Fluorocarbon Overview

World leading innovations in fluoropolymer processing
Corporate Overview

Founded in 1962

- One of the UK’s largest fluoropolymer processors and a global supplier of PTFE and polymer related components and semi-finished materials
- Our customers are worldwide market leaders across many business areas
- Our aim is to offer our customers cost effective solutions at the highest quality
- In-house capability offering bespoke products tailored to meet individual customers requirements
Corporate Overview

Manufacturing Sites
UK
• Hertford
• Irlam, Manchester

Europe
• Romania

Sales Offices
• Hertford
• Irlam, Manchester
• Romania
Corporate Overview

Global Agents

- China
- Germany
- India
- Korea
- Mexico
- UAE
Corporate History

1960’s:

*Fluorocarbon founded and became a pioneer in the moulding of PTFE polymers in the UK*

1970’s:

*Addition of high performance plastics machining to the processing capability*

1980’s:

*Completion of 6-acre purpose built manufacturing site in Manchester, accommodating a very diverse product portfolio*

1990’s:

*Fluorocarbon Seals Ltd established to design and market high performance sealing solutions*

*Acquisition of Nottingham plant and formation of Fluorocarbon Bakeware system*
Corporate History

2000’s:

*Fluorocarbon Hose Ltd established specialising in reinforced and unreinforced PTFE hoses*

*Fluorocarbon acquired a manufacturing site in Romania and launched USA sales office*

*Fluorocarbon Group Ltd acquires Prestige Industrial Ltd*

2010’s

*Sales office opened in Houston*

*Fluorocarbon Surface Technologies launched*
Objectives

- The Fluorocarbon brand to be the leading trusted technology partner in high performance plastics
- To streamline global supply chains for our customers
- To co-create sustainable value
Markets

- Aerospace
- Automotive
- Chemical Processing
- Construction & Off-highway
- Food
- Medical & Pharmaceutical
- Oil, Gas & Petrochemical
- Semi-conductor
- Water & Environmental
- Military & Defence
Materials

Based on elastomer, PTFE and thermoplastic technologies, our Fluorinoid® company register includes over 500 materials that offer exceptional characteristics enabling them to operate in demanding environmental conditions at temperatures to over 300°C.

Capabilities:

- Collaborative bespoke product development: Plastics and Steel with significant diverse size range

- High performance plastics: PTFE, PCTFE, PEEK, PFA, FEP, ETFE, ECTFE, PPS, PES, nylons...

- A variety of fillers including Glass, Carbon, Graphite, Bronze, Ekonol and Aluminum...
Processing Techniques

- Inert Gas Sintering
- Annealing
- Surface Treatment/Etching
- Surface Preparation/Tumbling
- Encapsulated Insert molding
- Bi-Material Molding
- Injection Molding
- Hot/Cold Molding
- Surface Technologies
- Hi-Lo & Isostatic Molding
Engineering Plastics

With over 50 years of experience in the manufacture of PTFE, melt fluoropolymers and high performance polymers, our range of semi-finished products is one of the most extensive in the world.

- PTFE: Rods & Tubes up to 40” diameter (1000 mm)
- Melt extrusion (PFA, PEEK, PCTFE, etc.)
- PTFE sheet and tape
Machined Components

Utilising the latest technology, we specialise in the precision machining of Fluoropolymers into complex components for use throughout many markets, including aerospace, chemical, medical, pharmaceutical and telecommunications.

• CNC sliding head and automatics
• CNC Turning
• CNC Milling
• Testing facilities
• 1mm to over 1500mm
We offer an extensive range of Fluoroline® PTFE hose and hose assemblies to a wide range of industries, including chemical, laundry and automotive.

- Smoothbore
- Convoluted
- Braided or unbraided
- Heat shielded
- Pre-formed
Moulded Components

Exploiting our extensive injection and transfer moulding facilities we convert the widest range of melt fluoropolymers and advanced engineering thermoplastics into precision component parts.

- Injection Moulding
- Isostatic Moulding
- PTFE Compression Moulding
- Melts Hot Compression Moulding (PFA, PEEK, PCTFE, etc.)
At Fluorocarbon we are dedicated to the design and manufacture of high performance seals for use throughout many industries, including chemical, pharmaceutical, food processing, aerospace, automotive and offshore, as well as custom designs for special applications.

- Elastomeric energised seals
- Fluoroglide® bearing strips
- Metallic sealing rings
- Polyurethane seals
- Rotary shaft seals
- Spring energised seals
Slide Bearings and Pipe Support

Utilising our range of Fluorinoid® load bearing low friction materials, we have gained a global reputation for providing specifically designed slide bearing solutions to the construction and oil industries.

- Slide bearing applications include:
  - Expansion movement in pipelines and heat exchangers
  - Pedestrian walkways, pipe bridges, large concrete buildings and stadiums

- A range of configurations using filled Fluorinoid® PTFE as the bearing material
- Fluoroslip® 414 with PTFE additive to aid effectiveness of bearings
PTFE Sheet & Tape

As one of the largest UK manufacturers of semi-finished virgin and filled PTFE sheet and tape we ensure each product is tailored to meet customer requirements.

Our extensive range of PTFE sheets and tapes includes dimpled, moulded, skived and self-adhesive; available in a variety of thicknesses. A fast turnaround service is available on non stock items and same day dispatch on all standard stock items. Using our in-house services all items can be supplied chemically etched on one or both sides using the Fluoroetch® HD etching process.
PTFE is well-known for being a non-stick material; therefore, to enable bonding to other substrates, surface modification in the form of chemical etching is required.

Etching

Our Fluoroetch® Sodium / ammonia process is the most effective etching medium available. The solution is freshly mixed for each specific batch to ensure the highest quality and all etching and testing is carried out to Roll Royce RPS 407 standard and certified to our ISO 9001:2008 quality system.

Capabilities

• Up to 1.2m width on one or both sides
• Bulk etching of free issue sheet and tape material
• Shapes can be selectively etched to allow bonded fabrications
• Etched sheet can be factory bonded for the manufacture of Fluoroglide® expansion bearings, slide bearings and Skidways
• Etching of free-issue materials in sheet form or finished component.
Based on the proven PTFE slide bearing technology, we design and manufacture bonded PTFE / metallic Fluoroglide® skidway plates to suit individual customer requirements.

- Applications include skidding oil jackets, modules and heavy structures of up to 35,000 tonnes
- Customer approvals include Aramco, Saipem, JGC and Shell
Valve Seats

We manufacture a wide range of soft seat configurations across many industries supplying major global customers.

- Valve seats and seat inserts, including ball valves, butterfly valves, gate valves and chokes
- Valve stem seals, including chevron packing and all types of energised seals
- Complete valves, valve liners and linings
- A range of flexural modulus materials for a range of applications
Our team of engineers can specify a range of elastomeric components to meet the demands of a variety of applications, such as off-shore, construction and off-highway markets.

- Range of elastomeric components, such as pipe clamps, valve seats, seals, bellows and diaphragms
- Custom moulded products
Our Services

Our pre-treatment area is extremely diverse, specialising in surface treatments including cleaning and finishing solutions for a vast range of materials to suit various applications.

- Blast cleaning
- Grit blasting
- Chemical etching and bonding
Surface Technologies

High Performance Surface Coatings

At Fluorocarbon we have been applying specialist industrial surface coatings for over 40 years. Our breadth of experience and technical expertise enables us to offer the right coating solution for each individual application.

Fluorocarbon Surface Technologies, was launched in 2014 as part of the growing need to provide coating solutions. As a leading coatings provider we offer a wide range of fluoropolymers such as PTFE coatings, PFA coatings, ECTFE coatings and ETFE coatings. These are backed up by our strong partnerships with major suppliers including DuPont (Teflon®), Whitford (Xylan®), Solvay (Halar®), Arkema (Rilsan®) and Thermolon®.
If you are in the design stage, it is not too soon to consult us. Working with our customers to understand their needs, we recommend the most accurate and cost effective coating to add product value and a distinct competitive advantage. **Creating Innovation-Together**

**F-LON®** coating systems can solve numerous problems including:

- Low friction / abrasion resistance
- Corrosion / chemical resistance
- Cryogenic stability
- Electrical properties
- Heat resistance
- Water resistance
- Non-stick/release
Surface Technologies

Working with our customers to understand their needs, our breadth of experience and technical expertise ensures we recommend the most accurate and cost effective coating solution for chemical or environmental protection, low friction, non-stick and decorative coatings.

- Strong partnerships and approved applicators of major suppliers, including:
  - Dupont (Teflon®)
  - Thermolon®
  - Whitford (Xylan®)
  - Solvay (Halar®),
  - Arkema (Rilsan®)
  - SBS® Bakeware Technologies
Environment

We continuously seek to improve environmental performance. We strive to minimise any potential impact on employees, customers, the general public and the natural environment by complying with all relevant legislation.

- Maintain programmes to ensure on-going compliance with relevant legislations and seek to exceed minimum standards
- Hertford head office and manufacturing site is certified to ISO 14001
- Raise awareness and encourage participation from all employees
- Expect similar environmental standards from all employees, suppliers and contractors
- Reduce pollution, energy, emission and waste
- Liaise with the local community
Laboratory Testing

Utilising our modern and qualified laboratory, products are closely controlled before and throughout the production process, offering full traceability and ensuring the highest quality finish.

Day-to-day testing and analysis to international standards; ASTM, DIN, BSI and ISO

Testing carried out includes, but is not limited to:

- Tensile
- Elongation
- Density
- Hardness
- zero strength time
- Melt flow rate
- Coordinate measurement machines (CMM)
- Non-contact vision system
- Peel testing
- Surface finish measurements
Thank you, please contact our sales team to discuss your requirements further

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