September 2023

EurEau position on the draft revised Regulation on Detergents and Surfactants

Protecting our water resources

Summary

The revision of this Regulation offers the possibility to adjust the requirements for detergents, taking into account the great strides made in technical progress in the almost 20 years since the original Regulation.

In the view of drinking water and wastewater operators, the Commission's proposal clearly lacks ambition and major environmental impacts are not sufficiently addressed.

The new Regulation should respond to the EU's Zero Pollution ambition by strengthening the biodegradability requirements for all ingredients, including surfactants, avoiding the risk of microplastics generation, ensuring the safe use of microorganisms and reducing the release of phosphorous into the sewer network while strengthening phosphorous recycling.

If the Commission truly wants to future-proof this Regulation, it should raise the overall ambition levels at least to those already set out in the Ecolabel criteria that have proved feasible and successful in the market.

Introduction

Future requirements for detergents must be in line with the European strategies for chemicals and zero pollution while stimulating innovation and meeting consumer demands. Consequently, detergents should not lead to the release of hazardous substances and other non-desirable compounds into the environment and avoid negative impacts on urban wastewater treatment, sewage sludge management (including agricultural applications) and water reuse.

It is regrettable that the Commission did not use the opportunity of this revision to propose future-proof requirements. Such requirements should at least be based on the criteria for the European Ecolabel or other ecolabels such as the Nordic Swan, some of

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which have been in place and widely accepted for more than 20 years. For example, about 90% of the laundry and dishwashing detergents on the Swedish consumer market fulfil these requirements.

As some of the regulatory requirements are relatively old, manufacturers are already going beyond today and stricter rules should be envisaged. Furthermore new concerns have emerged.

EurEau recommends strengthening the following areas:

- Anaerobic degradability of all the ingredients in detergents
- Limiting the use of phosphorous compounds to only those cases without alternatives
- When the use of phosphorous is essential, establishing maximum phosphorus content as well as promoting phosphorous recycling
- Prevention of the spread of microplastics and ensuring the degradability of the plastic material used for laundry and dishwashing tablets and capsules
- Additional requirements for the safe use of intentionally added micro-organisms
- Inclusion of specific requirements for detergents and surfactants having biocidal properties
- Reduction of the use of hazardous substances.

Setting stricter requirements will reduce the use of phosphate rocks (a critical material at EU level), reduce the discharge of phosphorus into EU waters, reduce the spread of microplastics to the sewage network and, thus, strengthen the circular economy through improving the possibility of returning sewage sludge and nutrients from urban wastewater treatment plants (UWWTP) to farmland and enabling the safe and secure reuse of treated wastewater.

We also suggest increasing consumer awareness through better labelling with a view to informing them of the right dosing and negative environmental impacts.

With this in mind, EurEau recommends the inclusion of the following amendments in the text as proposed by the Commission.

Article 4 and Annex I - Biodegradability

EurEau supports strict requirements for biodegradability for detergents, including surfactants and **also all other ingredients** to ensure that their compounds do not pose problems in the biological treatment step of UWWTP and individual systems, as well as for sludge management and water reuse.

The proposed biodegradability requirements and tests are not sufficient. For example, linear alkylbenzen sulfonates (LAS) are hazardous surfactants which are not degraded in wastewater treatment, but transferred to sewage sludge. As a consequence, they can end up in the environment.

On the other hand, **all ingredients in detergents should be biodegradable** including fragrances or other additives such as preservatives, antifoaming agents, colorants, chelating compounds etc..

Hence, tests to determine **biodegradability** should not be limited to the aerobic degradability of surfactants. Raher, requirements must be set for the aerobic and **anaerobic degradability of all ingredients** (including surfactants) in order to minimise the risk of large amounts of persistent substances being transferred to the sewage sludge and, subsequently, to farmland. Existing ecolabel criteria and their wide application, together with the progress of the manufacturers' technologies, show that solutions exist to address this problem.

In addition, it must be ensured that the substances resulting from the degradation process are not hazardous themselves.

We also suggest extending this article to include requirements for **detergents and surfactants having biocidal properties**. It must be avoided that they support the generation of anti-microbial resistances in the wastewater treatment process or in the environment.

The Regulation must also ensure that the **biodegradability of plastic materials in detergents is preserved** to avoid the creation and spreading of microplastics. Such a requirement will ensure consistency with the EU's Plastics Strategy and the requirements in Directives 2020/2184/EC (Drinking Water Directive), 2000/60/EC (Water Framework Directive, revised text currently in the co-decision procedure) and 91/271/EEC (Urban Wastewater Treatment Directive, UWWTD, revised text currently in the co-decision procedure). Hence, as widely practiced in the market today and required by existing ecolabels, the plastic film around 'tablets' and 'capsules' for laundry and dishwasher detergents must be rapidly degradable.

Article 5 and Annex II - Detergents containing micro-organisms

The wastewater sector has little experience with micro-organism-containing detergents. With a view to avoiding regrettable developments, manufacturers should provide **evidence that such micro-organisms will not have any negative impact on urban wastewater treatment processes** and, in particular, on the biological treatment step or the receiving water.

Annex II should also prohibit the use of micro-organisms listed in Annex 1 Table 4 of Regulation 2020/741 (Regulation on Minimum Requirements for Water Reuse).

Article 5A (new) – Use of hazardous substances

As enshrined in the EU Treaty (Article 191.2), EU environmental policy should be based on the Precautionary Principle and control-at-source measures. In line with the Zero Pollution Ambition and to ensure policy coherence with Directive 91/271, the use of hazardous substances in detergents should be phased out.

With this in mind, EurEau calls for the prompt phase out of all substances listed in Annex I to Directive 2008/105/EC (Environmental Quality Standards Directive, revised text currently in the co-decision procedure) and Annexes I and II to Directive 2006/118/EC (Groundwater Directive, revised text currently in the co-decision procedure). In particular, the use of persistent and mobile substances such as PFAS should be prohibited.

The burden of preventing such substances from being released to the environment cannot be put on the shoulders of UWWTP alone.

Article 6 and Annex III - Limitations on the content of phosphates and other phosphorus compounds

Phosphorous has been identified as an EU Critical Raw Material and should be used only when no alternative exists. At the same time, phosphorous-driven eutrophication is seriously deteriorating the aquatic environment, such as the Baltic Sea (blue-green algae blooms, oxygen deficiency and benthic mortality). Furthermore, phosphorous in water bodies can cause the growth of toxic cyanobacteria leading to substantial and increasing public health, environmental and economic impacts.

UWWTP therefore remove most of the phosphorous arriving through the influent. However, the removal at UWWTP is a resource-intensive process. The draft revised UWWTD will set stricter requirements for the phosphorous content of treated wastewater for UWWTP above 10,000 pe. Ambitious control-at-source measures are needed to reduce the concentrations of the UWWTP influent and, hence, limit the burden of wastewater operators.

The Commission proposal fails to take all pathways to the environment and the practice of wastewater treatment into account and the draft revised Regulation clearly lacks ambition when it comes to replacing phosphorous by alternative substances and including at least professional laundry detergents in the requirements. Clearly, there are alternative ingredients (such as zeolite/clay) on the market today offering good performance at affordable prices.

While we acknowledge the need for sufficient time to enable all manufacturers to find non-regrettable alternatives, pressure should be uphold on industry to innovate. We therefore suggest that stricter requirements should be proposed after a transition period of three years.

As a matter of example, the EU Ecolabel and the Nordic Swan apply requirements for completely phosphate-free laundry and dishwashing detergents for consumers and also

regulate the total phosphorus for professional laundry and dishwashing detergents. This Regulation should ensure that at least the ecolabel requirements are met after the transition period.

Summary of the EU Ecolabel and Nordic Swan requirements:

~ Consumer laundry detergents: No phosphates.
~ Industrial detergents: Limit for total phosphorus. Not included in the Detergent regulation.
~ Dishwasher detergents: No phosphates.
~ Hand dishwashing detergents: No phosphates. Not included in the Detergent regulation.
~ Industrial dishwashers: Limit on total phosphorus. Not included in the Detergent regulation.

About EurEau

EurEau represents Europe's drinking and waste water sector. We encompass 37 national water services associations including public and private operators from 32 countries.

Together we promote the access to safe and reliable water services for Europe's citizens and businesses, the management of water quality and resource efficiency through effective environmental protection.

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ANNEX
EurEau amendments

Article 4, Annex I - Biodegradability

Commission proposal	EurEau amendment
Article 4 Biodegradability 1. Detergents and surfactants shall comply with the biodegradability requirements laid down in Annex I. …	*Article 4* ***Aerobic and anaerobic*** biodegradability ***and anti-microbial resistance*** 1. ***All ingredients of*** detergents, ***including*** surfactants, shall comply with the ***aerobic and anaerobic*** biodegradability requirements laid down in Annex I. … ***3. Where detergents or surfactants have biocidal properties, manufacturers shall provide evidence that the generation of anti-microbial resistances in the wastewater infrastructure and the environment is excluded.*** ***4. Any plastic components that may be released during washing cycles to the sewer network, including plastic films around detergent tablets and/or capsules shall be fully biodegradable.***

Commission proposal	EurEau amendment
ANNEX I Biodegradability requirements referred to in Article 4	ANNEX I Biodegradability requirements referred to in Article 4

Ultimate Biodegradability Criteria and Test Methods for Surfactants ***and*** Surfactants in Detergents 1. The reference method for laboratory testing of surfactant ultimate biodegradability in this Regulation is based on the EN ISO standard 14593: 1999 (CO2 headspace test). 2. Surfactants ***and*** surfactants contained in detergents shall be ultimately biodegradable as determined in accordance with the criteria laid down in point 3. 3. Surfactants ***and*** surfactants contained in detergents shall be considered as ultimately biodegradable if they meet one of the following criteria: …	Ultimate Biodegradability Criteria and Test Methods for Surfactants, Surfactants in Detergents ***and other ingredients in detergents*** 1. The reference method for laboratory testing of surfactant ultimate biodegradability in this Regulation is based on the EN ISO standard 14593: 1999 (CO2 headspace test). 2. Surfactants, surfactants contained in detergents ***and other ingredients in detergents*** shall be ultimately biodegradable as determined in accordance with the criteria laid down in point 3. 3. Surfactants, surfactants contained in detergents ***and other ingredients in detergents*** shall be considered as ultimately biodegradable if they meet one of the following criteria: ***3a (new): All ingredients of detergents, including surfactants, must be anaerobically degradable, which means at least 60% degradability under anaerobic conditions, in accordance with ISO 11734, ECETOC no. 28 or equivalent test methods.***

Justification:

Requirements for the anaerobic degradability of surfactants must be set in order to minimise the risk of large amounts of surfactants being transferred to the sewage sludge and, subsequently, to farmland.

The increase in anti-microbial resistances (AMR) is one of the major health challenges of our time. Biocides must therefore be used very prudently and their impact on AMR occurrence must be assessed, so that preventive measures can be taken in line with the control-at-source principle.

Detergents must not generate microplastics that could end up in wastewater and subsequently in sewage sludge.

Article 5, Annex II - Detergents containing micro-organisms

Commission proposal	EurEau amendment
ANNEX II Requirements for detergents containing microorganisms referred to in article 5	ANNEX II Requirements for detergents containing microorganisms referred to in article 5
…	…
2. The following pathogenic micro-organisms shall not be present in any of the strains included in the finished product when screened using the indicated test methods or equivalent:	2. The following pathogenic micro-organisms shall not be present in any of the strains included in the finished product when screened using the indicated test methods or equivalent:
(a) E. coli, test method ISO 16649-3:2005;	(a) E. coli, test method ISO 16649-3:2005;
(b) Streptococcus (Enterococcus), test method ISO 21528-1:2004;	(b) Streptococcus (Enterococcus), test method ISO 21528-1:2004;
(c) Staphylococcus aureus, test method ISO 6888-1;	(c) Staphylococcus aureus, test method ISO 6888-1;
(d) Bacillus cereus, test method ISO 7932:2004 or ISO 21871;	(d) Bacillus cereus, test method ISO 7932:2004 or ISO 21871;
(e) Salmonella, test method ISO 6579:2002 or ISO 19250	(e) Salmonella, test method ISO 6579:2002 or ISO 19250 ***(f) any other microorganisms listed in Annex 1 Table 4 of Regulation 2020/741.***
…	… ***4a (new): Intentionally added microorganisms shall not negatively affect urban wastewater treatment processes and, in particular, the biological treatment step, nor sewage sludge management, water reuse nor the quality of the receiving water bodies.***
…	…

Justification:

No microorganisms should be authorised that are prohibited in the Regulation on water reuse (for agricultural irrigation).

Today, there is limited knowledge on how such micro-organisms might affect urban wastewater treatment. Excluding negative impacts is a logical control-at-source measure to avoid the marketing of regrettable innovation that may cause additional costs for wastewater operators.

Article 5A (new) – Use of hazardous substances

Commission proposal	EurEau amendment
	Article 5A (new) – Use of hazardous substances ***1. By [two years after the entry into force of this Regulation], manufacturers shall set up plans to phase out the use of substances listed Annex I to Directive 2008/105/EC and Annexes I and II to Directive 2006/118/EC.*** ***2. As part of these plans, manufacturers should end all uses of persistent and mobile substances by [four years after the entry into force of this Regulation].***

Justification:

As enshrined in the EU Treaty (Article 191.2), EU environmental policy should be based on the precautionary principle and control-at-source measures. In line with the Zero Pollution Ambition and to ensure policy coherence with Directive 91/271, the use of hazardous substances, and in particular persistent and mobile substances such as PFAS, should be phased out.

Article 6 and annex III - Limitations on the content of phosphates and other phosphorus compounds

Commission proposal	EurEau amendment
Article 6 Limitations on the content of phosphates and other phosphorus compounds	Article 6 Limitations on the content of phosphates and other phosphorus compounds
Detergents listed in Annex III shall comply with the limitations on the content of phosphates and other phosphorus compounds laid down in that Annex.	***1.*** Detergents listed in Annex III shall comply with the limitations on the content of phosphates and other phosphorus compounds laid down in that Annex.
…	***2. By … [three years after the entry into force of this Regulation], phosphate and phosphorous compounds shall only be used if no alternative exists. In any case, total phosphorous content in detergents shall not exceed the threshold values laid down in Annex III.***
…	***3. By [three years after the entry into force of this Regulation], 30% of the phosphorous used in detergents shall come from recycled sources.***

Commission proposal

Annex III

Limitations on the content of phosphates and other phosphorous compounds referred to in Article 6

…

EurEau amendment

Annex III

Limitations on the content of phosphates and other phosphorous compounds referred to in Article 6

Table 2: Minimum requirements for the content of phosphates and other phosphorous compounds applicable from [three years after the entry into force of this Regulation]

Detergent	***Limitations***
Industrial laundry detergents	***0.5 g/kg of laundry for light soil and 1.00 g/kg of laundry for medium soil***
Consumer laundry detergents	***No phosphate or other phosphorous compounds***
Dishwasher detergents and rinse aid - ***Dishwasher detergents*** - ***Rinse aids***	***No phosphates*** ***≤ 0.20 g P/wash*** ***≤ 0.030 g P/wash***
Hand dishwashing detergents	***No phosphate or other phosphorous compounds***
Industrial dishwashers - ***Pre-soaks*** - ***Dishwasher detergent*** - ***Rinse aids*** - ***Multicomponent system***	 ***0.08 g/l of washing solution*** ***0.3 g/l*** ***0.02 g/l*** ***0.32 g/l***

Justification:

Phosphorous release in the environment needs to be reduced but its removal at wastewater treatment plants is a resource-intensive process. The detergents industry must contribute to this effort. With a view to avoiding regrettable substitutes, industry should be given additional time to develop alternatives.

The Critical Raw Materials Act identifies phosphorous and phosphate rock as critical raw materials. The use of recycled phosphorous must be strengthened in line with EU ambitions.