Impacts of a restriction on fluoropolymers on distributors and their role in the supply chain

meweo GmbH's comments on the ANNEX XV RESTRICTION REPORT on per- and polyfluoroalkyl substances (PFASs)

Executive Summary:
meweo is a specialized distributor of fluoropolymer sealing parts, serving a diverse range of industries, including food and beverage, pharmaceuticals, paint and coatings, chemicals, semiconductors, and green energy. Committed to environmental responsibility, we acknowledge the necessity of addressing concerns related to certain PFAS of concern. As an SME only recently alerted to the PFAS restriction proposal, we wish to highlight the unique qualities of fluoropolymers compared to other PFAS, which render them the sole viable option for maintaining industry's competitiveness and fostering innovation. Additionally, we underscore the crucial role of distributors, particularly SMEs, in the fluoropolymer supply chain, driven by their technical expertise and capacity to enable economies of scale. This contribution to ECHA's public consultation on the PFAS restriction dossier echoes the submission of the European Small Business Alliance for Fluoropolymers (ESBAF) and calls upon EU regulators to exclude fluoropolymers from the proposed PFAS restriction.

The PFAS restriction dossier currently under consideration poses an existential threat to small and medium-sized enterprises (SMEs), which are the backbone of the European industrial landscape. SMEs are vital drivers of economic growth, innovation, and employment opportunities within the EU. As the European Union (EU) seeks to achieve its industrial goals and strategic autonomy, it is imperative to strike a delicate balance that sustains independent industrial capabilities while fostering innovation and ensuring the viability of SMEs.

The European Commission, in a recent report, has acknowledged the unparalleled challenges faced by SMEs in the face of economic uncertainty. Within this context, the proposed REACH restriction on Per- and Polyfluoroalkyl Substances (PFAS) presents a grave threat to the numerous SMEs that rely on fluoropolymers, such as Fluor Kautschuk Monomers (FKMs), and Fluorinated Fluor Kautschuk Monomers (FFKMs), in their strategic supply chains. These fluoropolymers form the foundation of critical sectors such as semiconductors, pharma, chemical, the food industry, and medical devices, among others. While certain strategic end uses are benefiting from time-bound derogations under the proposed restriction, SMEs that constitute the intricate remainder of these supply chains have been left in a precarious position.

A notable gap in the current consultation process is the absence of representation for distributors within the supply chain. Distributors play a pivotal role in ensuring the availability of fluorinated products (FPs) to end-users across various industries. Their unique position allows them to match the

right FP product to specific end-use requirements, a condition that is indispensable in high-performance applications. Unfortunately, the PFAS restriction dossier does not take into consideration the complexity of FP supply chains and the essential role played by distributors.

We at meweo, a distributor based in Germany employing 15 people, prioritize sustainability and environmental responsibility. Not only is meweo ISO 14001 certified, but we also see it as our responsibility and core value to go the extra mile for our customers. This includes the commitment to eliminating PFAS where possible. meweo works with the food and beverage, the pharma, the paint and coatings, the chemical, and the semiconductor industry as well as supplies green energy industries. There are no alternatives to fluorinated seals for these high-performance applications.

meweo's key messages regarding the PFAS restriction dossier:

- **There are no alternatives to fluorinated seals for high-performance applications:** Fluoropolymers, such as those utilized in high-performance applications, offer exceptional qualities including resistance to chemicals, high temperatures (up to 330 degrees Celsius), aging, and weathering, as well as unique electrical properties. These polymers remain stable when exposed to hydrocarbons, solvents, acids, bases, and their combinations, making them compatible with various chemicals. The strong C−F bond in fluoropolymers enhances their ability to withstand hydrolytic and oxidative factors.[1,2]

  Restricting the use of fluoropolymers without viable alternatives would hinder technological advancements, limit product innovation, and compromise the overall competitiveness of European industries. Moreover, replacing fluoropolymer compounds with lower-performing substances may lead to regrettable substitutions from both a hazard and sustainability perspective, as the structural properties of fluoropolymers ensure the safe and sustainable use of products and chemical processes.

- **Distributors provide necessary technical know how to the supply chain:** Distributors bring crucial technical know-how to the supply chain. In applications where O-rings are considered C-parts in terms of value but A-parts in terms of performance, selecting the correct product is vital. Distributors are in the unique position to accumulate the technical know-how to supply a variety of end uses that are dependent on reliable sealing solutions. They are able to match the end use with products that ensure the technical performance, as well as the safety and environmental protection. Replacing fluorinated products in such end uses would have severe consequences:

  - **Technical Performance Compromised:** Using non-fluorinated O-rings in applications requiring high chemical resistance results in compression set and swelling, compromising the O-ring's sealing effectiveness and causing leaks, reduced pressure containment, and functional failure.
  - **Increased Environmental Risk:** Reduced chemical and thermal resistance in O-rings due to non-fluorinated materials leads to increased waste generation, resource consumption, and energy consumption for maintenance and replacement. It also heightens the risk of harmful substance emissions and environmental contamination due to potential leaks.

[1] Atkinson, S. (2018). Essential high-purity sealing materials for semiconductormanufacturing. Sealing Technology,7,5–7. https://doi.org/10.1016/S1350-4789(18)30284-8

[2] Marshall, J. 2017. Kalrez®-type perfluoroelastomers—Synthesis, propertiesand applications. In J. Scheir (Ed.), Modernfluoropolymers(pp. 349–358). John Wiley and Sons.

- **Worker Health and Safety:** Diminished thermal and chemical resistance in non-fluorinated elastomers pose significant hazards to worker safety, increasing the potential for leaks and compromising structural integrity.

- **Distributors enable economies of scale and immediate availability:** Technical distributors help achieve economies of scale for O-rings in high-performance applications. O-rings, especially those made from FFKM or FKM compounds, are often demanded in low quantities but high varieties. Distributors collect demand from multiple clients, enabling them to order larger quantities and stock a variety of products, thereby reducing costs and maintaining European industry competitiveness. Furthermore, distributors play a critical role in ensuring immediate product availability, especially for complex and specialized components like fluorinated seals. They contribute to uninterrupted production processes and provide access to spare parts.

In light of the aforementioned considerations, we call upon EU regulators to exclude fluoropolymers from the scope of the proposed restriction on PFAS. While addressing potential risks associated with certain PFAS is crucial, it is equally imperative to recognize the complexities of the supply chain and distributors within it in the functioning of the society and driving a European competitive industry. By excluding fluoropolymers from the proposed restriction, European SMEs will be able to continue their contributions to society's wealth, economic growth, technological advancement, and job creation. This balanced approach ensures the sustainability and competitiveness of European industries while prioritizing environmental responsibility and safety.