

# Amy Neal

Emerson respectfully submits comments in support of NMED's efforts to prepare its report under HJM3, evaluating the existing exemptions within the PFAS Protection Act (HB 212).



September 17, 2026

By Electronic Submission

New Mexico Environment Department (NMED)

**Re: Comments in Support of HB 212 Legislative Exemptions**

Dear NMED Team:

**1.0 Introduction**

Emerson Electric Co. (Emerson) welcomes this opportunity to submit comments in support of the New Mexico Environment Department's (NMED's) efforts to prepare its report under House Joint Memorial 3 (HJM3), evaluating the existing exemptions within the PFAS Protection Act (HB 212). We are grateful for NMED's continued engagement with Emerson throughout this process.

Emerson Electric is an \$18 billion company headquartered in St. Louis, Missouri. We operate extensively across the United States with more than 29,000 employees and 50 manufacturing facilities. We are committed to delivering Industrial Automation Monitoring & Control (IAMC) products and systems that prioritize safety for end-users and environmental protection, aligning closely with NMED's objectives.

**2.0 Summary of Emerson's Key Points**

Emerson respectfully submits the following key points for NMED's consideration in preparing its HJM3 report:

- IAMC equipment, enabled by Fluoropolymers, are indispensable to world-critical applications.
- Fluoropolymers are chemically and toxicologically distinct from the mobile, bioavailable non-polymeric PFAS that motivated the PFAS Protection Act.
- Contamination risk is concentrated at the manufacturing and end-of-life stages of the fluoropolymer lifecycle. The risk at assembly, product-use, and in-service stages is negligible.
- Incineration research confirms that standard, controlled combustion conditions safely mineralize fluoropolymers, without generating the small molecule non-polymeric PFAS.
- Minnesota's PRISM reporting data shows non-polymeric PFAS represent ~20% of materials reported, with similar results expected in New Mexico. Regulatory priority should focus on the 20%, as it represents the highest contamination risk.
- Emerson recommends NMED's report retain the existing fluoropolymer exemption and prioritize near-term regulatory attention on non-polymeric PFAS.

### 3.0 Overview of IAMC Products

IAMC equipment consists of complex electromechanical products that measure a variety of parameters such as temperature, humidity, pressure, corrosion and density as well as process control products such as valves, actuators, flow measurement devices and regulators, per the list below and Figure 1 (Right):



**FIGURE 1. IAMC EQUIPMENT**

- Pressure, Flow, Level and Temperature Measurement
- Corrosion, Erosion & Heat Trace Monitoring
- Energy Monitoring & Management
- Industrial Test & Measurement Instruments
- Density & Viscosity Measurement
- Liquid, Flame, & Gas Detection
- Machinery Monitoring, Protection & Maintenance
- Marine Measurement & Analysis
- Distributed Control Systems
- Hygienic & Sanitary Measurement
- Vibration Sensors & Welding Machines
- Electrical Power Distribution & Control
- Valves, Regulators, and Actuators

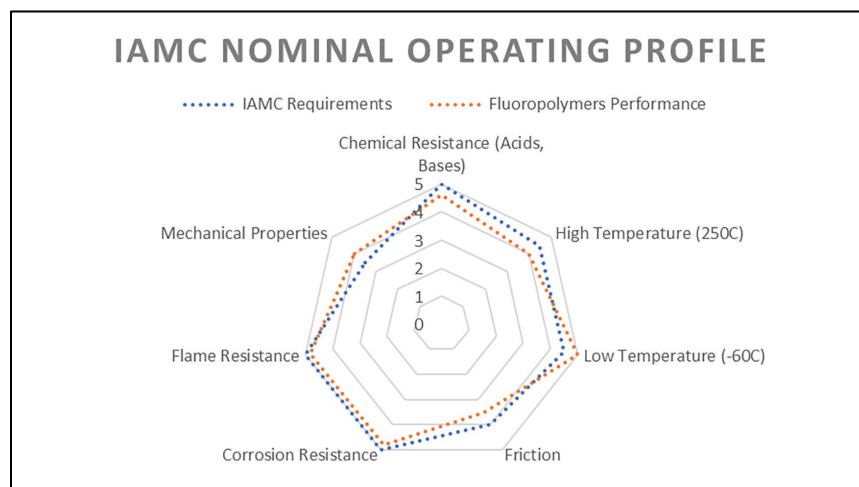
IAMC equipment is vital for optimizing processes and manufacturing to increase operational efficiency, enhance safety and reliability, reduce costs and downtime, and fulfill key applications. Key outcomes achieved include:

- **Safe and Reliable Control**
  - Real-time parameter monitoring identifies and mitigates potential plant failures, reducing risks and unplanned downtime.
  - IAMC systems prevent human exposure to hazardous environments, ensuring workplace safety.
- **Enhanced Data-Driven Decision Making for Optimal Operational Efficiency**
  - Real-time parameter monitoring enables proactive adjustments for optimal process control, minimizing manual intervention, ensuring consistency, and maximizing throughput.
  - Real-time monitoring collects critical process data, which can be analyzed to optimize performance, forecast throughput and maintenance, and improve quality control.
- **Key Applications Fulfillment**
  - IAMC is critical in sectors like energy, pharmaceuticals, food processing and chemicals.
  - Key enabler of complex activities such as metals and mining, energy generation and control, and precision manufacturing.

### 4.0 Fluoropolymers are Key Enablers of IAMC Products

IAMC equipment must be designed with substantial robustness to operate reliably in industrial processes, demanding the use of high-performance materials and high safety margin designs, often specified by industry standards such as ATEX or IECEx.

Fluoropolymers (including fluoroelastomers), which are vital as an engineering material class, not because of one particular characteristic, but because of the multiple properties any one of them simultaneously possesses, are perfectly suited for IAMC products. This is demonstrated in Figure 2 below where IAMC requirements and fluoropolymers performance are overlaid. The overlap in performance across this specific array of properties is what sets fluoropolymers apart from other material and makes them a requirement for many IAMC applications.



**FIGURE 2. IAMC'S OPERATING PROFILE REQUIREMENTS OVERLAP WITH FLUOROPOLYMERS PERFORMANCE, WHICH IS WHY THEIR USE IS SO COMMON IN INDUSTRIAL APPLICATIONS**

Fluoropolymers' and Fluoroelastomers' most commonly leveraged properties include:

- Broad chemical resistance to virtually all chemicals
- Low temperature performance down to -328°F
- High temperature performance up to 500°F
- Corrosion Resistance
- Intrinsic flame resistance
- Excellent electrical properties
- Low friction
- Purity
- Good oxidative stability

A range of different PFAS (fluoropolymers and fluoroelastomers) such as PTFE, PCTFE, ETFE, PFA, FEP, FKM and FFKM are used in critical components of IAMC equipment, such as liners, coatings, seals, wire and cable insulation, as well as electronic components.

## 5.0 Fluoropolymers are Chemically Different from Other PFAS

PFAS is a broad chemical class encompassing thousands of compounds united only by the presence of at least one fully fluorinated carbon. Within this class, fluoropolymers, including polytetrafluoroethylene (PTFE), occupy a fundamentally distinct subcategory characterized by high molecular weight, negligible water solubility, extremely low vapor pressure, and chemical inertness.

The properties that have raised concern for other PFAS, bioaccumulation, environmental mobility, and system toxicity, arise from small, soluble molecules capable of being absorbed and transported within biological systems and persisting in aqueous environments. Fluoropolymers do not share these

properties. Their high molecular weight and insolubility in water and biological fluids effectively preclude absorption through conventional exposure pathways.

Key distinguishing properties of fluoropolymers include:

- Molecular weight: >100,000 g/mol vs <500 g/mol for problematic PFAS such as PFOA and PFOS.
- Water solubility: effectively zero
- Bioavailability: not absorbed as the fluoropolymer is in solid form.
- Environmental mobility: negligible migration in soil or groundwater in solid form.
- Thermal stability: resists degradation up to 500°F (PTFE), with no release of short-chain PFAS under normal use conditions.

The European Chemicals Agency (ECHA), in its updated 2025 REACH restriction proposal, has likewise moved toward differentiated treatment of fluoropolymers, reflecting a similar recognition that this subcategory of PFAS warrants distinct regulatory consideration.

Furthermore, The U.S. Food and Drug Administration (FDA) has similarly recognized the distinct safety profile of high-molecular-weight fluoropolymers<sup>1</sup> compared to smaller, mobile PFAS chemicals. In 2025, the agency stated that fluoropolymers have been used safely in medical devices for decades, reinforcing the agency's consistent, cross-application recognition that fluoropolymers' physical properties place them in a materially different risk category than small-molecule PFAS.

## 6.0 Selection of Fluoropolymers is Driven by Their Unmatched Physical Properties

Fluoropolymers are selected only where conventional elastomers, polymers or other materials cannot meet the demanding chemical resistance, temperature range, pressure, permeability, friction, and longevity requirements. Their use is driven by technical necessity rather than preference, particularly given their higher cost and the extensive legislative justification typically required for their inclusion.

Fluoropolymers are chosen only where no suitable alternative can satisfy the functional and safety demands of the application over the required service life.

**TABLE 1. COMPARATIVE RANKING OF HIGH-PERFORMANCE POLYMERS**

| Rank | Chemical Resistance                               | Low Temp Performance (°C) | High Temp Performance (°C) | Dielectric Constant | Limited Oxygen Index (%) |
|------|---------------------------------------------------|---------------------------|----------------------------|---------------------|--------------------------|
| 1    | Polytetrafluoroethylene (PTFE)                    | PI (-275)                 | PI (275)                   | PTFE (2.0)          | PTFE (95)                |
| 2    | Polyphenylene sulfide (PPS)                       | PTFE (-200)               | PTFE (260)                 | UHMWPE (2.2)        | PI (53)                  |
| 3    | Crosslinked Polyethylene (XPE)                    | XPE (-150)                | PEEK (260)                 | XPE (2.3)           | PPS (47)                 |
| 4    | Polyimide (PI)                                    | PEEK (-75)                | Phenolic (250)             | PEEK (3.0)          | PEEK (35)                |
| 5    | Polyetherether Ketone (PEEK)                      | PPS (-50)                 | PPS (200)                  | PI (3.0)            | Phenolic (35)            |
| 6    | Phenolic                                          | UHMWPE (-50)              | Acetal (120)               | Acetal (3.4)        | XPE (18)                 |
| 7    | Ultra-High Molecular Weight Polyethylene (UHMWPE) | Acetal (-50)              | XPE (95)                   | PPS (4.0)           | UHMWPE (18)              |
| 8    | Acetal (POM)                                      | Phenolic (-40)            | UHMWPE (90)                | Phenolic (5.0)      | Acetal (15)              |

As shown, in Table 1, PTFE ranks 1<sup>st</sup> or 2<sup>nd</sup> in every category of importance for a particular application and provides a clear choice for the Engineer. Additionally, these materials have been used in industrial products safely and successfully for many years.

## 7.0 The Highest Lifecycle Risk of Fluoropolymers Occurs at the Manufacturing and End-of-Life Stages

The fluoropolymer lifecycle, illustrated in Figure 3, consists of five stages: (1) manufacturing, (2) material processing/component forming, (3) assembly, (4) product use, and (5) end-of-life. Each stage carries a different level of contamination risk, and that risk is not evenly distributed across the lifecycle.

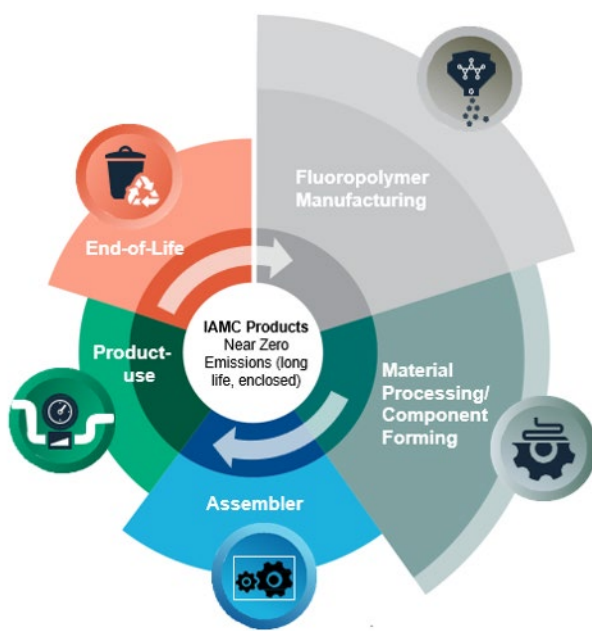


FIGURE 3. LIFECYCLE OF A FLUOROPOLYMER

Contamination risk is concentrated at the manufacturing and end-of-life stages, where non-polymeric PFAS are used as processing aids and concerns over degraded fluoropolymers forming non-polymeric PFAS exist, respectively. Risk at the assembly, product-use, and in-service stages is negligible.

During manufacturing, most fluoropolymers are produced using low molecular weight processing aids that are consumed over the course of the process. Because these processing aids are mobile and low molecular weight, unlike the finished fluoropolymer itself, they must be contained up through the point of consumption to prevent release into the environment.

By contrast, the material processing/component forming stage, where fluoropolymers exist in powder or solid pellet form, carries a contamination risk comparable to that of any conventional plastic in powder form, provided the material remains within normal processing temperatures and conditions.

The assembly and product-use stages carry minimal risk. As a downstream user of three-dimensional fluoropolymer components embedded in devices that remain in the field for over 15 years, we can confirm that the potential for contamination during assembly and in-service use is negligible.

Finally, at end-of-life, IAMC equipment containing fluoropolymer components is disposed of by trained professionals, using established methods including incineration, recycling of metal housings, and rebuild/reuse. The soft goods such as seals, liners, or wire insulation are typically not recyclable or reusable and are therefore generally directed for incineration.

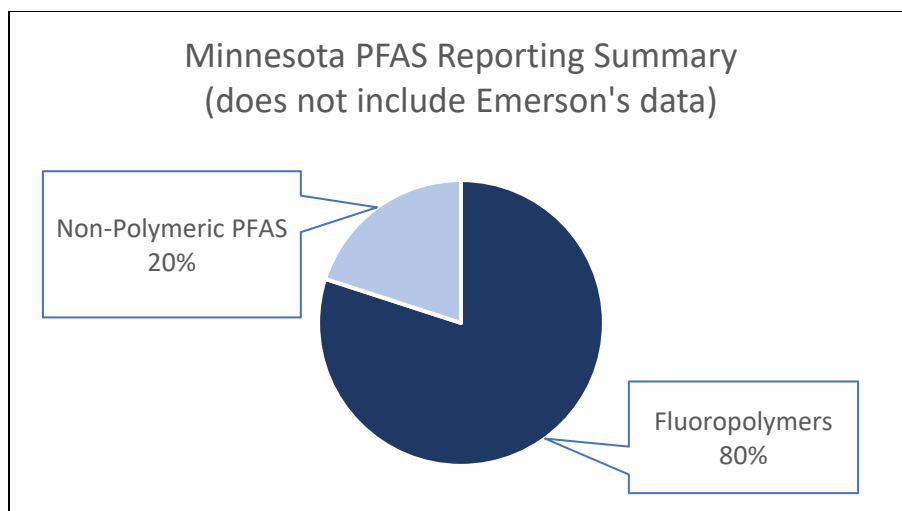
Recent fluoropolymer incineration research shows that this pathway can be carried out safely. A 2024 study by the Karlsruhe Institute of Technology<sup>2</sup>, testing multiple commercially significant fluoropolymers, found near-complete mineralization under standard municipal incinerator conditions, with no meaningful improvement in destruction from higher combustion temperatures. Subsequent peer-reviewed research<sup>3</sup> measuring up to 71 PFAS analytes has similarly found PTFE destruction efficiencies exceeding 99.99% under controlled incineration conditions, with no detectable formation of the small-molecule PFAS (PFOA and PFOS) associated with environmental and health concerns. The fluorine released is instead converted to inorganic fluorinated compounds that are manageable through existing air pollution control systems. Together, these findings support incineration, when conducted under standard, controlled conditions, as a safe and effective end-of-life management pathway for fluoropolymer-containing components.

Given this uneven distribution of risk across the lifecycle, NMED's exemption framework should be calibrated to where contamination potentially actually exists, namely the manufacturing and end-of-life phases.

## **8.0 Minnesota's PFAS Reporting Statistics Support NMED's Decision to Exempt Fluoropolymers from the 2032 Prohibition and Reporting Requirements**

As of August 30, 2026 over 30,000 PFAS substances have been reported to Minnesota's PRISM reporting system. Of these, more than 80% (~25,000) are fluoropolymers, while approximately 20% are non-polymeric PFAS.

A high-level summary of the data is shown below in Figure 4:



**FIGURE 4. MINNESOTA PFAS REPORTING**

Although these figures aren't surprising, we're sharing them with NMED as similar results are expected in New Mexico. To support your case to the legislature, we recommend that the regulatory focus should prioritize the ~20% non-polymeric PFAS. These data strengthens the argument NMED can make in its HJM3 response, namely that we already know that fluoropolymers in final form are safe, and that it is the low molecular weight, non-polymeric PFAS that represents the highest risk to consumers and the environment. Addressing this subset will likely take multiple years, after which the team can revisit the fluoropolymer exemption.

**Note:** *this data does not yet include Emerson's submission, as we had not filed our data by the date the data was extracted. For context, 100% of Emerson's PFAS usage is limited to fluoropolymers.*

## 9.0 Recommendations to NMED

Emerson respectfully recommends that NMED's report to the Legislature conclude as follows:

- **Retain the fluoropolymer exemption in its current form**, based on the documented chemical, toxicological, and physical distinctions between fluoropolymers and the mobile, bioavailable PFAS compounds that motivated the PFAS legislation.
- **Focus your attention and efforts on non-polymeric PFAS.** The Minnesota PRISM data indicate that ~20% of reported substances are non-polymeric PFAS, which are the compounds that exhibit the mobility, bioavailability, and persistence characteristics that originally motivated the PFAS Protection Act. Given the volume and chemical diversity of substances within this subset, evaluating them individually will require sustained effort over several years. NMED and the Legislature should direct near-term regulatory resources toward this work rather than spreading capacity across the full spectrum of reported PFAS, including fluoropolymers, which are comparatively well-characterized and present a distinct risk profile.
- **Review the favorable fluoropolymer incineration results.** Because fluoropolymers are chemically stable and not bioavailable in their finished form, the primary point of potential

environmental concern across their lifecycle shifts to disposal, particularly incineration, where thermal decomposition has proven to be effective under standard operating conditions.

## 10.0 Conclusion

NMED correctly identified fluoropolymers as warranting differentiated regulatory treatment. The Science supports this judgment as fluoropolymers do not exhibit the mobility, bioavailability, or systemic toxicity that characterize the PFAS compounds of greatest concern. At the same time, they are indispensable to world-critical applications such as energy, water, and advanced manufacturing.

We urge NMED to recommend retention of the fluoropolymer exemption with the definitional refinements and end-of-life provisions described above.

We appreciate the opportunity to provide these comments and are available to meet with NMED staff to discuss any aspect of this submission in greater technical detail.

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<sup>1</sup><https://www.fda.gov/medical-devices/products-and-medical-procedures/pfas-medical-devices-what-you-need-know>

<sup>2</sup><https://doi.org/10.1016/j.chemosphere.2024.143403>. Mineralization of fluoropolymers from combustion in a pilot plant under representative European municipal and hazardous waste combustor conditions

<sup>3</sup><https://doi.org/10.1016/j.jfluchem.2026.110603>.