

The EU's push for biodegradable polymers in mineral fertilizers

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The EU Commission launched the Circular Economy Action Plan early in 2018. Among the main priorities of the plan is the reduction of plastic use and waste, thus the improvement of the re-use and recycle of plastics, at both business and consumer level, remain the major target for the upcoming years. In 2017, the EU Commission put plastics production and use high on the agenda by setting the goal of ensuring that all plastic packaging is recyclable by 2030.

Reduction of microplastics is part of this scheme. Microplastics, are pieces of plastic less than 5mm long, accumulate in the sea and due to their small size, the marine life can easily ingest them. Microplastics have been also found in the air, drinking water and foods such as salt or honey, with potential impacts on human health. In total, it is estimated that between 75,000 and 300,000 tonnes of microplastics are released into the environment each year in the EU.

In this framework, the EU Commission has put forward a proposal to restrict some intentionally added microplastics in products, including polymers used in fertilizers, by 2021.

Fertilizers Europe cooperation with the European Chemical Agency (ECHA)

Fertilizers Europe, the European Fertilizers Industry Association, worked hand-in-hand with ECHA and

Did you know?

Polymers in fertilizers are used for two main purposes:

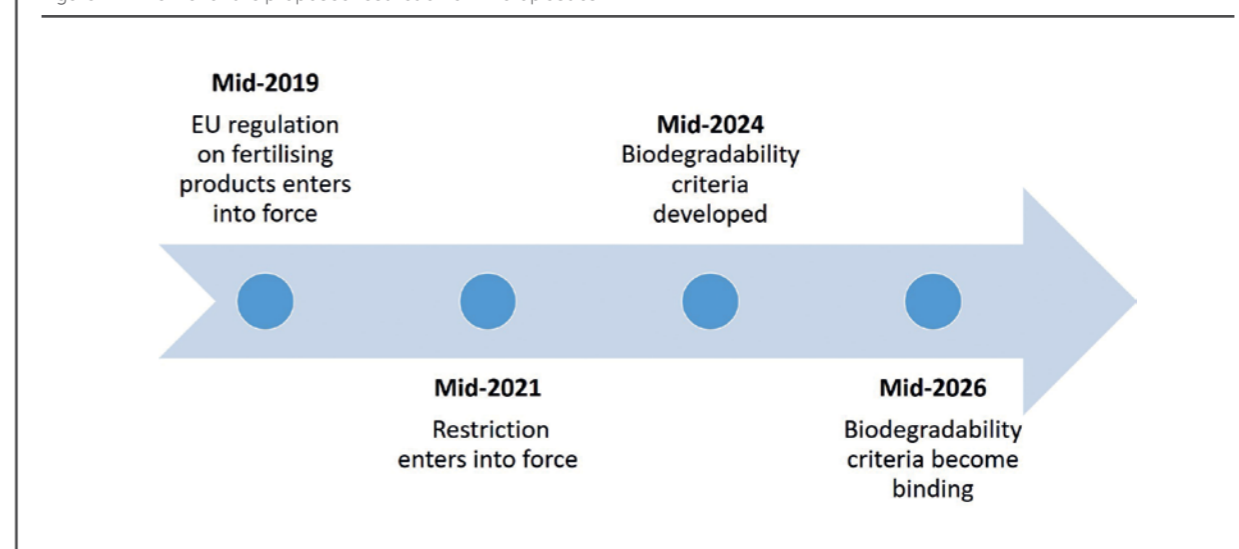
1. Technical additives (such as anti-caking) are used in fertilizers to prevent the formation of lumps in moist conditions which makes it difficult to pack, transport and keep them.
2. Controlled release fertilizers (CRF) are coated with a tiny layer of polymer which allow to release nutrients in a very timely and targeted way to various crops (trees, flowers and some cash crops) and used in closed environments such as potting plants or greenhouses. The function of this product is ensured by a coating around the granule of fertilizer, which is partly composed of microplastics, i.e. polymers. The release mechanism for the polymer coated material is in general water penetration through the coating followed by swelling of the granules and gradual release of the dissolved nutrients over time. This coating around CRF thus helps to ensure the true function of the product, which is to ensure a very high Nutrient Use Efficiency (NUE). This means that nutrients (such as nitrogen, phosphorus and potassium) are released to the plants in a more targeted way and that there are less losses to air and water.

provided the industry's input on the intentionally added microplastics used in fertilizers. By providing sound evidence and expertise advice, Fertilizers Europe worked out with the regulators a workable solution which in its original form could have a significant impact on the fertilizer industry in the case of a total ban of polymers. At present, there are currently no alternatives to the polymers used in controlled release fertilizers and in technical additives (e.g. anti-caking and anti-dust agents).

Proposed measures and the impact on fertilizers

The Annex XV restriction report that was published by ECHA on 30 January 2019, clearly defines the concerns associated with microplastics particles which pose risks for the environment and human health, due to their persistency in the environment and for which ECHA has insufficient information to justify the conclusion that 'the risk is adequately controlled'. Therefore, the restriction for ECHA is an action to minimize and contain any further release due to their persistency

Figure 1. Timeline for the proposed restriction on microplastics.



in the environment, the same principle is used for other substances of concern under REACH (such as PBT/vPvB).

The European Chemical Agency is therefore proposing a restriction for most of chemical sectors, comprising three measures:

- A restriction on the placing on the market of microplastics on their own or in mixtures where their use will inevitably result in releases to the environment, irrespective of the conditions of use;
- A labelling requirement to minimize releases to the environment for uses of microplastics where they are not inevitably released to the environment but where residual releases could occur if they are not used or disposed of appropriately;
- A reporting requirement to improve the quality of information available to assess the potential for risks in the future.

Intentionally added microplastics shall not be placed on the market as a substance on its own or in a mixture as microplastic in a concentration equal to or greater than 0.01% w/w. According to the ECHA's proposal, fertilizers regulated under the New Fertilizers Regulation are exempt from the restriction. The industry

ECHA seek synchronisation of the new proposal on microplastics

recognises the effort from the European Chemical Agency to seek synchronisation of the new proposal with the upcoming New Fertilizers Regulation.

Moreover, to have a level-playing field and to align the requirements regarding the biodegradability with the New Fertilizers Regulation, nationally marketed fertilizers are also exempt if they meet the New Fertilizers Regulation conditions for biodegradability. If nationally marketed fertilizers don't meet these biodegradability requirements then they are subject to the ECHA's restriction. Figure 1 illustrates the timeline for the proposed restriction on fertilizers to enter into force and the deadline for its compliance with the biodegradability requirements from the New Fertilizers Regulation inception.

This timeline applies solely to the technical additives (anti-caking agents and anti-dusts agents) in fertilizers as CRFs are covered already by the New Fertilizers Regulation. A transition

period of five years will apply after the entry into force and so from the 2026 on polymers fulfilling the microplastic definition contained in the Annex XV report will have to meet the biodegradability requirements laid down in the New Fertilizers Regulation, Annex II, CMC 10 and its modifications.

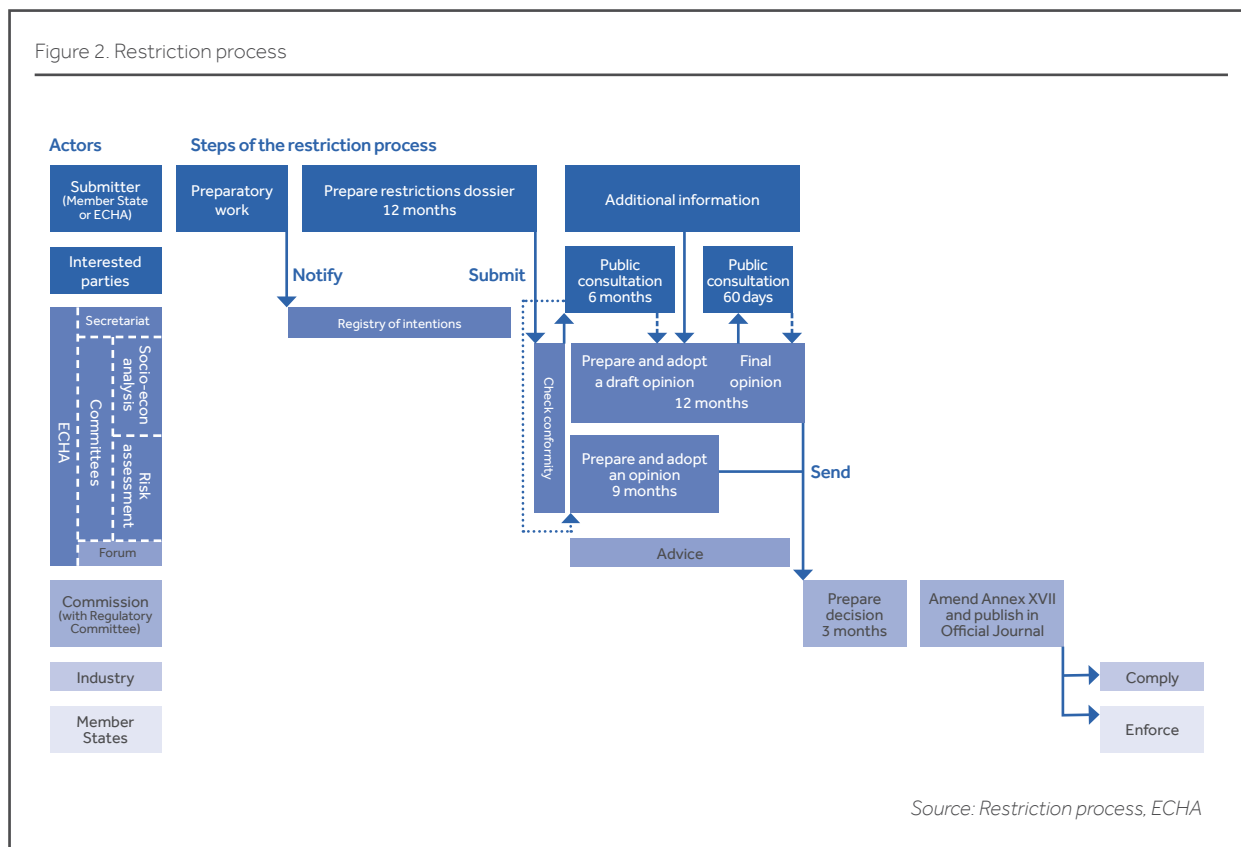
Fertilizers Europe will strive to fulfill the deadline set by the New Fertilizer Regulation and will cooperate with EU institutions in the process of developing guidance and the biodegradability criteria.

An in-depth look at the restriction's process

After 12 months preparation of the Annex XV restriction dossier, ECHA on mandate of the EU Commission made the report and its Annex publicly available on 30 January 2019.

The restriction process involves different public authorities (Committees and Fora) in the

Figure 2. Restriction process



The industry will strive to fulfill the deadline set by the New Fertilizer Regulation and will cooperate with regulatory bodies in the process of developing guidance

European Chemical Agency. Figure 2 is a visual representation of this complex process.

Starting from the submission of the Annex XV restriction dossier, on 11 January, the step for the conformity check is now on-going and will be discussed on the 6 and 7 March at the Committee for Risk Assessment (RAC) meeting and the Committee for Socio-Economic Analysis (SEAC) meeting the week after. If the dossier passes the conformity check, a public consultation will be launched on the 20 March 2019. During the public consultation, interested parties will have the opportunity to submit comments on the restriction proposal and supporting documents within six months of the date of their publication.

Advice to RAC and SEAC on the enforceability of the restriction will be given by the Forum, most probably end 2019.

The RAC will prepare and adopt an opinion, based on the restriction dossier and comments received during the public consultation, within nine months of the date of the publication of the report. The SEAC's draft opinion, based on socio-economic impacts and the comments and any socio-economic information received during the public consultation, will follow.

The draft opinion of SEAC and the final opinion of the RAC will be published. Interested parties will be able to comment on the SEAC's opinion. The public consultation will

be open for 60 days, SEAC will take into account the comments received and will prepare and adopt the final opinion.

RAC's and SEAC's opinions will be published on the ECHA website and sent to the European Commission ahead of the preparation of draft amendments of the restriction. If the restriction is accepted by the Council and the European Parliament, the Commission will adopt it and its decision will be published in the Official Journal as an amendment Annex XVII of the REACH.

From that moment, the industry needs to comply with the restriction dossier unless there are any exemptions. ECHA expects the Restriction to enter into force as of mid-2021. ■