

Do you have remarks on the scope (definition of the PFAS ?)

⇒ We follow the position of FPP4EU

INPUT INOVYN

Please indicate your sector and describe briefly the Restriction impact/influence on your sector

⇒ INEOS Inovyn chlor alkali production uses membrane and diaphragm technologies which are mostly made of fluoropolymers, covered by the EU restriction. They are essential for our sector.

Do you have specific remarks on the restriction text and its exemptions.

⇒ EUROCHLOR requested a derogation in 1st phase of stakeholder consultation but not been considered at this stage (low volume).

Are you concerned by an exemption?

⇒ Chlor-alkali use has not been considered for derogations at this stage, but expected forward

If yes, is the timing foreseen reasonable for your sector?

⇒ No, as : i) technically feasible alternatives are not available for performance same way , ii) current technologies used by INEOS Inovyn are BAT (Best Available Technologies) according to EU BREF document 32013D0732 and iii) No reasonable alternative can be found within the proposed 5 and 12 years derogation periods

Have you conducted an alternative assessment that indicates that the proposed timing is reasonable or not?

⇒ Yes, no alternative is currently available

INPUT O&P

Please indicate your sector and describe briefly the Restriction impact/influence on your sector

⇒ We are using PFAS in about 120kt of polyethylene (PE) as PPA (polymer processing aid). It's used in different applications : pipe (100kt), film (10kt) and small and large blow moulding (10kt). It's mainly used to improve the surface aspect on the final product or to reduce die build up at the exit of the die.

Do you have specific remarks on the restriction text and its exemptions.

- Only one use is covered by a derogation (Restriction proposal, paragraph 6a, with explanatory note (11) : *Piping and tubing for drinking water applications*). All other uses in piping systems for gas (standard EN 1555) and for water drainage and sewerage (standard EN12201), or in food packagings are not covered by a derogation.

Have you conducted an alternative assessment that indicates that the proposed timing is reasonable or not?

⇒ No alternatives are known that can bring the same benefits to polyolefin processing. The validation of alternatives requires food contact approval. Approval time of minimum 3 years for pipes (testing according to ISO9080) once a suitable alternative has been found.

INPUT OXIDE, but probably also applicable for other INEOS businesses as this goes about more generic industrial uses of PFAS

Please indicate your sector and describe briefly the Restriction impact/influence on your sector .

- ⇒ We are a producer of basic chemicals (ethylene oxide and propylene oxide and derivatives, esters, ENB)
- ⇒ For the transport of chemicals, we need PTFE/PTFE envelope seals for the manlid/footvalve /discharge and relief valves and PTFE/PTFE envelope gaskets for flanges in Railtankcars and tankcontainers.
- ⇒ In our installations, PFAS coated gaskets, PFAS lined valves and PFAS containing lubricants are used

Do you have specific remarks on the restriction text and its exemptions.

- ⇒ Among the derogations, there is no exemption for use of PFAS in industrial installations. How the text is now written, we can keep using such gaskets, PFAS lined valves, lubricants..., but will have no availability to such spare parts. This can introduce disruptions in the production processes
- ⇒ For the time being, it is not clear how largely used such PFAS containing equipment is. This assessment is still ongoing

Are you concerned by an exemption?

- ⇒ The Teflon (PTFE) exemption for transport applications

If yes, is the timing foreseen reasonable for your sector? Have you conducted an alternative assessment that indicates that the proposed timing is reasonable or not?

- ⇒ As we produce chemically reactive substances, we require seals which are sufficiently fire resistant in the presence of aggressive chemicals. Flat gaskets containing PFAS have been replaced where possible with gaskets consisting of metal-graphite.
- ⇒ However, regarding seals, no alternatives are available. A seal has to be chemical resistant and should shut off mechanically in a correct way. For ethylene oxide for instance several alternatives have been tested in the past, but no alternative is safe enough. For some other chemicals, alternatives may be available, but will typically also contain Fluor.
- ⇒ This goes about thousands of rail containers and iso-containers. Impact in installations is not yet clear for the time being.