Position Paper: The Impact of a Blanket PFAS Ban on Climate Goals and Key Technologies

Introduction:

VDMA Electronics, Micro and New Energy Production Technologies (EMINT) trade association represents the interests of over 200 member companies. It is subdivided into the specialist departments (sector groups) Micro Technologies, Productronics, Photovoltaic Production Equipment and Battery Production.

Our members represent four of the most innovative sub-sectors of mechanical engineering and benefit sustainably from the exchange of experience that we facilitate. As an innovation and networking platform, we bundle knowledge for our member companies, whose know-how significantly drives innovation. Together we address relevant future topics such as autonomous driving, renewable energies, electromobility and micro technologies.

OE-A (Organic and Printed Electronics Association) is a working group within VDMA. The OE-A is the leading international industry association for the emerging technology of flexible, organic and printed electronics with more than 200 international members. Representing the entire value chain, OE-A provides a unique platform for local and international cooperation between companies and research institutes.

Products and Applications:

PFASs are used in a wide variety of forms in EMINT sectors, e.g. in seals, O-rings, plastics, hoses, fittings, fillers, gasket materials, pipe lines, ink, valves, refrigerants for air conditioners, coatings and membranes. On the one hand, they are found in the manufactured products themselves and / or in the machines that produce these products such as pumps, dosing devices, electronic components, industrial printers for printed electronics, machine tools, semiconductor manufacturing, construction machinery, laser equipment, wet chemical industry (medical technology, photovoltaics, electronics production,), automation components, grippers, sensors, organic photovoltaic cells, contact microphones, stethoscopes, loudspeakers, piezoelectric devices, pyroelectric sensors, electronic components, etc.

The chemical properties of PFAS allow them to withstand extreme conditions such as high temperatures and pressures. Due to their media resistance, they extend the durability and performance of machines and products.

Impact and Alternatives according to our member survey:

As a result of the ban on PFAS substances, our members fear, among other things, rising development costs for alternatives. If no suitable substitute materials were found, a product stop could be the impending consequence. In addition, alternatives could result in the loss of chemical and physical properties, which in turn would lead to a reduction in the service life and performance of the product. In the worst case, there would be a product ban or a relocation of production abroad. For many companies, the consequences cannot be conclusively assessed at this time.

Most members currently consider possible alternatives to be non-existent and not feasible in the short term. The consequence would be high development costs with uncertain results. Some companies are currently still looking into the possibility of alternative materials.

Manufacturers fear many disadvantages due to the PFAS restriction including loss of sales, rising prices, longer delivery times, loss of market share, long approval times, loss of customers, loss of quality, shorter product life cycles, which would be less sustainable.

Our members use a lot of different kind of PFAS, but the ones mentioned the most are:

FPM (Fluorinated Propylene Monomer)

PTFE(Polytetrafluoroethylene)

PTT (Polytrimethylen eterephthalate)

PVDF (Polyvinylidene fluoride)

P(VDF-TrFE), or P(VDF-TrFE-CTFE/CFE) relaxor ferroelectric terpolymers

FEPs (Fluorinated Electroactive Polymers)

Crucial Role of PFAS in Climate Neutrality Technologies

Without PFAS, the implementation of key technologies for achieving climate neutrality becomes unattainable. Technologies such as solar panels, energy storage systems, electric vehicles, semiconductors, and various cross-sectional components are fundamental to the energy and mobility transition. PFAS play a pivotal role in manufacturing these technologies, making them indispensable for realizing the European Green Deal's objectives and our collective climate goals.

Balancing Environmental Protection with Technological Innovation

We advocate for a balanced approach that acknowledges both environmental protection and technological innovation. While we support the intention behind regulating hazardous PFAS, we urge the European Union to consider the diverse nature of PFAS, comprising over 10,000 substances. Not all PFAS pose the same level of risk to humans or the environment, and a one-size-fits-all approach through a complete ban is not prudent.

Recommendations for a Differentiated Approach

1. **Scientific Risk Assessment**: We emphasize the importance of conducting comprehensive scientific risk assessments for different PFAS compounds. The risk-based approach should consider the hazardous properties of specific substances, as well as their actual exposure in various applications.

2. **Differentiation in Regulation**: We propose categorizing PFAS into different groups based on their risk profiles and properties, rather than a generalized classification. This will enable tailored regulations that account for the specific risks associated with each group.

3. **Exemptions for Low-Risk PFAS**: PFAS compounds classified as "polymers of low concern," with scientifically established non-toxic, non-bioavailable, and non-water-soluble properties, should be exempted from the ban. This exemption should also extend to substances necessary to produce these low-risk fluoropolymers.

4. **Industrial vs. Consumer Applications**: Differentiate between industrial and consumer applications. The industrial sector demonstrates professional risk management and responsible handling of PFAS, warranting specific exemptions for industrial uses.

5. **Extended Transition Period**: The proposed 18-month transition period is insufficient for industries to explore, qualify, and adopt alternatives. A longer transition period, spanning several years, is necessary for comprehensive testing and implementation.

6. **Spare and Used Parts**: Allow exceptions for the market placement of spare, used, and wear parts to ensure economic efficiency and sustainability in line with the "repair as produced" principle.

7**. Transparent List of Substances**: Provide a transparent list of affected substances, including IUPAC names, CAS numbers, and EU numbers, to facilitate information collection along complex supply chains.

8.**Avoid Double Regulation**: Ensure coherence and consistency with other EU regulations, such as the new F-Gases Regulation, to prevent unintended consequences and confusion.

Conclusion:

The future of sustainable technologies and the achievement of climate goals are intertwined with the responsible use of PFAS. While we acknowledge the importance of regulating hazardous substances, we stress the need for a differentiated approach that accounts for the diverse nature of PFAS compounds and their varying levels of risk. By striking a balance between environmental protection and technological advancement, we can ensure that industries continue to contribute positively to climate neutrality without compromising innovation or economic growth.

We, as Trade association EMINT and VDMA/O-E-A collectively voice our concerns regarding the proposed blanket ban on perfluorinated and polyfluorinated alkyl substances (PFAS) under the REACH Regulation. While we acknowledge the necessity of environmental protection and support the goal of restricting hazardous PFAS, we firmly believe that a differentiated approach is essential to safeguard climate goals and maintain the progress towards a sustainable future.