

25th May, 2023

JRAIA's comments on the Proposed Restriction of PFAS

The Japan Refrigeration and Air Conditioning Industry Association (JRAIA) representing manufacturers of refrigeration and air conditioning equipment in Japan, and its member companies are committed to maintaining and improving living standards by providing environmentally sustainable refrigeration and air conditioning products/services for human comfort and industrial processes.

As major downstream users of fluoropolymers and F-gases (HFCs / HFOs) in refrigeration, air-conditioners and heat pumps, JRAIA welcomes this opportunity to submit feedback regarding the ECHA's consultation on the PFAS restriction proposal prepared by five Member States. We would appreciate it if you can consider our opinion during the ECHA's consultation.

Refrigeration, Air Conditioning and Heat Pump (RACHP) products play an essential role in ensuring not only the safety, security and health of users in extreme climate conditions, but also maintaining food sustainability, while also supporting the Fit for 55 and REPowerEU policies for reducing CO₂ emissions and achieving carbon neutrality.

Therefore, we would like to request an exemption from the restrictions on the use of PFAS for socially necessary RACHP products. In addition, we also kindly request to take into consideration the extensive research time required to trace back the components and materials used in RACHP products. We urge you to carefully consider the legislation regarding this matter.

In RACHP products, PFAS is an essential material used in various applications such as refrigerants (F-gas applications), electrical and electronic components (electronics applications), surface coatings, metal plating (plating applications, etc.), as well as in functional components such as refrigerant circuit components and structural materials that make up the chassis (other applications).

The unique properties^{*1} of PFAS make them a popular choice in RACHP products, where they provide the necessary durability that consumers demand. In summary, materials using PFAS are vital in RACHP products that are essential to people's everyday lives. Thus, an exemption for RACHP products is necessary to ensure their continued use.

Regarding the disposal of electrical and electronic products including RACHP products, the WEEE Directive enforces the collection and disposal of these products, as well as the provision of information to recycling facilities, specifically problematic components. We kindly ask Member States to enhance guidance on the proper operation of recycling facilities.

In addition, when considering the circular economy and efficient use of resources, use of all maintenance related items required for product maintenance and repair should be permitted with no expiration date.

JRAIA intends to submit additional comments and evidence. However, the number of chemical substances that fall under the definition of PFAS is enormous. We are currently conducting surveys with our suppliers to determine the presence or absence of these substances and their applications in each part. This process requires time to investigate the possibility of substitution and to evaluate their applications. It is imperative to conduct investigations that cover not only risk assessment and socioeconomic impact of substances but also span from upstream to downstream, starting from materials, components, and final products, which make up the final RACHP product. We recommend including the time frame for such a study in the legislative review process.

Lastly, we would like to bring attention to refrigerants and refrigerant circuit components:

Refrigerants:

Not all refrigerants can be easily replaced, and the "S+3Es" concept (which is considering not only Safety, but also Environmental performance, Energy efficiency and Economic feasibility) is crucial for successful transition to alternative refrigerants. In this context, "environmental performance" refers specifically to a refrigerant's low global warming potential (GWP), which may have a negative impact on the environment.

In addition, we would like to point out the impact on the two types of Air Conditioning and Heat Pump as shown below:

1. Direct expansion

The market favors direct expansion systems due to their high efficiency and ease of installation. However, the use of R290 (Hydrocarbon), a potent refrigerant, in such systems is premature and is not feasible yet. This is mainly due to concerns about product safety, as well as a lack of social systems such as qualification programs for installers and maintenance / repair technicians handling higher flammability refrigerants.

2. Indirect expansion

Among indirect expansion systems, large size equipment charged with large amount of refrigerant such as centrifugal chillers have a safety issue when converting to higher flammability refrigerants such as R290. While the transition of refrigerants in small-capacity centrifugal chillers is making progress, applying R290 to all indirect expansion systems is difficult due to installation restrictions and safety regulations.

Refrigerant Circuit Components:

PFAS materials are used for components that make up the refrigerant circuit of RACHP products, such as compressors, four-way valves and shut-off valves, because they are required to have long-term reliability (durability) as a maintenance-free feature, which is considered essential for the design of hermetic systems. Therefore, transition to alternatives is not easy.

※1 Flame resistance, heat resistance, chemical resistance, electrical insulation, water and oil repellency, weather resistance, dielectric properties, lubricity, sliding properties, sealing properties, etc.

About JRAIA

The Japan Refrigeration and Air Conditioning Industry Association (JRAIA) was originally established in February 1949 as the Japan Refrigerating Machine Manufacturers Association which was thereafter reorganized in February 1969 to become an incorporated association and renamed as it is at present.

JRAIA is the industry association representing over 160 manufacturers of refrigeration and air conditioning equipment in Japan. We, the members of JRAIA, have so far been dedicated to offering quality products to the markets of EU. JRAIA aims to promote and improve production, distribution and consumption of refrigeration and air conditioning equipment and their applied products, as well as auxiliary devices and components, automatic controls and accessories and thereby contribute to the steady development of Japanese industry and the improvement in people's standard of living.

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