

**ECHA**

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## | Dossier zu PFAS

Ladies and Gentlemen,

Attached is the HEROSE GMBH dossier for the consultation on the PFAS project.

### **PFAS ban project**

#### **1. Basics**

- HEROSE GMBH does not recommend a blanket ban on the entire PFAS group of approx. 10,000 different individual substances, because it presents HEROSE GMBH and important parts of the German and European economy with challenges that are almost impossible to solve.
- The restriction procedure should be based on the regulatory system of the REACH regulation and be substance-related and risk-based, and use a differentiated approach. The actual risk of each PFAS substance and the way it is used must be taken into account.
- The duration of the derogations and the transitional periods must be extended, as the research, development and certification of possible alternative substances is or can be long and expensive. Case-related exceptions should be continuously reviewed, extended and re-applied for.
- HEROSE GMBH recommends including an evaluation framework for possible exemptions in the restriction in order to make the process transparent and legally secure.
- In the area of exceptions, regulations for basic repairs, spare and wearing parts should also be included.
- When designing the exceptions, the starting materials themselves, as well as the necessary raw, intermediate or auxiliary products along the entire supply chain and the manufacturing process were not considered. This would lead to the manufacturing processes migrating to third countries, to import dependency and to a loss of

competitiveness. We therefore recommend looking at the exceptions holistically and taking the entire value and supply chain into account.

- The undifferentiated PFAS restriction would have significant effects on HEROSE GMBH and the valve manufacturing industry, because PFAS materials are required in future technologies such as hydrogen technology and also play an important role in achieving the goals of the European Green Deal.

## **2. Relevance for HEROSE GMBH**

PFAS materials are a large group of around 10,000 different industrially produced chemical compounds. These are particularly characterized by their high thermal and chemical stability and longevity. As a result, PFAS hardly react with other chemicals, are water, grease and dirt-repellent and are extremely temperature, fire and weather resistant.

These properties are the basis for chemical, temperature and pressure resistance, efficiency, durability and the safety of systems and products. The use of PFAS turns normal plastics into high-performance plastics. This is of crucial importance for the affected sectors in order to comply with legal regulations, e.g. in fire protection, efficiency requirements, safety standards or norms.

The substance group of PFAS is required by HEROSE GMBH in a wide variety of applications. In the field of valve technology, these range from applications in cryogenics, in oxygen-carrying systems to materials that come into contact with food. In the industrial sector, PFAS are considered high-performance materials that are indispensable in many processes, especially under extreme conditions at both low (e.g. -196°C) and high temperatures.

They are used, among other things, in the surface treatment of metals and plastics, in the manufacture of semiconductors, fuel cells or in water electrolysis and are also indispensable in medical technology, in laboratory equipment and in many other applications. A broad restriction of the entire group of substances in production and use would have far-reaching effects on HEROSE GMBH and large parts of German and European industry.

This would negatively affect entire supply chains, the location factor, the investment and competitiveness of HEROSE GMBH and the European Union, as well as the goals of the European Green Deal.

## **3. General**

The restriction of per- and polyfluoroalkyl substances (PFAS) has already been established as part of the "Chemicals Strategy for Sustainability - For a Pollution-free Environment", which is part of the "European Green Deal".

On January 13, 2023, German authorities, in cooperation with authorities from the Netherlands, Denmark, Norway and Sweden, submitted a restriction proposal for PFAS to the European Chemicals Agency (ECHA), thereby initiating the restriction procedure for the inclusion of PFAS in Annex XVII REACH.

The aim of this restriction is to implement a general ban on the manufacture, placing on the market, including import and use of PFAS as a component of other substances, in mixtures and in articles above a certain concentration limit.



The area of application corresponds to the official OECD definition of PFAS and includes the entire substance group of approx. 10,000 chemical compounds. Time-limited exemptions are only reserved for a few specific uses.

The group of substances has special physical and chemical properties that are indispensable in a large number of special applications and very often cannot be substituted. For this reason, HEROSE GMBH supports the possibility of companies participating in the restriction process by submitting further information during the 6-month public consultation. In doing so, we help to compare the regulatory measures of the final restriction with the actual possibilities of the economy, while important goals of the European Green Deal or necessary standards can still be achieved.

#### **4. Restriction of the entire group of substances**

Deviating from Article 69 (1) of the REACH Regulation, it is not just a single substance that should be subject to the restriction, but the entire PFAS substance group of around 10,000 different individual substances. Not all PFAS falling under the broad OECD definition have the same characteristics in terms of persistence, bioaccumulation or mobility. A generic group approach does not do justice to this fact. In addition, there was no well-founded risk assessment of the individual PFAS. For many there is a lack of precise knowledge about possible harmful effects on humans and/or the environment. The broad restriction is therefore a departure from the previous risk-based regulatory approach.

The restriction procedure should continue to be based on the regulatory system of the REACH regulation and should be substance-related and risk-based. A differentiated approach is necessary, where the focus is not only on the hazardous properties of chemicals, but the actual risk of using the individual PFAS substances is assessed. PFAS that have been shown to be harmless should be exempted from the restriction. The type of use should also be considered and observed. For example, PFAS installed inside industrial plants do not come into contact with the environment, which means that there is no environmental exposure. It should therefore also be possible in the future to use such substances, the use of which is indispensable, in closed and safe cycles.

#### **exemptions**

In principle, HEROSE GMBH supports exceptions to the restriction. However, the proposed exemptions are very specific and not consistent, some related to uses, others to products or individual PFAS compounds. The time limit for the exceptions is also very short. The research and development of alternative chemicals, the approval and certification, as well as the adaptation of entire manufacturing processes takes many years and is also very expensive. Accordingly, it is advisable to extend the period of the exemptions and the transitional periods appropriately. In view of the indispensable importance of PFAS, it is also important to grant the possibility of continuously checking, extending and, if necessary, reapplying for exceptions. In addition, the caveat of potential exceptions is particularly critical. In order to achieve this, companies must submit additional information and evidence of their indispensable use. After the consultation, these must stand up to renewed testing and approval. This is problematic because there is no legal basis for an indispensability concept for assessing the importance of the individual uses or products, and under the chemicals regulation REACH there is also no restriction proposal. The challenge therefore lies



with the political decision-makers to make an appropriate judgment about the uses that, despite their problematic properties, require exceptions because they are indispensable. Since PFAS has not previously been subject to the CLP regulation and is therefore not subject to any information obligation along the supply chain, many downstream users have no knowledge of the PFAS content in the products. Since it is still unclear when the REACH regulation is to be revised, it would be desirable in this context to include a legally binding indispensability concept and an assessment framework for possible exemptions in the restriction in order to make this process transparent and legally secure.

In addition, there are currently no general exemptions for basic repair work, spare and wear parts. These should be included for reasons of sustainability.

### **Not considering the manufacturing process, the supply chain**

The proposed exceptions relate to very specific uses or end products. The starting materials themselves and the necessary raw, intermediate or auxiliary products along the entire supply chain and the manufacturing process were not taken into account. This can mean that the planned exemptions do not apply if the raw materials or components required for the use or the end product can no longer be manufactured in the EU. This in turn would lead to a migration of manufacturing processes to third countries, resulting in job losses and increasing import quotas from non-EU countries. The resulting increase in import dependencies also leads to a reduction in strategic autonomy and contradicts the EU's objective of reducing economic dependencies on third countries, promoting supply chains and manufacturing processes in Europe and strengthening strategic autonomy, especially in the area of critical infrastructure and future technological fields .

In addition, the complete restriction of PFAS would be a significant competitive disadvantage for HEROSE GMBH and Germany, Europe as a business location. Due to the PFAS supply shortage and the resulting rising prices, investment decisions would be negative. Since the matter affects various sectors, this would have adverse effects on the value creation and innovative ability of Germany and the European Union. This would also put German and European manufacturers who are subject to this PFAS restriction at a direct competitive disadvantage compared to competitors from third countries who would remain unaffected by this planned restriction. On the one hand, there is the disadvantage that manufacturers in third countries use primary and auxiliary products containing PFAS in the manufacturing process and can export the end products that do not exceed the specified limit values to the EU. On the other hand, from the fact that even if the limit values are exceeded, there are no standardized analysis methods or control frequencies required by law to control the imported products at the borders.

It is therefore advisable to consider the exceptions holistically and to include the entire value and supply chain in an exception regulation. In order for the exceptions to take effect in practice, the manufacture of starting materials and intermediate products must continue to be possible in the EU. Instead, new regulations should be applied to the process or product design in order to promote responsible production and recovery and to exclude the risk for people and the environment. Only then can added value and the production of sustainable products continue to take place in Europe.



## Standards

The PFAS high-performance plastics are indispensable for affected industries in order to comply with legal regulations, e.g. in the field of fire protection, safety standards or norms. A broad PFAS restriction would result in significant gaps in the safety, performance and reliability of assets and products across many industries. Using the example of HEROSE GMBH with the use of seals reinforced with PFAS, a loss of this would endanger the safety of plants, systems and people and lead to more emissions or leaks of gases and chemicals. As a result of this and the shortened service life and more frequent maintenance intervals, the environmental impact would also increase. In this context, chemicals should only be considered as an alternative to PFAS and thus as a justification for a restriction if they have also been adequately evaluated with regard to safety-relevant aspects, service life, energy consumption and other factors. In addition, the use of alternatives should not be systematically restricted by the requirements of other technical regulations in order to avoid conflicting regulations. In addition, the alternatives should be functionally equivalent, i. H. PFAS-based solutions can replace in terms of form, suitability and function. However, if alternative chemicals are tested that can chemically replace PFAS in an equivalent manner, there is a likelihood that they will be chemically resistant and persistent in equal measure. Since the development of alternatives, if at all possible, will take years or decades, HEROSE GMBH recommends making broad exemptions from PFAS for industrial applications. The time span of the exemptions should be based on the state of research in order to make the implementation of the restrictions possible. Where alternatives are already available or at a late stage of development, temporary transition periods would be appropriate. In those cases where no real alternatives are yet available, the exceptions should apply indefinitely. At the same time, research into alternative substances should be provided with more research funding in order to enable the gradual substitution of the PFAS substance group. In this way, the EU could take on a global pioneering role on the subject of PFAS and impress with innovations.

## Green Deal:

An indiscriminate PFAS restriction would have a significant impact on a wide range of industries, including the renewable energy industry. Because PFAS are required in future technologies and play an important role in achieving the goals of the European Green Deal. For example, products containing PFAS are part of key components of fuel and electrolysis cells. These include proton exchange membranes, which are made from the proton-conducting material of perfluorosulfonic acid (PFSA) and enable the transport of protons with simultaneous spatial separation of hydrogen and oxygen. These core components are indispensable for the functioning of fuel or electrolysis cells, for which no technically mature alternatives are currently available. PFAS are also used in various components of renewable energy systems, such as rechargeable lithium-ion batteries, semiconductors, heat pumps, wind turbines or solar systems. They are required for protective coatings against environmental conditions such as extreme heat or humidity, as electrical insulation in wiring, for fuel lines or for high-voltage safety seals. The PFAS guarantee improved durability and safety of systems. Consequently, PFAS are crucial for the energy and mobility transition. Despite this, the draft restriction only provides for exceptions for a few specific uses in the energy sector. A broad and undifferentiated restriction of the group of substances would mean that many technological applications would no longer be possible and the ability



to innovate would decrease. This would not only be a setback for the energy transition, but would have far-reaching negative effects on the achievement of the goals of the European Green Deal. In order to avoid this conflict of interest, attention should be drawn to the importance of PFAS for the transformation and permanent exceptions for transformation technologies and critical infrastructures should be developed.

## **5. Description HEROSE GMBH**

1873 Foundation of the valve factory TH. ROSE KG.

1921 Foundation of HERO Armaturenwerk GmbH.

1947 Foundation of HEROSE GMBH Valves and Metals as a sales company.

Parent company of the HEROSE Group with subsidiaries in England, Spain, Germany, China, India and Australia.

Distribution in over 80 countries worldwide.

Manufacturer of valves for industrial applications. Since 1996, beginning and further development of the valve product portfolio for low-temperature technology (cryogenics). In 2000 expansion of the product portfolio in the LNG area for onshore applications and since 2010 also for LNG-powered ships. 2019 Start of the H2 initiative.

Annual production volume of approx. 400,000 valves with more than 400 employees worldwide.

Applications of our products for cryogenic purposes (air gases, LNG, hydrogen) in the area of transport, storage and processes, for LNG and H2 also for refueling.

Use of our products for industrial applications in industrial plants, in medical technology, the food industry, in process cooling systems, in heat exchangers, in gas and water extinguishing systems, in vehicle construction, in water treatment systems and many other applications.

We ask you to consider our aspects in the decision-making process.



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