

Aug 25, 2023

Comment on Proposed Restriction of PFAS

Japan Valve Manufacturers' Association (JVMA)

Japan Valve Manufacturers Association (JVMA) appreciates the opportunity to provide comments to the PFAS restriction proposal.

1. Introduction

JVMA was established in 1954 and has been a representative association of Japanese valve industry for nearly seventy years. As of today, we are comprised of 115 majors domestic valve manufacturers including several Japanese subsidiaries of European valve makers and additional 68 associate companies. Since our establishment, we have implemented various effective programs to contribute to society, occasionally cooperating with some of Central Government Ministries and Agencies. Especially we are pouring the biggest effort to resolve environmental problems, so the Environmental Committee and four working groups in our organization are working on the following issues:

- Greenhouse gas reduction.
- Design for the environment of valves.
- Life cycle assessment of valves.
- Gathering information on restricted substances.
- Environmental education.

To response to the PFAS restriction proposal, we have prepared a technical and socioeconomic statement which is attached document.

2. Comment

PTFE and PFA are selected when high cleanliness polymer materials are required. PTFE and PFA are widely used in semiconductor manufacturing. Due to the requirements of semiconductor manufacturing, PTFE is molded in clean rooms. Therefore, PTFE and PFA are polymer materials with high cleanliness. Cleanliness is required for the following categories of valves:

- Diaphragms of valves used for the supply and waste of high-temperature (200° C or higher) chemical solutions in the cleaning process of the semiconductor manufacturing category.
- Diaphragms of valves used in ultrapure water facility lines of semiconductor factories in the

semiconductor manufacturing category.

- Valve seats for valves used for high-purity gas supply, high-purity chemical supply, and waste liquid in the semiconductor manufacturing category.

- Valve gaskets used for high-purity gas supply, high-purity chemical supply, and waste liquid in the semiconductor manufacturing category.

- Valve boxes for valves used for high-purity gas supply, high-purity chemical supply, and waste liquid in the semiconductor manufacturing category.

- High-purity gas supply in the semiconductor manufacturing category, high-purity chemical supply, valve diaphragm used for waste liquid.

- Diaphragms of valves used for transfer and storage of bioprocess liquids in the pharmaceutical manufacturing category.

- Diaphragms of valves used in lines for PW/UPW purification and injectable solutions in the pharmaceutical manufacturing category.

- Diaphragms of valves used in CIP cleaning equipment and cleaning liquid lines in the pharmaceutical manufacturing category.

- Diaphragms of valves used in SIP sterilizers and sterilization steam lines in the pharmaceutical manufacturing category.

- Pharmaceuticals, chemistry, food, electrical equipment, metals, steel, rubber, glass, textiles, petroleum, papermaking, household equipment, steam for laundry category, sterilization of pharmaceutical tanks.

- Sterilization of food production lines.

- Various raw materials and reactors Seat rings for valves used for heating, hot water production, and safety valves for boilers.

- Pharmaceuticals, chemistry, food, electrical equipment, metals, steel, rubber, glass, textiles, petroleum, papermaking, household equipment, steam for laundry category, sterilization of

pharmaceutical tanks.

- Sterilization of food production lines.
- Various raw materials and reactors valve discs used for heating, hot water production, and safety valves for boilers.
- Medicines, foods, cosmetics, fine chemicals, liquid crystals in the categories of pharmaceuticals, cosmetics, fluid control of food manufacturing lines, filling valves, liquid crystals, semiconductor manufacturing chemical lines, viscous fluids, slurry fluid control, lithium-ion battery manufacturing lines valve diaphragm.
- Valve gaskets used in sterilization, sterilization, cleaning, air conditioning, and reactions in the pharmaceutical category.
- Valve seats for valves used in sterilization, sterilization, cleaning, air conditioning, and reactions in the pharmaceutical category.
- Air trap valve openings and air vent valve seats for valves used in sterilization, sterilization, cleaning, air conditioning, and reactions in the pharmaceutical category.
- Valve discs for valves used in sterilization, sterilization, cleaning, air conditioning, and reactions in the pharmaceutical category.
- Control valve bodies for valves used in sterilization, sterilization, cleaning, air conditioning, and reactions in the pharmaceutical category.
- Diaphragms of valves used in RO water supply lines in the medical equipment category.
- Valve seats, packings, gaskets, seal rings, thrust washers, plain rings, wear rings, and bearings used for dialysis water supply in the medical equipment category.
- Gaskets, shaft seals, soft seats (disc seats) used in valves for process piping in the aerospace category.
- Diaphragms used in valves for process piping in the aerospace category.

- Diaphragms of valves used in lines for various acidic/alkaline process liquids in the food manufacturing category.
- Diaphragms of valves used in lines for filling equipment in the food manufacturing category.
- Valve lining used for supplying high-purity chemicals in the cleaning process of the semiconductor category and for waste liquids.
- Valve packing, sealing material, and valve body used for supply of high-purity chemicals in the cleaning process of the semiconductor category, and for waste liquids.
- Valve guide for supply of high-purity chemicals in the cleaning process of the semiconductor category and for waste liquids.
- Diaphragms of valves used for manufacturing, transporting, and storing various high-purity chemicals in the semiconductor and electronics categories.
- Diaphragms of valves used for semiconductor-grade pure water supply equipment in the semiconductor and electronics categories.
- Diaphragms of valves used in chemical supply lines for manufacturing secondary batteries in the semiconductor and electronics categories.
- Ball valve seats for valves used for transfer and storage of electronic material process liquids and refined chemical liquids in the semiconductor and electronics categories.
- Gaskets, shaft seals, and soft sheets (disc sheets) used in valves for process piping in the semiconductor industry category.
- Diaphragms used in valves for process piping in the semiconductor industry category.
- Gaskets used in valves for process piping in the semiconductor industry category.
- Diaphragms of valves used in filling lines for luminescent liquids in the organic EL manufacturing category.

We do not yet know about other **polymer** materials with high cleanliness of fluoropolymer PTFE and PFA. We may be able to develop alternatives, but we cannot prepare everything in a short period of time.

For that reason, we require valves to comply with the conditions of restriction “until 13.5 years after EiF”. It is desirable that the conditions of restriction corresponding to the multiple Uses described in this comment be clarified in the opinion of SEAC.