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
4 UK
- Hertford
- Irlam, Manchester
- Nottingham
- Sheffield

1 Europe
- Romania

Sales Offices
- Hertford
- Irlam, Manchester
- Nottingham
- Romania
Corporate Overview

Technical Sales Office

• Houston, USA

Global Agents

• China
• France
• India
• Italy
• Japan
• Korea
• Middle East
• Russia
• USA
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
Group Structure

FLUOROCARBON GROUP

Fluorocarbon Polymers
Fluoropolymer and Precision Engineering

Fluorocarbon Surface Technologies
Advanced Surface Technologies

FBS Prestige
Industrial Bakeware

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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 through early stage product design integration
Markets

- Aerospace
- Automotive
- Chemical Processing
- Construction & Off-highway
- Food
- Medical & Pharmaceutical
- Oil, Gas & Petrochemical
- Semi-conductor
- Water & Environmental
- Military & Defence
Value Stream
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 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.
Fluoroglide® Skidways

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 design, develop and 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
Our Team

**TOM SAVAGE**  
Fluorocarbon Limited  
Director

**COLIN LEWIS**  
Product Manager -  
Semi Finished, Sheet and Extruded Products

**MICHAEL FISHER**  
North America Business Development Director

**ALAN PARIS**  
Product Manager -  
Machined Parts

**ROBERT BALLAGO**  
International Sales Manager

**ALLEN WOODING**  
Sales Engineer -  
Southern UK

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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®.
Surface Technologies

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

Fluralon® 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

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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
Industrial Bakeware

**FBS Prestige** is at the forefront of designing and manufacturing the next generation in bakeware solutions.

- One of Europe’s leading manufacturers and coating applicators of quality industrial bakeware
- Operates from 3 sites; 2 UK locations in Nottingham & Sheffield and 1 in Europe
- Develops specifically designed standard and custom made bakeware, including: bread tins, barbanded trays and baking moulds
- Close association with DuPont® and SBS® together with the company owned
- Hallmark system provides a wide range of non-stick coatings that eliminates the need for oil or grease
Product Range

Whatever the product we have a dedicated team to provide the best possible route to achieving a cost effective and efficient solution to improve productivity.

Our extensive product range includes:

- Baguette trays
- Barbanded baking trays
- Cake tins and moulds
- Muffin trays
- Pie hoops & tins
- Pizza trays
- Racks & trolleys
- Strapped bread pans
Applications

Significant investment in the latest food approved release coating technology allows us to provide the finest range of coating solutions developed specifically for the baking industry.

- Approved applicator SBS® non-stick release coating system
- Company owned F-LON® multi coat non-stick release coating system
- Silicone glaze
- Silicone rubber elastomer
- Black anodising
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
Research & Development

Offering design, development and laboratory testing facilities to handle projects from concept to full scale manufacture, Our team of qualified R&D engineers and material specialists carry out on-going new material and product development projects.
Using our strong relationships with worldwide partners we offer engineering solutions tailored to suit specific applications.

**Service**

- Advice on materials selection from our range of over 500 grades of material
- Development of special products for which no standard products exist
- Adaptation of existing products to meet new requirements
- Development and improvements to manufacturing capabilities
- On-site consultations
- Non-disclosure & Joint development agreements
Research & Development

- Strong relationships with worldwide partners
- Engineering solutions tailored to suit specific applications
- State of the art CAD/CAM technology
- Advice on materials from our range of over 500 grades
- Laboratory testing; polymers physical properties testing
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
Quality

Our policy is based on the recognition that both management and employees have a mutual responsibility to achieve positive quality trends in all aspects of the business.

- Our commitment to quality is total and demonstrated through our BE EN ISO 9001:2008 certification and conformance to AS9100
- All levels of the organisation are focused on satisfying and exceeding the needs and expectations of customers
- Emphasis is placed on quality throughout, commencing with incoming raw materials, through to manufacture, inspection and delivery of the finished product
Approved Applications

- DuPont® licensed industrial coating applicator
- SBS® Bakeware Technologies licensed coating applicator
- Whitford Worldwide coating applicator
- Weilburger coating applicator
- Arkema Rilsan® approved coating applicator
- Acheson approved coating applicator
- Thermolon®

Customer Approvals

- Rolls Royce
- Airbus UK Ltd
- BAe
- GEC Aerospace
- Dowty Aerospace
Qualifications/Standards

- API Sub Committee Member
- ISO 9001
- ISO 14001
- AS9100 Aerospace Approval
- NORSOK M-710
- ISO 13000
- APQP
Thank you, please contact our sales team to discuss your requirements further.

team@fluorocarbon.co.uk