

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 major 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

The technical functions provided by FKM/FFKM are persistence. Persistence is required for valves in the following categories.

- Piston packing for pneumatic cylinders of valves used for pressure control of chemical supply and circulation lines in the semiconductor manufacturing category.
- Diaphragms of valves used in manufacturing facilities for intermediates and active pharmaceutical ingredients in the pharmaceutical manufacturing category.

- O-rings of valves used for sealing the sliding parts and connecting parts of valve parts in the pharmaceutical manufacturing category.

- O-rings for valves used to supply hot water in factories that use steam in the food manufacturing and pharmaceutical manufacturing categories.

- Pharmaceuticals, chemistry, food, electrical equipment, metals, steel, rubber, glass, textiles, petroleum, paper manufacturing, household equipment, water and liquids in the laundry category, water supply lines for facilities such as houses and factories, etc. Manufacturing of plants such as chemicals O-rings of valves used in lines.

- Pharmaceuticals, chemistry, food, electrical equipment, metals, steel, rubber, glass, textiles, petroleum, paper manufacturing, household equipment, water and liquids in the laundry category, water supply lines for facilities such as houses and factories, etc. Manufacturing of plants such as chemicals Gaskets and packings for valves used in lines.

- Pharmaceuticals, chemistry, food, electrical equipment, metals, steel, rubber, glass, textiles, petroleum, paper manufacturing, household equipment, water and liquids in the laundry category, water supply lines for facilities such as houses and factories, etc. Manufacturing of plants such as chemicals Diaphragms of valves used in lines.

- Pharmaceuticals, chemistry, food, electrical equipment, metals, steel, rubber, glass, textiles, petroleum, paper manufacturing, household equipment, water and liquids in the laundry category, water supply lines for facilities such as houses and factories, etc. Manufacturing of plants such as chemicals Discs of valves used in lines.

- O-rings used in energy category cold evaporator valves.

- O-rings used in valves for process piping in the energy category.

- Valve O-rings used in safety valve parts for liquefied gas storage tanks and piping in the energy industry/ petrochemical category.

- O-rings for valves used to eliminate drain in steam piping systems in the chemical industry & more category.

- Valve O-rings and dust seals used for fluid control of thermal power, nuclear power, hydraulic power, geothermal power generation, steel mills, and ship category power generation equipment.

- Seals for water passages of devices in the hydrant category, packing for valves used to prevent water leakage, O-rings.

- O-rings for valves used for fluid control of air conditioning equipment in the building air conditioning/petrochemical/chemical category, and fluid control in petrochemical and chemical plants.

- Seal washers for valves used for fluid control of air conditioning equipment in the building air conditioning/petrochemical/chemical category, and fluid control of petrochemical and chemical plants.

- O-rings for valves used for fluid control of building air conditioning water supply/hot water supply/petrochemical and chemical category air conditioning equipment, water supply/hot water supply control for building equipment, water supply control for buried piping, fluid control for petrochemical/chemical plants, Rubber packing, valve seat (seat).

- Valve O-rings, seats, and packings used in humidified steam cutoff valves for building air conditioning equipment in the building air conditioning instrumentation category.

- Used in pharmaceuticals, foods, cosmetics, fine chemicals, liquid crystal category pharmaceuticals, cosmetics, fluid control of food production lines, filling valves, liquid crystal, semiconductor manufacturing chemical lines, viscous fluids, slurry fluid control, and lithium-ion battery production lines valve piston packing.

- Used in pharmaceuticals, foods, cosmetics, fine chemicals, liquid crystal category medicines, cosmetics, fluid control of food production lines, filling valves, liquid crystal, semiconductor manufacturing chemical lines, viscous fluids, slurry fluid control, lithium-ion battery production lines valve Y packing.

- O-rings used for cold evaporator valves in the medical category.

- O-rings used in valves for process piping in the medical category.
- Valve O-rings used as sealing members for piping connections in the medical equipment category.
- Packing and sealing materials for valves used in highly corrosive fluid manufacturing processes in the chemical category.
- Packing and sealing materials for valves used in processes using highly corrosive fluids in the chemical category.
- Seat rings for valves used in cleaning lines in the chemical industry category.
- O-rings for valves used in medicine and food circulation lines in the chemical industry category.
- Back-up valves used in chemical industry category pharmaceutical and food circulation lines.
- O-rings for valves used in lines for handling chemical liquids in the chemical industry category.
- Diaphragms of valves used for transfer and storage of highly corrosive liquids and gases in the chemical industry category.
- Valve O-rings used for sealing the sliding parts and connecting parts of valve parts in the chemical industry category.
- O-rings for valves used to control fluids used in chemical fiber manufacturing plants in the chemical fiber category.
- O-rings of valves used for sealing sliding parts and connecting parts of valve parts in the seawater desalination equipment category.
- Water supply equipment (reducing valves, check valves, fittings, etc.) Category equipment water passages, pipe connection seals, valve diaphragms, O-rings, and packings used to prevent water leakage.

- Valves used to control the opening and closing of hot water (including pressure and flow control) in water supply equipment (electronic faucets, automatic faucets, electric water heaters, toilet flush valves, ball taps, etc.) in the faucet (manual/electric) category Diaphragm (driving solenoid valve), U-packing/X-packing (sliding part shaft seal).
- Plumbing equipment, plumbing category equipment water passages, seals for pipe joints, valve packing, gaskets, and O-rings used to prevent water leakage.
- O-rings for valves used for building air conditioning, chemical, petrochemical, gas, and water category gas transportation piping and equipment fluid control.
- O-rings for valves used for fluid control of building air conditioning, chemical, petrochemical, gas, and water category water treatment facilities and piping.
- Valve O-rings used for high-temperature specification sliding part shaft seals in the industrial valve category.
- O-rings used for cold evaporator valves in the aerospace category.
- O-rings used in valves for process piping in the aerospace category.
- O-rings for valves used to control the fluid used in manufacturing high-performance resins in the high-performance resin category.
- Valve packings and sealing materials used for gas generator switching valves in the industrial equipment and equipment category.
- O-rings of valves used for sealing the sliding parts and connecting parts of valve parts in the industrial water treatment category.
- O-rings of valves used for sealing sliding parts and connecting parts of valve parts in the water and sewage treatment category.
- O-rings of valves used for sealing sliding parts and connecting parts of valve parts in the food manufacturing category.

- Valve O-rings, sheets, and packings used in hypochlorous acid water generators in the water treatment category.

- Rubber valve discs used to seal main parts of highly durable valves in the category of water supply valves (soft seal gate valves) and prevent water leakage.

- Sliding shaft seals for highly durable valves in the water supply valve (butterfly valve) category, O-rings for valves used to prevent water leakage.

- O-rings for valves used to control fluids used in paper manufacturing plants in the paper manufacturing category.

- O-rings for valves used to control fluids used in iron-making plants in the iron-making category.

- O-rings of valves used for sealing the sliding parts and connecting parts of valve parts in the steel industry category.

- Control of fluids used in petroleum refining plants in the petroleum refining category.

- Valve packing and sealing materials used in cooling lines in the steel category.

- O-rings of valves used for sealing sliding parts and connecting parts of valve parts in the water treatment category for power generation.

- Diaphragms of valves used for manufacturing, transporting, and storing various high-purity chemicals in the semiconductor and electronics categories.

- Diaphragms of valves used for supplying various high-purity chemical liquids in the semiconductor and electronics categories and waste liquid equipment.

- Valve O-rings used for sealing sliding parts and connecting parts of valve parts in the semiconductor and electronics categories.

- O-rings used in valves for cold evaporators in the semiconductor industry category.

- O-rings used in valves for process piping in the semiconductor industry category.
- Oil seals for valves used to control fluids used in the production of resins in the general-purpose resin category.
- Valve lip packing used to control the fluid used in the production of resins in the general-purpose resin category.
- X-rings for valves used to control fluids used in manufacturing resins in the general-purpose resin category.
- O-rings used for cold evaporator valves in the transportation category.
- O-rings used in valves for process piping in the transportation category.
- O-rings for valves used to control fluids used in ceramics category ceramics equipment.

There are no elastomers that are as difficult to decompose as FKM or FFKM. In particular, FKM and FFKM using bisphenol-AF for cross-linking are highly resistant to decomposition. 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.