Microbeads and the industry's environmental responsibility

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Plastic microbeads are a common ingredient of cosmetic and personal care products such as face scrubs, soaps, lotions and toothpastes. They are added to these products for a number of purposes, such as to make the product more abrasive or for decoration.

Cosmetics Europe,[1] the European trade association for the cosmetics and personal care industry, defines plastic microbeads as "intentionally added, water insoluble, solid plastic particles (5 mm or less in size)", which are "used to exfoliate or cleanse in rinse-off personal care products"; this specification was added to the definition in 2016, following two international, multi-trade association plastic workshops held in order to harmonise definitions. This definition distinguishes plastic microbeads from microplastics, which are any 5 mm or less, water insoluble, solid plastic particles found as marine litter.

The environmental issues

Following use by consumers, the plastic microbeads present in cosmetic and personal care products are washed into domestic sewage. The microbeads are, however, too small to be completely filtered out by sewage treatment systems. A proportion is consequently emitted from the sewage treatment plant and, ultimately, is washed out into the marine environment.

The Joint Group of Experts on the Scientific Aspects of Marine Environmental Pollution (GESAMP), raised concerns that microplastics could be ingested by marine wildlife, with the possibility of physical harm and reproductive or toxic effects.[2] Nevertheless, according to Cosmetics Europe, there is no peer-reviewed research showing that microplastic litter harms fish or other aquatic life at environmentally relevant levels. There is also some evidence suggesting that microplastics enter the human food chain, but based on current evidence they are not thought to represent a health risk.

Studies estimate that only a small proportion (0.1% to 4.1%) of marine microplastic pollution in Europe originates

from cosmetic product sources. The major sources of microplastic pollution have been identified as car tyre wear, industrial scrubbers used to blast clean surfaces, and plastic powders used in moulding.[3]

On 26 June 2017, the European Union (EU) Commission launched a public consultation investigating options for reducing releases to the environment of microplastics from all sources. The stated aim of this consultation is to collect the views of stakeholders and citizens with regard to policy options available to reduce the level of microplastics entering the marine environment. This consultation will close on 16 October 2017 and a report will be published at the end of this year.

History of regulatory action in the European Union (EU)

The EU Ecolabel is used to identify products that are both environmentally friendly and of good quality. Published in December 2004, EU Commission Decision 2014/893/EU[4] prohibits the use of the Ecolabel by rinse-off cosmetic products containing microplastics, meaning that they cannot be marketed as being environmentally friendly.

A number of cosmetic product manufacturers have either discontinued or pledged to phase out the use of plastic microbeads. Furthermore, in October 2015, Cosmetics Europe recommended its member companies to discontinue the use of microbeads in rinse-off cosmetic and personal care products by 2020. A study commissioned by the European Commission indicated that voluntary measures taken by industry could potentially reduce microplastic use in cosmetic and personal care products by almost 50% by 2020, and an outright ban might not be necessary given that a number of producers had already committed to phasing out microbeads.[5] This was confirmed by a survey conducted in 2016 by Cosmetics Europe which showed an 82% reduction in the use of microbeads following their discontinuation recommendation.

Moreover, a recent report by the European Commission concluded that the introduction of an outright ban on the use of plastic microbeads in the EU would be legislatively complex. It is unclear as to whether any of the existing Directives and Regulations (e.g. the Cosmetics Regulation, the REACH Directive, the Eco Design Directive or the Urban Waste Water Treatment Directive) would be suitable to introduce a ban.

Action in the UK

In a recent report,[7] a UK parliamentary committee highlighted that, despite the intention of the cosmetics industry to phase out the use of microbeads, this commitment is voluntary and may not be adopted universally. It was concluded, therefore, that an outright legislative ban would be 'beneficial in bringing greater consistency in the industry'.

The position of the UK Government is that they are prepared to act unilaterally to legislate against the use of plastic microbeads in the absence of a common position in the EU and particularly if the current voluntary approach by industry is deemed inadequate.

Subsequently, in September 2016, the UK Department of Environment, Food & Rural Affairs (DEFRA), announced that it planned to ban the use of microbeads in cosmetics and personal care products by October 2017. A consultation on the proposed ban was published on 20 December 2016, and closed on 28 February 2017. The purpose of the consultation was to seek views on proposals

to ban the manufacture and sale of cosmetics and personal care products containing microbeads which may harm the marine environment. The consultation also sought to gather evidence on the extent of the environmental impacts of further sources of potential marine plastic pollution, to inform future UK actions to protect the marine environment.
The proposed ban is intended to apply to both the manufacture and sale of cosmetics and personal care products containing plastic microbeads in the UK. It would not apply to bigger sized plastics found in other cosmetic and personal care products, or to household and industrial cleansing products containing microbeads. DEFRA expect the ban to come into force by 1 October 2017 and to apply to manufacture from 1 January 2018, with a ban on sales expected from 30 June 2018.

Action in France

On 8 March 2017, France published a decree to ban the placing onto the market of rinse-off cosmetic products intendent to be used as exfoliants or cleansers containing plastic microbeads.[8] The decree will enter into force on 1 January 2018.

Action in the Nordic region

In April 2016, The Nordic Council of Ministers for the Environment (the official inter-governmental body for cooperation in the Nordic Region), published the Joint Nordic Statement on marine plastic litter and microplastics,[9] according to which they agreed "on the need to assess the effectiveness of the relevant international and regional regulatory framework to combat marine plastic litter and microplastics; including their implementation and enforcement".

Can plastic microbeads be banned unilaterally by EU Member States?

As a national ban on microbeads could be considered to restrict the free movement of goods, a Member State would have to show that the ban was justified; this may be justifiable on environmental protection grounds.

The Swedish Chemicals Agency has already assessed the issue of plastic microbeads, and has concluded that a national ban on the use of microbeads in Sweden could be formulated to satisfy the conditions needed to introduce a national ban. The unilateral action already proposed by the UK and France may therefore also be acceptable.

Actions outside Europe

The United States Congress passed the Microbead-Free Waters Act of 2015, which will ban the marketing of rinse-off cosmetics that contain intentionally-added plastic microbeads from 1 January 2018. The manufacture of these products has been banned since 1 July 2017.

Under the proposed change to the Canadian Environmental Protection Act (Microbeads in Toiletries Regulations) new regulations will affect the manufacture and import of microbeads. The proposed regulations would prohibit the manufacture, import, sale or offer for sale of toiletries (any personal hair, skin, teeth or mouth care products for cleansing or hygiene, including exfoliants and any of those products that is also a natural health product or a non-prescription drug) that contain plastic microbeads. The manufacturing or importing prohibition is intended to come into effect on 1 January 2018, with the prohibition of sale or offer for sale of these products by 1 July 2018. If toiletries are also non-prescription drugs or natural health products, the bans will apply on 1 July 2018 and 1 July 2019 for manufacturing and sale, respectively.

Australia has launched a voluntary ban in effect for mid-2018. The Australian Environment Minister announced that the federal government will take action to institute a formal ban if, by 1 July 2017, it is clear that the voluntary phase-out will not achieve its objectives.The New Zealand government has announced plans to ban the manufacture and sale of rinse-off personal care products containing plastic microbeads. A public consultation closed on 28 February 2017. On 8 March 2017, the proposed ban was notified to the Committee on Technical Barriers to Trade. The products affected would be personal care products containing microbeads that are rinsed off. The deadline for comments finalised in May 2017 and the ban has been proposed to be effective from 1 July 2018.

The Indian Government has requested a report on the use of microbeads in cosmetics and on their possible detrimental or harmful effects on humans.

Other countries announcing plans to take actions on microbeads include Taiwan and South Korea. At the time of submission of this article, these bans are expected to be applied from June/July 2017.

Conclusion

Despite the relatively minor contribution of cosmetics and personal care products containing plastic microbeads to marine plastic contamination, social pressure is moving more and more countries to establish legislative bans on the use of plastic microbeads in this type of product. While all contributions to reducing contamination count, an analysis of the economic and legal implications is advisable, considering that the voluntary phase out by the industry has proven to be successful. PC

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