European Materials Handling Federation

Proposed PFAS restriction under the REACH Regulation

FEM position paper
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Introduction

The European materials handling industry manufactures technical equipment and systems delivering organisational solutions for complex production, storage and logistics requirements. Our companies support a sustainable logistic transformation and contribute directly to Europe's green transition. Their personal commitment to reducing their environmental footprint takes various forms, amongst which a wide electrification process of their products.

PFAS are found throughout pretty much every materials handling product. In addition to refrigerants, one can mention fluoropolymers and elastomers, which are widely used in various complex applications due to their unique properties. Consequently, the proposed PFAS restriction, as it stands, would have tremendous effects on the European materials handling industry. These effects would go far beyond the ability to innovate and remain competitive, and actually question companies' ability to continue manufacturing their products in Europe.

Given the magnitude of the risk, some changes are absolutely necessary to ensure that the pursuit of laudable environmental objectives does not expose Europe's industry to devastating consequences.

Impact

PFAS are present in a variety of parts and components of all types of materials handling equipment. This is notably the case of hydraulic components where PFAS are found in seals, pipes, fittings, hoses, bearings and sliding elements, pumps and motors. Other uses include sealings in gearboxes, cooling agent in air conditioning systems, and binder/separator in Li-Ion batteries.

There are many more PFAS uses than those mentioned above. However, it is near to impossible to establish an exhaustive list because of the combined effect of, on the one hand, value chains' complexity and materials handling equipment manufacturers position therein, and, on the other hand, identification issues due to insufficient harmonised classification of PFAS in the CLP Regulation.

The reasons behind such a widespread use are well-known, pertaining to PFAS' unique and cumulative properties, such as performance, high temperature and oil resistance, chemical/electromechanical stability, sliding properties, high power density, etc. These properties are essential to materials handling equipment's safe and efficient operation. According to our first findings, there are no or no comparable alternatives on the market capable to meeting those cumulative requirements for relevant uses in the materials handling industry.

Implementing a blanket ban without any differentiation would, as a direct consequence, essentially deprive our industry from components that are essential to produce materials handling equipment. Without suitable alternatives, this could simply put production chains to a halt, threatening our industry's core business.

Given the materials handling industry's enabling role, whether in production and distribution facilities, or to ensure logistic flows, indirect consequences would also be felt in many other sectors., some of which are absolutely critical, such as retail, food or health.

Changes are therefore necessary to avoid devastating consequences.

1- General approach

The current proposal consists in a blanket ban on some 10,000 PFAS put together on the sole basis of their chemical structure. This artificial approach is at complete odds with the usual risk-based and substance-based approach described in Articles 68 and 69 of the REACH Regulation. As a result, many of the thousands of PFAS would undergo a restriction without identified unacceptable risk to human health or the environment.

⇨ We call on authorities to **follow a risk-based and substance-based approach** across the whole life cycle (including manufacturing and end-of-life stage) so that the actual risk of specific substances in each phase is the main driver for potential regulation, also taking into account the availability of alternatives that are suitable from a technical, economic and environment/health protection point of view.

There is currently no analytical and extraction method for PFAS and their uses. Indeed, there is no legal obligation to collect and distribute information on most PFAS in supply chains. Moreover, there is no harmonised classification for most PFAS, making the exercise for downstream users of gathering information nearly impossible.

⇨ To fill such a gap an **information obligation for "intentionally added" PFAS** should be introduced before any restriction is applied.

The current 18-month transition period envisaged is completely insufficient for industrial applications, such as in the materials handling industry. Indeed, it typically takes several years to develop and approve alternatives that are suitable from a technical and safety point of view, and compliant with applicable EU regulatory requirements (e.g., Machinery Regulation, Low Voltage Directive, EMC Regulation, etc.). Too short a transition period will therefore result in less qualitative products (e.g., safety, durability) and, given development time, actual supply disruptions. It would also delay if not question the electrification process the materials handling industry is going through.

⇨ **Much longer transition periods, of minimum 10 years,** depending on the types of PFAS and their related use(s), should be provided to give industry sufficient time to develop suitable and compliant alternatives.

Given the sheer number of substances and affected products, the introduction of restrictions on PFAS, even if it follows a risk-based and substance-based approach, will generate massive enforcement needs. If those measures are to produce their intended effects whilst preserving free and fair competition on the EU market, substantial market surveillance resources will have to be deployed. There have been (too many) previous examples of ambitious legal requirements that have not been properly policed due to insufficient market surveillance, resulting in huge gaps and non-conformities to the benefit of rogue traders.

⇨ **Adequate market surveillance resources** should be deployed to ensure proper enforcement of the future requirements.

2- Approach to derogations

Despite the expected impact of a PFAS restriction, only limited derogations are envisaged at this stage, without clarity on the process to handle derogations for such a vast quantity of substances that do not yet need to be reported. We believe a number of derogations should be implemented:

- ***Spare parts and refurbished parts*** should be excluded from the restriction, in line with Green Deal ambitions (e.g. Right to Repair) and to avoid premature obsolescence of many finished products.

- ***Products already placed on the EU market for the first time*** should also be excluded from the restriction to allow them to be resold, repaired and maintained.

- ***Fluoropolymers*** considered as "polymers of low concern" according to the OECD definition and their industrial applications in closed systems and equipment components and equipment should be exempted, provided their safe use is ensured.

- ***HFOs***, used as low global warming potential alternatives to refrigerants banned under the F-Gas Regulation, should be exempted from the PFAS restriction. In addition to the double regulation issue, HFOs are necessary for many applications where natural refrigerant alternatives are either not available or not suitable.

- ***B2B applications*** should be differentiated insofar as industrial actors can ensure professional risk management throughout the PFAS-containing product lifetime.

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ANNEX – PFAS uses in materials handling industry (non-exhaustive list)

Part Name/Product type/Product group	PFAS substance name	CASRN (If known) Use the Following List as a reference point: (copy and paste to any browser) https://www.oecd.org/chemicalsafety/risk-management/global-database-of-per-and-polyfluoroalkyl-substances.xlsx	Mass (g) (If known)	Max Concentration (parts per million / ppm) (If known)	Description of component/ subcomponent or process chemicals/formulations that contain PFAS:	Technical function that PFAS provides. Please provide quantitative requirements wherever possible.	Outline why PFAS-free alternatives are not available, not used or not viable. If applicable, please describe industry standards and customer requirements per material.
seal (hydraulics)	FKM	64706-30-5			used in hydraulic components in Forklift trucks	high power density; resistance to high hydraulic temperatures; operating range >100°C	no alternative on the market that meets temperature requirements with simultaneous resistance properties
pipe interface	FKM	64706-30-5			used in hydraulic components in Forklift trucks	high power density; resistance to high hydraulic temperatures; operating range >100°C	no alternative on the market that meets temperature requirements with simultaneous resistance properties
fittings (hydraulics)	FKM	64706-30-5			used in hydraulic components in Forklift trucks	high power density; resistance to high hydraulic temperatures; operating range >100°C	no alternative on the market that meets temperature requirements with simultaneous resistance properties
hoses/pipes (hydraulics)	FKM	64706-30-5			used in hydraulic components in Forklift trucks	high power density; resistance to high hydraulic temperatures; operating range >100°C	no alternative on the market that meets temperature requirements with simultaneous resistance properties
bearings and sliding elements (hydraulics)	PTFE	9002-84-0			used in hydraulic components in Forklift trucks	high temperature and oil resistance + good sliding properties	no alternative on the market that meets temperature requirements with simultaneous resistance & sliding properties
pumps	PTFE	9002-84-0			used in hydraulic components in Forklift trucks	high temperature and oil resistance + good sliding properties	no alternative on the market that meets temperature requirements with simultaneous resistance & sliding properties
motors	PTFE	9002-84-0			used in hydraulic components in Forklift trucks	high temperature and oil resistance + good sliding properties	no alternative on the market that meets temperature requirements with simultaneous resistance & sliding properties
sealings (gearboxes)	FKM	64706-30-5			used in gearboxes in Warehouse trucks	robustness and temperature stability	no alternative on the market that meets temperature requirements with simultaneous resistance properties
cooling agent	R134a	811-97-2			used as cooling agent in air conditions	performance of air condition	currently, no alternative exists; alternatives not suitable for all work environments (safety)
Li-Ion Battery	PVDF	24937-79-9		<10% in cells	binder for coating the cathode with metal oxide	high chemial/electrochemical stability, good adhesion stability, temparature stability, long lifetime, high energy and power density	currently, no comparable alternative known
Li-Ion Battery	PTFE/FEP	9002-84-0 / 25067-11-2		<10% in cells	binder for coating the cathode with metal oxide	high chemial/electrochemical stability, good adhesion stability, temparature stability, improve performance & lifetime, high energy and power density	currently, no comparable alternative known
Li-Ion Battery	PTFE/FEP	9002-84-0 / 25067-11-2		<10% in cells	separator coatings	high chemial/electrochemical stability, good adhesion stability, temparature stability, improve performance & lifetime, high energy and power density	currently, no comparable alternative known
Li-Ion Battery	PTFE/FEP	9002-84-0 / 25067-11-2			additives in electrolyte	high chemial/electrochemical stability, good adhesion stability, temparature stability, improve performance & lifetime, high energy and power density	currently, no comparable alternative known
Li-Ion Battery	PTFE/FEP	9002-84-0 / 25067-11-2			seals	high chemial/electrochemical stability, good adhesion stability, temparature stability, improve performance & lifetime, high energy and power density	currently, no comparable alternative known

About FEM

FEM has represented European manufacturers of materials handling, lifting and storage equipment since it was founded in 1953. One of the largest mechanical engineering sectors, the European materials handling industry employs nearly 300,000 people and generates more than €60bn annual turnover.

More information: www.fem-eur.com