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Beldam Crossley Statement on PFAS Regulation, Compliance and Material Innovation

Supporting customers through change — responsibly, practically and with confidence

At Beldam Crossley, we recognise that PFAS is one of the most significant regulatory and environmental topics currently affecting advanced manufacturing and engineered polymer applications worldwide. As a long-established UK engineering business supplying precision-machined polymer components into demanding industries, we are committed to acting responsibly, transparently and proactively as legislation continues to evolve across the UK, Europe and the United States.

The current global regulatory position around PFAS remains active and evolving rather than fully defined, particularly for industrial fluoropolymers and high-performance engineering applications.

In the UK, the Government's recently published PFAS Plan outlines a science-led and proportionate approach focused on reducing environmental and health risks while supporting the transition towards safer alternatives where technically viable. Across Europe, the proposed EU-wide PFAS restriction under REACH legislation continues to progress through scientific and socio-economic review, including ongoing discussions around exemptions and transition periods for critical industrial applications where suitable alternatives are not yet available.

At present, there is no blanket ban on fluoropolymers within UK or EU industrial engineering applications. However, the direction of travel is clear:

- Increased scrutiny of PFAS manufacturing and emissions
- Greater supply-chain transparency and reporting requirements
- Tighter controls around specific PFAS substances already restricted under legislation
- Continued assessment of fluoropolymer use in industrial applications
- Increased focus on alternative materials where suitable replacements exist

As a manufacturer of engineered polymer components rather than a producer of base chemicals, our responsibility is clear:

- To source materials from reputable and compliant supply partners
- To monitor regulatory developments in every market we serve
- To support customers with accurate technical and material guidance
- To continuously review product suitability and future alternatives
- To minimise waste, maximise service life and promote responsible use of engineering materials

We work closely with our supply chain and note the significant investment being made across the fluoropolymer sector in emissions control, process improvements and compliance systems to meet future environmental standards.

In line with current regulations and proposals, Beldam Crossley can also confirm that referenced material grades supplied into customer applications comply with existing restrictions relating to substances including PFOA, PFOS, PFHxA, PFHxS and C9-C14 PFCAs in accordance with applicable UK and EU regulations. At the same time, we recognise that some customers may wish to reduce dependency on fluoropolymer-based materials as part of their own environmental, compliance or procurement strategies. Where that is the case, we are ready to support that transition.

Supporting Your Material Transition Journey

If you are reviewing existing specifications or exploring PFAS-free alternatives, Beldam Crossley can support you through a practical and low-risk transition process.

We understand that changing a material specification is not as simple as swapping one polymer for another. Performance, compliance, reliability, cost, service life and availability must all be considered carefully.

Our role is to help customers make informed engineering decisions based on real application requirements — not simply material trends.

How We Support Customers

- Review your existing component, drawing or material specification
- Understand the operating environment and performance requirements
- Identify suitable PFAS-free alternatives where viable
- Compare lifecycle performance, machinability and commercial impact
- Produce prototype or trial components for evaluation
- Support testing and validation processes
- Scale into full production supply where appropriate
- Help minimise operational and supply-chain risk throughout transition

Our objective is simple: if a transition is required, it should be measured, evidence-led and commercially practical without compromising component quality, reliability or lifespan.

Engineering Materials Currently Under Assessment

Beldam Crossley is actively assessing commercially available PFAS-free engineering materials for use in seals, bearings, bushes, wear pads, valve seats and precision-machined components.

Material	Typical Strengths	Typical Applications	Relative Cost vs PTFE	Market Availability	Key Considerations
PTFE / Fluoropolymers	Exceptional chemical resistance, very low friction, broad temperature range, non-stick performance	Seals, valve seats, bearings, gaskets, aerospace, chemical processing, marine and food applications	Baseline	Excellent	Regulatory scrutiny increasing around PFAS-related manufacturing and emissions, but still critical for many demanding applications
PEEK	High strength, temperature and wear resistance	Bearings, seals, aerospace components	Higher	Moderate	Excellent performance but premium cost
PPS	Chemical resistance and dimensional stability	Pumps, valves, electrical parts	Similar to higher	Good	More brittle than PEEK
POM (Acetal)	Machinability and dimensional accuracy	Bushes, wear pads, rollers	Lower	Excellent	Lower temperature capability
UHMWPE	Very low friction and abrasion resistance	Guides, liners, bearings	Lower	Excellent	Lower temperature limit
PA (Nylon)	Toughness and load capability	Structural and wear parts	Lower	Excellent	Moisture absorption possible
PET / PET-P	Stability and wear resistance	Precision machined parts	Similar	Good	Moderate thermal performance
PEI / PSU / PPSU	Heat and electrical performance	Medical and fluid handling	Higher	Moderate	Application specific
Silicone / EPDM / NBR	Flexible sealing performance	Gaskets and diaphragms	Lower	Excellent	Not suitable for rigid engineering duties

Our Anticipated Actions

As regulations continue to develop, Beldam Crossley is proactively preparing its business, supply chain and engineering capabilities to adapt responsibly alongside future legislation and customer requirements.

Our anticipated actions include:

- Continuing to monitor UK, EU and US regulatory developments closely
- Working with approved suppliers who demonstrate regulatory compliance and environmental responsibility
- Increasing material traceability and technical documentation where required
- Supporting customer material reviews and specification assessments
- Expanding evaluation of commercially viable PFAS-free engineering materials
- Developing application-led transition support for customers considering alternative materials
- Maintaining fluoropolymer solutions responsibly where no technically suitable alternative currently exists
- Continuing investment in engineering, testing and application support to ensure long-term product reliability and lifecycle performance

A Balanced Engineering Approach

For many industrial applications, lifecycle performance matters just as much as material chemistry. A longer-lasting component that reduces maintenance, replacement frequency and downtime can deliver meaningful sustainability benefits in real-world service.

That is why we assess materials not only by composition, but by total engineering performance across the full life of the component.

Where alternative materials can meet or exceed the demands of the application, we will help customers transition with confidence.

Where fluoropolymer solutions remain the safest, most reliable or technically appropriate option, we will continue to supply them responsibly, compliantly and with full focus on engineering integrity.

Beldam Crossley remains committed to innovation, regulatory readiness and helping customers navigate change with confidence.