

Ratingen 27.06.2023

Statement for the Public Consultation regarding the PFAS Restriction Proposal

Introduction & Approach

M&C TechGroup, a medium-sized Group of companies with a strong international market orientation, has held a leading position for 38 years and is well-renowned for a high degree of expertise in developing, manufacturing, and selling industrial gas analysis technology solutions in the sector of Process Automation, Monitoring, and Control (PAMC) technology worldwide. M&C TechGroup provides qualified solutions focused not only on extractive gas sampling, gas conditioning, and process control but also on supporting customers' specific requirements for complex and challenging measurement tasks that are essential for process optimization and safe operations.

The recent proposal for a comprehensive restriction on perfluorinated and polyfluorinated alkyl substances (PFAS) under the REACH Regulation, which was prepared by the competent authorities of Germany, the Netherlands, Denmark, Sweden and Norway, and submitted to the European Chemicals Agency (ECHA) earlier this year, is causing considerable concern in many industry sectors. For numerous industries, the planned ban on a comprehensive group of about 10,000 PFAS substances in an undifferentiated approach and without a documented risk assessment of the individual substances is a major threat to their business existence.

In this undifferentiated approach of the PFAS restriction proposal, numerous substances that display different physicochemical characteristics are blanketly classified as just one group of chemicals. However, these substances differ in their performance and need to be considered in detail prior to enforcing the general ban for regulatory purposes.

The PFAS restriction proposal compromises significantly the innovation capacity and competitiveness of major industrial sectors, such as the Process Automation Monitoring and Control (PAMC), represented in this case by gas analysis technologies.

M&C TechGroup at a Glance

The M&C TechGroup product portfolio covers the entire process of extractive gas measurement starting from gas sampling by means of sample probes, sample tubes and pre-filters, continued by the gas transport which is supported by heated sample lines, tubes and sample gas pumps, followed by gas conditioning with coolers and finally the gas analysis by means of oxygen or multigas analyzers. To assemble and complete this wide range of products, a variety of parts and components are required such as filter elements, heat exchangers and temperature controllers, sensors, flow meters, lubricants, tubes, seals, gaskets, membranes, liners, wires and electronic components. In addition, M&C TechGroup also develops and engineers special gas systems for particular gas measuring tasks, e.g. for mercury, as well as customer-specific system integration.

In almost all industries, the production of goods in general requires the monitoring of gases formed during the production process. This gas monitoring enables the control of all aspects involved in the production process, from quality and quantity up to environmental emission control. Therefore, the equipment for gas

analysis plays an essential role within a broad range of industrial processes in the petrochemical sector, metallurgy, waste incineration plants, and in the cement industry, as well as in power plants and in the shipbuilding industry among others. Moreover, to operate safely and efficiently in hazardous environments, the equipment for extractive gas measurements requires suitable robustness and stability ensured by the chemical and high- temperature resistance of the selected materials. Until today, the use of PFAS represents the only technically safe option available for gas monitoring equipment. Only these substances feature a combination of the three most indispensable properties essential for gas analysis technology: chemical resistance, temperature stability and diffusion resistance.

The technical solutions provided by M&C TechGroup ensure reliable and safe operations for customers worldwide with state-of-the-art equipment and systems. In this way, M&C TechGroup has assumed its responsibilities regarding the European Chemicals Strategy for Sustainability and Green Deal Initiatives, complying with all current environmental laws and regulations within the EU.

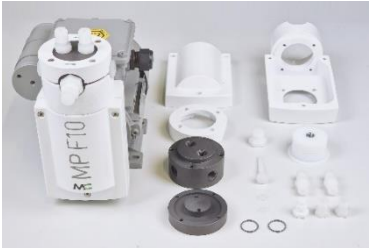
Product Applications

In all applications of gas analysis technology, PFAS materials are required to be used due to their unmatched different high-performance properties. Some PFAS typically used in M&C TechGroup products include PTFE, PCTFE, PFA, PVDF and FKM which are present in tubing, connectors, gaskets, O-rings, filter elements, heat exchangers, membranes, valves, lubricants, coatings, cables, wires and electronics. The performance of the above-mentioned components containing PFAS is based on the following specific properties: chemical resistance to almost all chemicals, corrosion resistance, thermal performance at low and high temperatures, high pressures near 150 bar, low friction and non-adhesive resistance, non-reactive inertness, diffusion resistance, mechanical strength and flexibility as well as dielectric properties.

Without these PFAS materials, the gas analysis equipment is destined to fail which ultimately leads to incorrect measurements. In the worst case, this may lead to an industrial process getting out of control, resulting in a disaster scenario. Thus, M&C TechGroup will not be able to deliver its professional core expertise for industrial gas analysis, which will have considerable consequences on the process control capacity as well as the gas emission monitoring to comply with environmental regulations. The lack of material alternatives leads to substantial limitations and negative consequences such as product failures and thus unreliable measurements, uncertain processes, strained supply chains, and consequently results in a tremendous impairment of the sustainability goals worldwide.

The following table shows M&C's core product groups including the annual turnover and the number of products sold per year.

Table 1: M&C Product Descriptions and PFAS Functionality

Product group	Products including PFAS	Turnover in € million (approx.)/year	Products sold (approx.)/year
Gas sample probes	Heated & unheated probes	3	1,500
 PVDF, FKM (Viton®) and PTFE are used for tubing, seals, O-rings, valves, filter housings, mounting flanges, cables & wires, electronic components, and metal coating of housings.			
Gas coolers	Peltier & compressor coolers	4	2,000
  PTFE, PVDF and FKM (Viton®) are used for seals, O-rings, insulation lubricants, heat exchangers, refrigerant, connectors, tubing, valves, cables & wires, electronic components and metal coating of housings.			
Sample gas pumps	Membranes, bellows & peristaltic pumps	1	1,000
 PVDF, FKM (Viton®), FFKM, FEP, and PTFE are used for connectors, pump heads, pump head housings, bellows, membranes, seals, O-rings, needle valves, cables & wires, motor & electronic components, metal coating of housings and lubricants.			
Filters	Heated & unheated filters	1	3,000
 PTFE, PVDF, FEP, FKM (Viton®) are used for seals, O-rings, filter elements, connectors, filter element holders, filter heads, cables & wires, motor & electronic components, metal coating of housings and lubricants.			

Analyzers	Oxygen & multigas analyzers	1	100
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FKM (Viton®), FFKM, PTFE, PPS, PVDF: tubing, electronic valves, flow meters, connectors, cables & wires, electronic components, metal coating of housings.

Viton® is a registered trademark for fluoroelastomers by DuPont Performance Elastomers, USA.

Reasoning

Even if alternative materials that match the known high-performance properties of PFAS became available today, material substitutions would require extensive reengineering and redesign work. Research and developing activities could extend over years, involving additional costs of material substitutions for individual products, that can reach up to hundreds of thousands of Euros without any guarantee to reach the required product performance.

The risks of adopting and enforcing this broad PFAS restriction will have tremendous consequences on the European market, depriving the EU economy of key technologies such as gas analysis systems that are urgently required for process control and emission monitoring. In view of M&C Tech Group's annual turnover amounting to approx. € 35 million and a purchasing volume of approx. € 2.2 million for PFAS components only, the proposed ban would lead to extensive financial losses involving the risks of company closures and unemployment. As a conclusion, there is a high risk of a domino effect which would affect the entire supply chain of gas analysis equipment and the customers requiring industrial process control and emission monitoring. Needless to mention all the collateral and long-term consequences of non-achieving the goals related to major EU projects such as the Green Deal, Circular Economy, and the climate neutrality targets, which have been largely underestimated by regulators.

Conclusion

With regard to the PFAS restriction proposal, M&C TechGroup GmbH requests the consideration of the following aspects:

- Balanced approach for the restriction proposal that includes a differentiated and risk-based regulation of the individual PFAS substances.
- Acknowledgement of the industrial gas analysis systems as an integral part of Process Automation Monitoring and Control (PMAC) within the REACH Annex XV Per- and Polyfluoroalkyl Substances (PFAS) restriction proposal
- 12-year derogation for the use of PFAS substances within the industrial gas analysis systems to gain necessary lead time for developing alternative materials within the Process Automation Monitoring and Control sector.

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