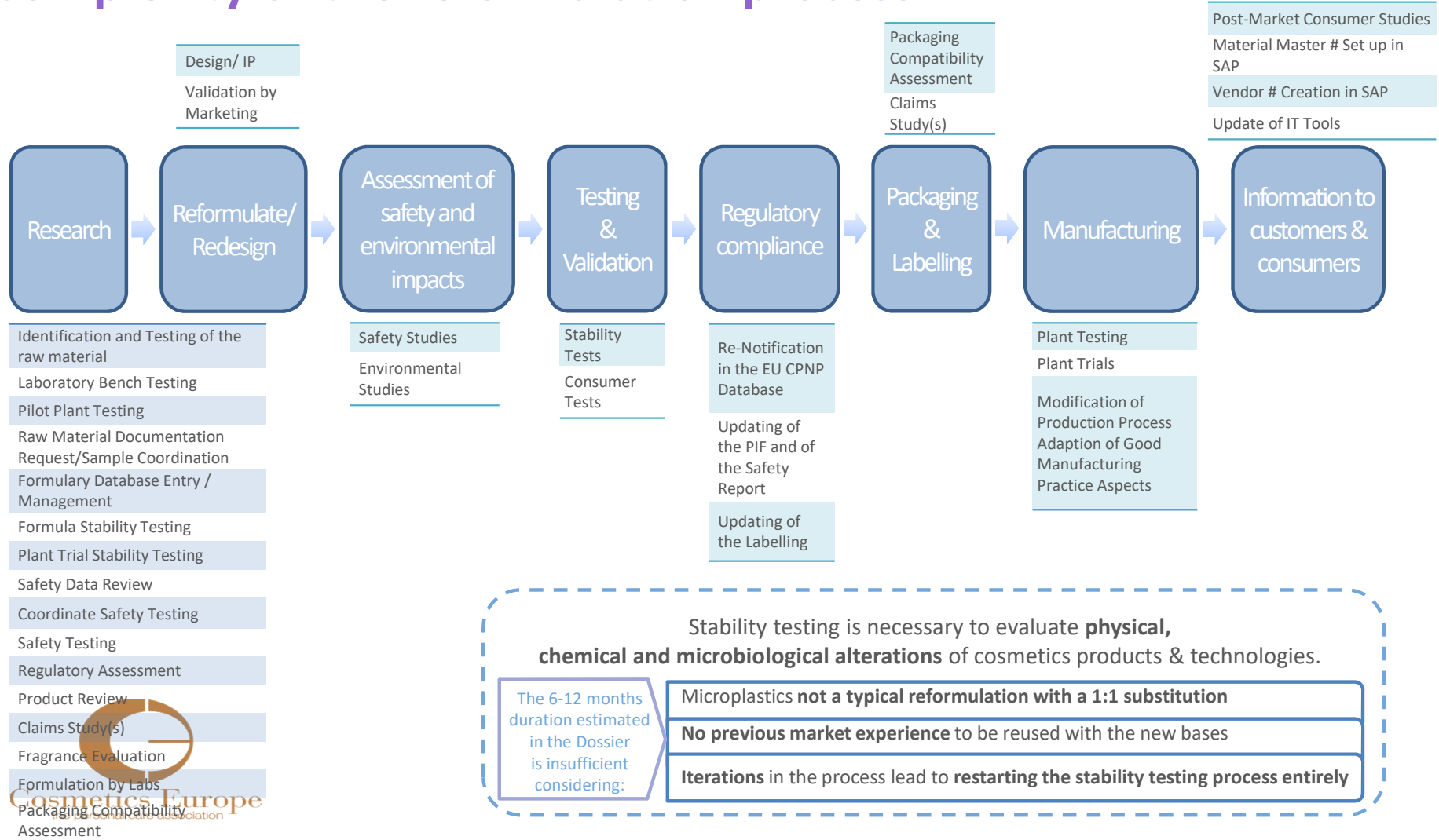
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## The ECHA view of alternatives

- ECHA assumes that there are alternatives for microplastics in all cosmetics products. e.g., reference to Nordic Swan Eco label;
- Nordic Swan label: 37 Make up products from 1 niche Danish brand, 6 lip ( lip balm) products from 2 Swedish Brands



# Complexity of the reformulation process





## Outside the Scope of the Ban

- Polymers **occurring in nature** which have not been chemically modified
- Polymers that have a **solubility** greater than 2 g/L;
- Polymers without carbon atoms in their structure;
- (Bio-) degradable polymers [nb needs to be proven in at least **three** different environmental compartments];
- Synthetic polymer microparticles the physical properties of which are permanently modified during intended end use in such a way that the polymer no longer falls within the definition eg film formers;
- Microplastics are permanently incorporated into a solid matrix at the time of use;
- However, nb labelling and reporting obligations for some derogated substances including film formers

# Additional Cosmetics Data on Make Up, Lip and Nail Products

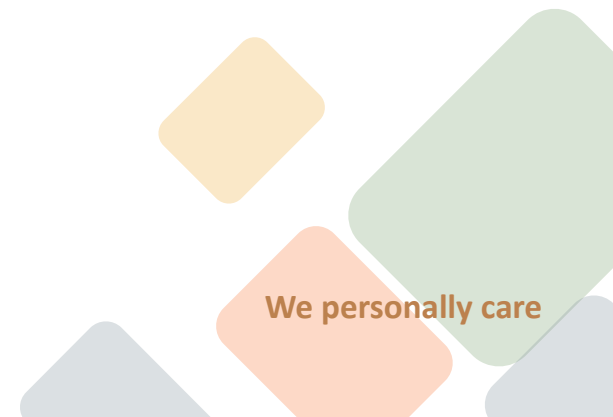
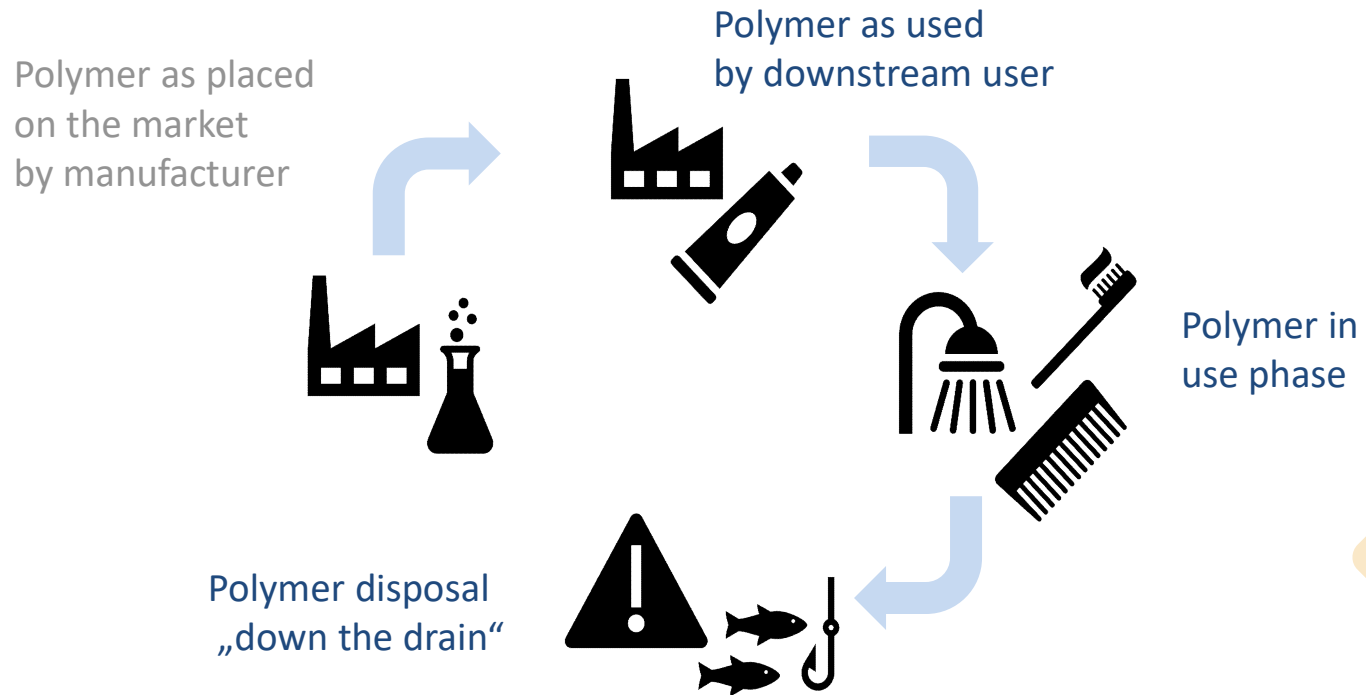
## CE Survey covering the 79% of the market

- A total number of **177 ingredients** used in make-up, lip and nail products have been identified.
- The total extrapolated number of make-up, lip and nail formulas containing Microplastics impacted by the current restriction proposal is **23,270**.
- the total estimated tonnage of Microplastics used in make-up, lip and nail products is **330.67 tons - much lower than the tonnage estimated by ECHA (40%)**
- This is clear evidence that there are extremely small quantities of synthetic polymers in Leave On products used to generate a wide range of specific functional effects

## Case study: voluntary phase out of microbeads

- Cosmetics Europe recommendation of Oct. 2015 to phase out microbeads by 2020;
- Number of formulations containing Microplastics: 296 formulations in total, but only 130 reformulated (26 reformulations/year across the industry);
- Number of Microplastics in total: only 2;
- Number of Microplastics ingredients per formulation: only 1;
- Function of the Microplastics ingredients in the formulation: only exfoliating and cleansing, not affecting the architecture of the product;
- Availability of suitable alternatives meeting the performance requirements: yes
  - **56% of the formulations had to be discontinued**
  - **35.9% of total cost allocated to R&D**
  - **The substitution took 5 years!**

# Key Areas for Microplastic Decision Tree



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**Q: Does the mixture contain 'Polymers' >0.01% (w/w) (§1) / Polymer definition of Article (3(5), EC No 1907/2006:**

- ... a substance consisting of molecules characterized by the sequence of one or more types of monomer units with less than a simple weight majority of molecules of the same molecular weight
- ... contain at least three monomer units

No

Not considered

- Out of Scope: Polymer or polymer mixture does not fall under the Microplastic definition (§2 and §3)
- Annex XV Restriction Proposal does not apply

No

No

Yes

**Q: Constitutes the polymer to at least 1 % by weight to a solid\* particle or builds a continuous surface coating with defined physical boundaries / interfaces and a size of equal to or less than <5 mm<sup>1</sup> in all dimensions or the length of the particles is equal to or less than <15 mm<sup>1</sup> and their length to diameter ratio is greater than 3?**

<sup>1</sup> lower size limit: where the concentration of synthetic polymer microparticles (>0.01%) cannot be determined by existing analytical methods or accompanying documentation only the particles shall be considered of at least 0.1 µm of any dimensions of particles <5mm and 0.3 µm for any dimension, for particles with a length that is equal to or smaller than 15mm (ratio >3)

Yes

**Q: Polymer is not of natural origin and/or not degradable acc. Appendix 10 of the restriction and/or has a water solubility ≤2g/l (at pH7) and/or does contain carbon atoms (§2)**

Yes

- Polymer is considered a synthetic polymer microplastic (SPM)

**Q: As substances on their own or in mixtures does one of the generic 'condition of end use' derogation criteria (§5) apply ?**

- Release to the environment during end use is prevented by technical means
- Physical properties during end use are permanently modified
- Microplastic permanently incorporated into a solid matrix during end use

Yes

- Use profile to be assessed in detail. **Derogation criteria may apply** (next page).

No

- Considered as SPM
- „Placing on the market“ ban applies after legal EIF

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**Q: Derogation 5.b. Physical properties of microplastic are permanently (non-reversible) modified during intended end use and no longer fulfil the meaning of a SPM**

No

Q: Derogation §5a\* or §5c\*\* apply?

No

Yes

➤ „Placing on the market“ ban applies

➤ „Placing on the market“ ban does not apply  
➤ But: labelling (§7)<sup>1</sup> / Reporting (§8)<sup>2</sup> obligations apply

\* §5 (a) synthetic polymer microparticles which are contained by technical means so that releases to the environment are prevented when used in accordance with the instructions for use during the intended end use

\*\* §5 (c) synthetic polymer microparticles which are permanently incorporated into a solid matrix during intended end use

Yes

Q: Does the use profile fall into one of the following categories (at the point of use) ?

Film forming - are intended to yield a continuous polymer film

No

Yes

➤ „Placing on the market“ ban does not apply  
➤ But: labelling (§7)<sup>1</sup> / Reporting (§8)<sup>2</sup> obligations apply

cease to exist, such as in instances where they ‘dissolve’ (e.g. polyelectrolytes or certain detergents) or permanently ‘swell’ in contact with water to such an extent that they can no longer be considered to be solid particles (e.g. super absorbent polymers; SAPs.) or exceed the relevant size dimensions (e.g. >5mm).

No

➤ Recheck if physical properties of microplastic are permanently (non-reversible) modified

Yes

➤ „Placing on the market“ ban does not apply  
➤ But: labelling (§7)<sup>1</sup> / Reporting (§8)<sup>2</sup> obligations apply

<sup>1</sup> Labelling obligations (§7) – applies 24 months after EiF

- Suppliers of products containing SPM derogated by §5 (a)-(c) shall provide instructions for use and disposal .....to avoid releases of synthetic polymer microparticles to the environment (text and where appropriate pictograms).

<sup>2</sup> Reporting obligations (§8) – applies 24 months after EiF **To Be Clarified**

Starting from 24 months after EiF, manufacturers and industrial downstream users of synthetic polymer microparticles in the form of pellets, flakes, and powders used as feedstock in plastic manufacturing at industrial sites, and

Starting from 36 months after EiF other industrial downstream users and suppliers of synthetic polymer microparticles referred to in paragraph 4a and 5 placed on the market for the first time or using synthetic polymer microparticles at industrial sites,

....shall submit the following information to the Agency by 31 May of each year:

(a) a description of the uses of SPM in the previous calendar year;

(b) for each use of SPM, generic information on the **type** of the polymers used;

(c) for each use of SPM, an estimate of the quantity of synthetic polymer microparticles released to the environment in the previous calendar year. ]

## Microplastics – Next Steps

- The EU Member States have to vote on the Commission Proposal – they can negotiate amendments with the Commission.
- The consultation with the EU Member States will be concluded in the coming months
- We can expect the Restriction to be finally adopted in Q4 2023/Q1 2024

**THANK YOU**

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**Cosmetics Europe**  
the personal care association