

BRUSSELS, 19 September 2023

Public Consultation on the PFAS Restriction Proposal

The effects of PFAS on human health and of their persistence in the environment continues to raise concern. The focus on PFAS has been growing for several years and Fertilizers Europe welcomes the adoption of restrictions on the use of those substances.

However, we would like to draw attention and raise awareness within the Commission to the tremendous impact that banning PFAS would have on the fertilizer industry. Without a suitable transitional period for research and development to find and test alternative materials for the PFAS products currently used in the production plant machinery and instrumentation, it could severely impact fertilizer production.

The fertilizer industry, in particular within the manufacturing of base chemicals like ammonia, nitric acid, phosphoric acid, and sulfuric acid, (the main intermediates for mineral fertilizers manufacturing) requires materials with specialized properties which are resistant to extremes such as high and low temperatures, corrosivity, pressure, permeability (e.g. hydrogen streams). These manufacturing conditions have led equipment and instrument suppliers to adopt PFAS containing materials for a wide range of technical solutions, to grant operational safety and reliability under such conditions. The same manufacturing conditions also apply to fertilizers obtained by synthesis (e.g. urea), and to other manufacturing processes (e.g. Superphosphates, Compound fertilizers).

Fertilizers Europe Members have reported a lack of alternative materials that would provide the same level of safety and reliability in running manufacturing plants.

A universal restriction on the use of PFAS materials, with no transitional time granted to develop alternative solutions for use in industrial manufacturing of chemicals, would lead to the halt of mineral fertilizers production plants. Although PFAS are not contained in any raw material that is incorporated in base chemicals and mineral fertilizer products, they remain an integral part of the fertilizer manufacturing process. It must be considered that the production halt would happen quickly following a universal restriction, as spare parts like gaskets, O-rings and seals made with PFAS are widely used both in main and ancillary equipment.

Fertilizers Europe believes that the risk of releasing PFAS materials to the environment through their use in chemical industry machinery can be adequately controlled during the

transitional period through the development of proper procedures for the disposal of PFAS waste.

Details on volumes, materials identity, and equipment where PFAS are used, as well as the technical reasons for the use of PFAS in fertilizer industry manufacturing plants, have been provided below for your perusal.

Information sheet for PFAS Use in the Fertilizer Industry

Facts	Production Volume Data	PFAS volume data	Additional Information
Production Estimate* of Main Fertilizer Product (https://agriculture.ec.europa.eu/common-agricultural-policy/agri-food-supply-chain/ensuring-availability-and-affordability-fertilisers_en#fertiliser-production) *Estimate based on partial inventory and extrapolation	2019–2021 average: ~40Mt/year	Disposed PFAS material from fertilizer manufacturing facilities: (Fertilizers Europe) ~50 - ~75 t/year	Estimated Installed PFAS material in fertilizer manufacturing facilities: (Fertilizers Europe) ~ 2000 – ~2600 t
Features	Mostly referred to:		
	Chemical resistance		Mainly referred to when it comes to prevalent functionality
	Low friction coefficient		
	Temperature resistance		
	Mechanical strength		
	High ductility		
	Resistance to moisture		
Types	Mostly referred to:		
	1. Fluoroelastomer PFA		This is not an exhaustive list of PFAS materials used in industry operations.
	2. Fluoropolymer PTFE		
	3. Fluoropolymer PVDF		
	4. Other identified materials/trade names**		
	**Materials: ePTFE, FKM, FKM-VG109, FKM 935, FKM-ED VITON, FFKM, FEPM, FKM85 HD80–90 SH, Glycodur F, Fluorosint 500, Chemraz 505, Modified polyolefin fluoropolymer, ETFE, FEP, other fluoropolymers not otherwise specified.		
**Trade Names: Teflon, Xylan, Viton, Aflas, Kalrez, Gylon.			

Concluding remarks	
1.	A partial inventory revealed the multiple uses of PFAS and PFAS containing materials in fertilizer industry machinery, devices, and auxiliary equipment.
2.	The special properties of these materials fit the purpose of the technical needs of fertilizer manufacturing processes. The main applications relate to gaskets, seals, machinery components (e.g. as in rotating equipment), auxiliary equipment, and specific surface coatings. Longstanding experience has proven the ability for PFAS and PFAS containing materials to ensure reliable and safe industry operation.
3.	So far, the industry is not aware of proven alternative materials available on the market and sees a need to develop alternatives that have an overall similar functionality enabling a transition to these alternatives without creating a potentially negative impact on safe and reliable operation. The industry is eager to adopt new material alternatives that have been developed and tested, and that will not significantly impact the availability and access to fertilising products by farmers and growers.
4.	A limited implementation timeframe of 18 months following publication is insufficient for the development of the needed proven alternative materials. The fertilizer industry is requesting for a sufficient transitional period of 10 years for the development of suitable alternatives and the phasing out of existing PFAS materials.
5.	Such an approach would allow for the European Fertilizer Industry to continue acting as a responsible provider of plant nutrients to European farmers and growers in a sustainable manner. As an industry we aim to ensure European food security; a challenge which in recent years has become more and more difficult as a result of geopolitical instability.