

General Comments:

Regal Rexnord Corporation (RRX) a publicly traded global manufacturer, is approximately a \$6B business with over 30,300 associates worldwide. As a leading producer of power transmission, automation products, our essential products help keep systems running in mission-critical applications worldwide — indoor air quality products used in hospitals, homes, and senior living facilities; industrial products that support food and beverage, and pharmaceutical production; and conveying equipment and components that help warehouse's function. Through longstanding technology leadership and an intentional focus on producing more energy-efficient products and systems, Regal Rexnord helps create a better tomorrow – for its customers and for the planet. To know more, please visit www.regalrexnord.com

Regal Rexnord is comprised of three operating segments: Automation & Motion Control, Industrial Powertrain Solutions, Power Efficiency Solutions. Regal Rexnord is headquartered in Milwaukee, WI, USA has manufacturing, sales, and service facilities worldwide.

Regal Rexnord has formed a team of internal experts from Product Compliance, Government Affairs, Engineering, Supply Chain to analyze & respond to the Mexico Per- and Polyfluoroalkyl Substances (PFAS) Restriction Proposal.

Regal Rexnord has developed a phased approach to responding to and complying with future PFAS regulations in the European Union. The approach relies on 'analyzing the impacted RRX components and materials, categorizing them based on primary PFAS groups, assessing alternative materials and their implications, pinpointing critical applications and products, gauging socio-economic consequences, and detailing end-of-life procedures and recycling techniques for PFAS elements.

The first critical step Regal Rexnord has undertaken has been a thorough review and identification of products in our portfolio that contain PFAS, either at the point of sourcing a component or during the manufacturing process. While every effort has been made to identify the presence of PFAS

in our portfolio, Regal Rexnord has found that it is very difficult to evaluate the presence of the PFAS that may be used indirectly, in processes such as molding or in lubricating oils, etc.

Abbreviations:

PFAS MATERIAL	CAS NUMBER	TERM
Polytetrafluoroethylene	9002-84-0	PTFE
Fluorinated ethylene propylene	25067-11-2	FEP
Ethylene tetrafluoroethylene	25038-71-5	ETFE
Polyvinylidene fluoride	24937-79-9	PVDF
Fluorine Kautschuk Material	9011-17-0	FKM
Bisphenol AF	1478-61-1	
Perfluoropolyalkyl Ether	60164-51-4	
Homopolymer of vinylidene fluoride	24937-79-9	VDF
Hexafluoropropylene	116-15-4	HFP
Tetrafluoroethene	116-14-3	TFE
Poly(tetrafluoroethylene-co-perfluoro(propylvinyl ether))	26655-00-5	PFA

Use of PFAS & their functionality in the RRX Products:

Our Motors, AC Drives & Controls, Power Transmission, and other Automation products use several components that contain PFAS substances. PFAS in our portfolio are primarily utilized to achieve temperature and chemical resistance, reduce friction, maximize photovoltaic performance, provide for chemical cleaning, and ensure corrosion resistance.

Refer Table A, for an incomplete list of Regal Rexnord products where presence of a PFAS substance has been identified, as well as its corresponding functionality.

SI No	Business Segment	Application	PFAS Substance	CAS Number	Concentration	RRX Product/Parts	Functional Property	Why these parts are used in the RRX product?
1		Aerospace Mechanical Seals and Bearings	Fluorine Kautschuk Material (FKM) (Viton)	9011-17-0	100%	"Viton" O-Rings	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Homopolymer of vinylidene fluoride (VDF)	24937-79-9				
			and hexafluoropropylene (HFP)	116-15-4				
			Bisphenol AF (may be present in FKM below 5%)	1478-61-1	<5%	"Viton" O-Rings	Flexibility along with Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Acrylonitrile	107-13-1	100%	Nitrile O-rings	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Butadiene	106-99-0				
			Trifluoropropyl Methyl Vinyl Silicone	592-09-6 872-50-4 108-05-4 7440-21-3	100%	Fluorosilicone o-rings & EMI Seals	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			ETHYLENE/PROPYLENE/DIENE TERPOLYMER	25038-36-2	100%	EP O-rings	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Polytetrafluoroethylene (PTFE) (Teflon)	9002-84-0	100%	Tec-Ring (Graphite Filled)	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Graphite	7782-42-5				
			Quartz Silica	14808-60-7				
			Tetrahydrofuran	109-99-9	100%	Hytrex Seals	Flexibility along with Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Butylene phthalate	84-74-2				
			polyalkylene-ether glycol	9038-95-3				
			Fiberglass	65997-17-3	100%	Machinable Liner	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Polytetrafluoroethylene (PTFE) (Teflon)	9002-84-0				
			Urethane Dimethacrylate	72869-86-4				
2_1		Fluid coupling, Gear couplings, Grid couplings, Sureflex	Fluorine Kautschuk Material (FKM) (Viton)	9011-17-0	100%	Fluoro-carbon material for special seals or limited production molded insert for Sureflex couplings	Temperature and Chemical Resistance	To achieve required product performance and life in Customer's environment
2_2		Manufacturing and production of couplings	1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	35%-45%	Substances used during production of Disc couplings, grid couplings, gear couplings, and Centa.	Chemical cleaning and corrosion resistance	CO Contact Cleaner
			Decafluoropentane (HFC-43-10mee)	138495-42-8	55%-65%		Chemical cleaning and corrosion resistance	CO Contact Cleaner
			Poly(tetrafluoroethylene)	9002-84-0	1%-5%		Lubricity and sealing	LOCTITE THREAD SEALANT WITH PTFE
			Decafluoropentane (HFC-43-10mee)	138495-42-8	95%-100%		Chemical cleaning and corrosion resistance	CO Contact Cleaner
			Decafluoropentane (HFC-43-10mee)	138495-42-8	95%-100%		Chemical cleaning and corrosion resistance	Contact Cleaner (Bulk)
			Poly(tetrafluoroethylene)	9002-84-0	1%-5%		Lubricity and sealing	LOCTITE THREAD SEALANT WITH PTFE
			Poly(tetrafluoroethylene)	9002-84-0	1%-5%		Lubricity and sealing	LOCTITE THREAD SEALANT WITH PTFE

TABLE A – List (Incomplete) of parts in RRX products having PFAS & its Functionality

SI No	Business Segment	Application	PFAS Substance	CAS Number	Concentration	RRX Product/Parts	Functional Property	Why these parts are used in the RRX product?
3		Chains and modular Belts	Polytetrafluoroethylene (PTFE)	9002-84-0	<<5%	All chains and belts produced in PSX material	Reducing friction and increasing PV performance	To achieve frictions low enough to keep container upright and to reduce energy usage
					<<5%	All chains and belts produced in HP material	Reducing friction and increasing PV performance	To achieve frictions low enough to keep container upright and to reduce energy usage
					<<5%	All chains and belts produced in WHP material	Reducing friction and increasing PV performance	To achieve frictions low enough to keep container upright and to reduce energy usage
			Polyvinylidene fluoride (PVDF)		100%	All chains and belts produced in CR material	Chemical Resistance	Unmet chemical resistance properties that are required in e.g. aseptic filling
4		HVAC Industry	Polytetrafluoroethylene (PTFE) (Teflon)	9002-84-0	100%	Leadwire Insulation in special applications	Temperature Resistance	To achieve required Electrical Insulation class.
						Shrink Tubing in some special applications	Temperature Resistance	To achieve required Electrical Insulation class.
			Perfluoropolyalkyl Ether (Krytox, Braycote)	60164-51-4	100%	Grease in some special bearings for	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
5		Industrial and precision linear Actuators	Polytetrafluoroethylene (PTFE) (Teflon)	9002-84-0		Leadwire Insulation	Temperature Resistance	To achieve required Electrical Insulation class.
						Shrink Tubing	Temperature Resistance	To achieve required Electrical Insulation class.
						Shaft Seals	Lubricity	To achieve required product life
						Leadscrew surface treatment	Lubricity	To achieve required product life
						Grease	Lubricity	To achieve required efficiency and product life
						Bushings	Lubricity	To achieve required efficiency and product life
						Leadnuts	Lubricity	To achieve required efficiency and product life
			Fluorinated ethylene propylene (FEP)	25067-11-2		Shrink Tubing	Chemical Resistance and Flexibility	To achieve required product life in Customer's environment
			Fluorine Kautschuk Material (FKM) (Viton)	9011-17-0		"Viton" O-Rings	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
						"Viton" Wipers	Temperature and Chemical Resistance	To achieve required product life in Customer's environment

TABLE A – List (Incomplete) of parts in RRX products having PFAS & its Functionality

SI No	Business Segment	Application	PFAS Substance	CAS Number	Concentration	RRX Product/Parts	Functional Property	Why these parts are used in the RRX product?
6	Heri (Suz	Commercial air conditioning and generation	Polytetrafluoroethylene (PTFE) (Teflon)	9002-84-0	100%	Leadwire Insulation	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Tubing in some special applications	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Fluorinated ethylene propylene (FEP)	25067-11-2	100%	Leadwire Insulation	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Shrink Tubing in some special applications	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Tubing in some special applications	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Poly(tetrafluoroethylene-co-perfluoro(propylvinyl ether)) (PFA)	26655-00-5	100%	Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Ethylene tetrafluoroethylene (ETFE)	25038-71-5	100%	Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Tetrafluoroethene (TFE)	116-14-3	100%	Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Polyvinylidene fluoride (PVDF)	24937-79-9	100%	Shrink Tubing on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.

TABLE A – List (Incomplete) of parts in RRX products having PFAS & its Functionality

SI No	Business Segment	Application	PFAS Substance	CAS Number	Concentration	RRX Product/Parts	Functional Property	Why these parts are used in the RRX product?
7	Hermitey	Commercial air conditioning and generation	Polytetrafluoroethylene (PTFE) (Teflon)	9002-84-0	100%	Leadwire Insulation	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Tubing in some special applications	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Fluorinated ethylene propylene (FEP)	25067-11-2	100%	Leadwire Insulation	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Shrink Tubing in some special applications	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Tubing in some special applications	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
						Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Poly(tetrafluoroethylene-co-perfluoro(propylvinyl ether)) (PFA)	26655-00-5	100%	Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			ethylene tetrafluoroethylene (ETFE)	25038-71-5	100%	Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Tetrafluoroethene (TFE)	116-14-3	100%	Leadwire Insulation on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.
			Polyvinylidene fluoride (PVDF)	24937-79-9	100%	Shrink Tubing on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class and Chemical resistance.

TABLE A – List (Incomplete) of parts in RRX products having PFAS & its Functionality

SI No	Business Segment	Application	PFAS Substance	CAS Number	Concentration	RRX Product/Parts	Functional Property	Why these parts are used in the RRX product?
8	Kollm	Military and commercial electric motors and drives	Polytetrafluoroethylene (PTFE) (Teflon)	9002-84-0	100%	Leadwire Insulation (AKM, etc)	Temperature Resistance	To achieve required Electrical Insulation class.
						Shrink Tubing in some special applications	Temperature Resistance	To achieve required Electrical Insulation class.
						Shaft Seals (AKM, etc)	Lubricity	To achieve required product life
						Anti-drip agent in AKD housings?	Flammability Resistance	To achieve required UL Flamability Rating
						Shrink Tubing on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class.
						thickener in some greases (i.e. Molcote G4500)	Chemical Resistance	To achieve required Chemical resistance
						fluorocarbon film capacitors in drives	Dielectric Properties	To achieve required performance
			Fluorinated ethylene propylene (FEP)	25067-11-2	100%	Lead Wire in some Special Motors	Chemical Resistance and Flexibility	To achieve required product life in Customer's environment
			ethylene tetrafluoroethylene (ETFE) (Tefzel)	25038-71-5	100%	Lead Wire in some Special Motors	Temperature Resistances, cold flow resistance and Radiation Resistance	To achieve required product life in Customer's environment
			Polyvinylidene fluoride (PVDF) (Kynar)	24937-79-9	100%	Lead Wire in some Special Motors	Radiation Resistance	To achieve required product life in Customer's environment
						Shrink Tubing in most Main St. BM, BMS, BMHS, RBE	Temperature Resistance	To achieve required Electrical Insulation class
						Shrink Tubing on some Thermistors	Temperature Resistance	To achieve required Electrical Insulation class
			Fluorine Kautschuk Material (FKM) (Viton)	9011-17-0	100%	"Viton" O-Rings	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Homopolymer of vinylidene fluoride (VDF) and hexafluoropropylene (HFP)					
			Bisphenol AF (may be present in FKM below 5%)	1478-61-1	<5%	"Viton" O-Rings	Flexibility along with Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Perfluoropolyalkyl Ether (Krytox, Braycote 601EF)	60164-51-4	100%	Grease in some special bearings for special motor applications.	Temperature and Chemical Resistance	To achieve required product life in Customer's environment
			Typically uses PTFE as a thickener to make grease					

TABLE A – List (Incomplete) of parts in RRX products having PFAS & its Functionality

A partial compilation of instances necessitating the use of PFAs:

1. **Energy Supply:** PFAs play a crucial role in the energy sector, especially in renewable energy production, our products are used in Axis trackers, Gear Box, Generators.
2. **Chemical Industry Processes:** The chemical industry relies on motors, power transmission products, AC drives, and controls with fluoropolymeric materials, even when the substances being produced are not PFA-based, to ensure efficient production processes.
3. **Electronics:** Semiconductors and other electronic components in motors, power transmission products, AC drives, and controls demand the use of PFAs to ensure proper functionality. Additionally, the manufacturing processes involving semiconductors often require ultrapure corrosive water, necessitating the use of fluoropolymeric materials in motors, power transmission products, AC drives, and controls.
4. **Replacement Parts:** Many production equipment pieces remain in service for extended periods, often exceeding 20 or 30 years. These machines may contain sliding parts made of materials like PTFE. It is essential to extend the lifespan of such equipment to align with the objectives of the Eco-design Directive and resource efficiency targets, reducing the need for discarding processing machines.
5. **Machinery:** The production of various materials and components relies on machines, including die-casting and compression molding machines for thermoplastics. These machines frequently require fluorinated polymers and, in specific cases, other PFAs to withstand high temperatures, provide non-stick properties, and cope with temperature fluctuations.
6. **Air Conditioning in Production Facilities:** Facilities engaged in activities like electronics manufacturing often incorporate fluorinated gases in their air conditioning systems for safety reasons.

RRX Motors, AC Drives & Controls, Power Transmission and Automation products are essential for all the applications that requires motion. This restriction may cause the following to occur:

- a) RRX products may no longer perform the same function as before;

- b) Restrictions may lead to an unsafe work environment for the operators and users;
- c) Restrictions may impact product life;
- d) May necessitate changes to processes and systems.
- e) Business-to-business (B2B) customers may not be able to sell their products and materials; and
- f) Spare parts may not be substitutable in the same design.

Adhering to additional regulations might pose a considerable challenge, potentially reaching a point of near impossibility. Any alteration in materials or design may lead to a breach of other regulatory requirements, including:

- a) Energy Efficiency Regulations, such as Eco-Design regulations for electric motors and other covered equipment;
- b) Non-Flammability Regulations, such as UL, ATEX
- c) ATEX, UL, FER, DPPP
(UL - Underwriters' Laboratories, ATEX - ATmosphere Explosible, FER - Fan Energy Rating ,DPPP - Dedicated-purpose pool pump)
- d) Food & Drinking Water Regulations, such as ??

PFAS Emissions in the end-of-life phase:

Manufacturing:

Regal Rexnord purchases most parts from the suppliers in ready to use/ assemble condition. Some of the parts that have PFAS substances are “O” rings (Viton, Fluro silicone & Nitrile), seals, liners, as well as materials used during production of molded components, chains, belts, lead wires, shrink tubing, grease, capacitors.

Use Phase:

No emission is expected during the use phase of the motors, power train, or automation because fluorinated polymers are stable during their use phase.

End of Life Phase:

New regulations implemented as part of the European Waste Frame Directive (EU WFD) will help the professionals to address the presence of the SVHCs greater than threshold. At this moment it is difficult to provide the figures.

Impacts on the recycling industry:

Unfortunately, Regal Rexnord does not have sufficient knowledge or expertise in the recycling field. We defer to input and comments provided by the recycling sector to clearly communicate impact on the recycling industry.

Proposed derogations – Tonnage and emissions:

RRX will initiate the process of collecting the data on type of the fluoropolymers used, concentration and weight in the parts supplied by the suppliers. Overall, the weight ratios of the fluoropolymers are much less as compared to the total weight of the metallic composed products, while providing critical functionality for the operation of the product as designed.

RRX Products, their application, PFAs importance, functions:

Please refer to the below TABLE B – List (Incomplete) RRX Products, Application, PFAS Importance, Function, Parts

Product Category	Application (incomplete list with current status)	Importance	Components Containing PFAS	Property	PFAS
Variable Speed Motors, Controllers, And Power Transmission Components	Commercial AirConditioning & Refrigeration (cold storage units, refrigerators, and freezers.)	No PFAS = High Risk for Proper storage and system monitoring is necessary in order to ensure the integrity and quality	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals	Temperature Resistance, Chemical Resistance, Lubricity	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF)
Motors for Food Processing Industry	Food Processing Industry	No PFAS = High Risk of Health Hazard for the Consumers, Contamination of the food, Food Supply shortage	Leadwires, Sleeves, Shrink Tubing, Sealing Rings, Seals	Temperature Resistance, Chemical Resistance, avoid Water entry, Lubricity	PTFE, FEP, PFA, ETFE, TFE, PVDF
Motors, Drives, Belts, Pulleys, Bearing, Coupling, Chains, Conveyor Components in Food Production Units	Food Production Industriay - Choppers, Conveyors, Cut-up, Deboning, Filleting, Ginders, Packaging, Pellet Wrappers, Pumps	No PFAS = High Risk of Health Hazard for the Consumers, Contamination of the food, Food Supply shortage	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals	Temperature Resistance, Chemical Resistance, avoid Water entry, Lubricity, long life, to meet insulation class,	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF)
Motors, AC Drives, Power Transmission	HVAC Applications - Air Handling Units, Chillers, Condensing Units, Energy Recovery Units, Fans, Heat PumpsUnit, Ventilators,Unitary,Ventilation	No PFAS = No Clean Air	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals	Temperature Resistance, Chemical Resistance, Lubricity	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF)
Special Motors & Drives	Aerospace & Defence - Baggage Handlers,Conveyors,Dive rters,Geardrives,Ground Support,Hydraulics,Jetbridges,Pallet Loaders,Rotor Heads,Screening, Sortation	No PFAS = Unsafe/ Hazardous Environment for the workers/ passengers	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals, Hytrel Seals, Machinable Liner, Tec-Ring (Graphite Filled), Fluorosilicone o-rings & EMI Seals	Temperature Resistance, Chemical Resistance, Lubricity, flexibility	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF, Trifluoropropyl, Methyl, Vinyl, Silicone, Fiberglass

TABLE B – List (Incomplete) RRX Products, Application, PFAS Importance, Function, Parts

Product Category	Application (incomplete list with current status)	Importance	Component Containing PFAS	Property	PFAS
Motors, AC Drives, and Power Transmission	Agriculture Solutions - Bulk Handling, Conveyors, Crop Drying, Grain Distributors, Fans, Feeders, Irrigation, Loaders, Pumps	No PFAS = No Efficient Food Production	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals	Temperature Resistance, Chemical Resistance, Lubricity	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF)
Motors, AC Drives, and Power Transmission	Air Moving - Agricultural Fan, Air Handling Units, Axial Fans, Blowers , Centrifugal Fans , Clean Rooms, Cooling Towers, Energy Recovery , Exhaust, Marine Pedestal, Tunnel Ventilation	No PFAS = No Clean Air	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals, Hydrel Seals, Machinable Liner, Tec-Ring (Graphite Filled), Fluorosilicone o- rings & EMI Seals	Temperature Resistance, Chemical Resistance, Lubricity, flexibility	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF, Trifluoropropyl, Methyl, Vinyl, Silicone, Fiberglass
Motors, AC Drives, and Power Transmission	Oil & Gas - Blowers, Compressors, Dr aw-works, Fans, Life Safety, Mud Pumps, Oil Field Machinery, Pumps, Rotary Tables, Shakers, Valves	No PFAS = Unsafe/ Hazardous Environment for the workers, Inefficient Production of Oil & Gas	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals, Hydrel Seals, Machinable Liner, Tec-Ring (Graphite Filled), Fluorosilicone o- rings & EMI Seals	Temperature Resistance, Chemical Resistance, Lubricity, flexibility	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF, Trifluoropropyl, Methyl, Vinyl, Silicone, Fiberglass
Motors, AC Drives, and Power Transmission	Water & Waste Water - Centrifugal, End Suction Machinery, Motors, Positive Displacement Reciprocating Rotary, Split Case, Submersible Valves, Vertical Turbine, Wells	No PFAS = No Clean Water	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals, Hydrel Seals, Machinable Liner, Tec-Ring (Graphite Filled), Fluorosilicone o- rings & EMI Seals	Temperature Resistance, Chemical Resistance, Lubricity, flexibility	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF, Trifluoropropyl, Methyl, Vinyl, Silicone, Fiberglass

TABLE B – List (Incomplete) RRX Products, Application, PFAS Importance, Function, Parts
The number of companies in the sector estimated to be affected by the
restriction.

The majority of Regal Rexnord's customers will be affected by the proposed restriction.

Regal Rexnord "Motors, Power Transmission Products, AC Drives & Controls" are used by our customers in below sectors.

- Aerospace And Defense
- Aggregate & Quarry
- Agriculture Solutions For Efficiency And Productivity
- Air Moving
- Automotive
- Beverage
- Cement
- Cement & Asphalt
- Commercial Laundry
- Compressors & Turbomachinery
- Farm And Agriculture
- Food, Water & Wastewater
- Grain Handling
- HVAC - Commercial
- HVAC - Residential
- Material Handling - Warehouse Distribution
- Oil & Gas
- Packaging Machinery
- Power Generation - Solar & Wind, Power Generation - Fossil
- Primary Metals
- Pulp, Paper & Forestry
- Pumping - Commercial & Industrial
- Pumping - Leisure
- Refrigeration & Medical Refrigeration
- Test Rigs & Industrial Machinery
- Cooling Tower Industry
- Crane, Hoist & Winch
- Marine, Mining & Minerals

PFAS Alternatives:

Regal Rexnord relies extensively on our suppliers' expertise in determining the appropriate chemicals, as well as suitable alternatives, for use in the production of our products. Regal Rexnord defers to the chemical producers in responding to this question. However, it is worth noting the many challenges

we face as a manufacturer who relies on the chemicals noted in Table A for their specific functionality and purpose. First and foremost, Regal Rexnord does not have direct control over research and development investments being made into suitable alternatives. We are largely dependent on the chemical industry to determine what suitable alternatives exist and when they are commercially available.

To date, Regal Rexnord has focused primarily on finding direct replacements to limit impacts to design, functionality, and cost. If an alternative chemical impacts the overall product design, it could take years to come up with a new design that works as well as the current one. Design changes also necessitate additional testing and certification of the impacted product(s), which in some cases relies on third party labs and certification bodies who also deal with capacity constraints.

Further, in cases where we are able to identify other materials to use instead of polymers, there will likely be changes that need to be made in our production processes. Specifically related to how shape materials and which tools are required. In some cases, we may inevitably need to use a substance designated as a PFAS in this process, should we be unable to find another approach. If we are required to replace a fluoropolymer with many different polymers, it will require extensive time and resources to make sure all of the new polymers work properly.

Possible impact on PFAS restrictions:

This will have a significant and adverse impact on the Motors, AC Drives & Controls, and Power Transmission industry, affecting both the upstream and downstream segments of the supply chain. The supply chain in question is highly intricate, making it challenging to precisely gauge the socioeconomic consequences on the industry. When the supply chain for components is disrupted, it jeopardizes the entire sector, rendering us unable to manufacture products and impacting our customers across various sectors.

Our products play a pivotal role in almost every industry, including the manufacturing processes within our own supply chain. The applications of our products are extensive and intricately interconnected. Therefore, it is not feasible to accurately assess the associated costs.

Motors, AC Drives & Controls, Power Transmission products are used in the following industries and/or production of Motors, AC Drives & Controls, Power Transmission Products depends on:

- Production of chemicals;
- Manufacturing of parts (both PFAS & Non-PFAS);
- Contract manufacturing such as complex electronics products;
- Water & wastewater treatment;
- Recycling and waste disposal; and
- Manufacturing of machines.

If PFAS is banned or severely limited, it would negatively affect various industries such as pharmaceuticals, aviation, oil and gas, food, automotive, and chemicals, among others. These industries, along with many others, would have a significant impact on the overall quality, safety, and cost of products in Europe.

RRX Product category, application Industry & components containing PFAS

Product Category	Application (incomplete list with current status)	Components Containing PFAS	Property	PFAS
Variable Speed Motors, Controllers, And Power Transmission Components	Commercial AirConditioning & Refrigeration (cold storage units, refrigerators, and freezers.)	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals	Temperature Resistance, Chemical Resistance, Lubricity	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF)
Motors for Food Processing Industry	Food Processing Industry	Leadwires, Sleeves, Shrink Tubing, Sealing Rings, Seals	Temperature Resistance, Chemical Resistance, avoid Water entry, Lubricity	PTFE, FEP, PFA, ETFE, TFE, PVDF
Motors, Drives, Belts, Pulleys, Bearing, Coupling, Chains, Conveyor Components in Food Production Units	Food Production Industriay - Choppers, Conveyors, Cut-up, Deboning, Filleting, Ginders, Packaging, Pellet Wrappers, Pumps	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals	Temperature Resistance, Chemical Resistance, avoid Water entry, Lubricity, long life, to meet insulation class,	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF)
Motors, AC Drives, Power Transmission	HVAC Applications - Air Handling Units, Chillers, Condensing Units, Energy Recovery Units, Fans, Heat PumpsUnit, Ventilators,Unitary,Ventilation	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals	Temperature Resistance, Chemical Resistance, Lubricity	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF)
Special Motors & Drives	Aerospace & Defence - Baggage Handlers,Conveyors,Dive rters,Geardrives,Ground Support,Hydraulics,Jetbridges,Pallet Loaders,Rotor Heads,Screening, Sortation	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals, Hytrel Seals, Machinable Liner, Tec-Ring (Graphite Filled), Fluorosilicone o-rings & EMI Seals	Temperature Resistance, Chemical Resistance, Lubricity, flexibility	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF, Trifluoropropyl, Methyl, Vinyl, Silicone, Fiberglass

Product Category	Application (incomplete list with current status)	Component Containing PFAS	Property	PFAS
Motors, AC Drives, and Power Transmission	Agriculture Solutions - Bulk Handling, Conveyors, Crop Drying, Grain Distributors, Fans, Feeders, Irrigation, Loaders, Pumps	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals	Temperature Resistance, Chemical Resistance, Lubricity	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF)
Motors, AC Drives, and Power Transmission	Air Moving - Agricultural Fan, Air Handling Units, Axial Fans, Blowers, Centrifugal Fans, Clean Rooms, Cooling Towers, Energy Recovery, Exhaust, Marine Pedestal, Tunnel Ventilation	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals, Hytrel Seals, Machinable Liner, Tec-Ring (Graphite Filled), Fluorosilicone o-rings & EMI Seals	Temperature Resistance, Chemical Resistance, Lubricity, flexibility	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF, Trifluoropropyl, Methyl, Vinyl, Silicone, Fiberglass
Motors, AC Drives, and Power Transmission	Oil & Gas - Blowers, Compressors, Drilling works, Fans, Life Safety, Mud Pumps, Oil Field Machinery, Pumps, Rotary Tables, Shakers, Valves	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals, Hytrel Seals, Machinable Liner, Tec-Ring (Graphite Filled), Fluorosilicone o-rings & EMI Seals	Temperature Resistance, Chemical Resistance, Lubricity, flexibility	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF, Trifluoropropyl, Methyl, Vinyl, Silicone, Fiberglass
Motors, AC Drives, and Power Transmission	Water & Waste Water - Centrifugal, End Suction Machinery, Motors, Positive Displacement Reciprocating Rotary, Split Case, Submersible Valves, Vertical Turbine, Wells	Leadwires, Sleeves, Shrink Tubing, Grease in special Bearings, O Rings, Seals, Hytrel Seals, Machinable Liner, Tec-Ring (Graphite Filled), Fluorosilicone o-rings & EMI Seals	Temperature Resistance, Chemical Resistance, Lubricity, flexibility	PTFE, FEP, PFA, ETFE, TFE, PVDF, Krytox, Braycote 601EF, Trifluoropropyl, Methyl, Vinyl, Silicone, Fiberglass