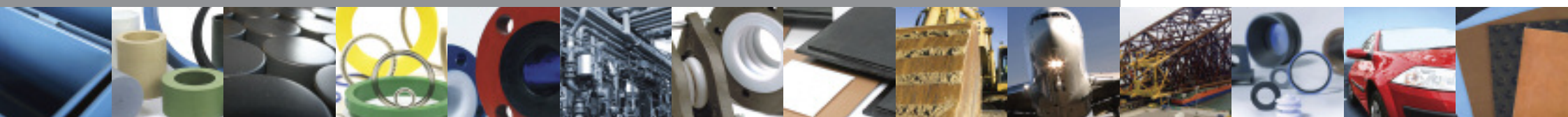




**FLUOROCARBON**



World leading innovations in  
fluoropolymer processing

# Our Company

One of the largest fluoropolymer processors in the UK and a global supplier of PTFE, polymer related components and semi-finished materials to market leaders throughout the world

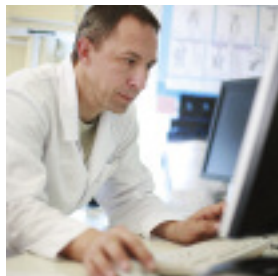
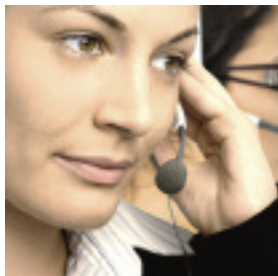


## Corporate Overview

**Founded in 1962, Fluorocarbon is one of the UK's largest fluoropolymer processors and a global supplier of PTFE, polymer related components and semi-finished materials. With customers who are worldwide market leaders across many business areas we ensure our products & services are focused on meeting their increasing demands.**

Fluorocarbon has 6 manufacturing sites: 5 in the UK and 1 in Europe, sales offices in Europe and the USA and partners globally. We aim to offer our customers high quality, cost effective solutions, from material selection and product design to manufacturing and distribution.

With a quality system certified to ISO 9001:2000 and a group research and development team striving to bring new materials and products to market, we have the in-house capability to offer bespoke products tailored to meet the individual requirements of our customers.



## Markets

### Aerospace

With customer approvals including Airbus UK, Rolls Royce and BAE Systems, our products are deployed across applications in major commercial and military aircraft programmes.

### Automotive

We are committed to the development of products to meet our automotive customers' present and future requirements. Our cost-effective components offering longevity are designed to meet the high quality demands dictated by APQP, PPAP and SPC.

### Chemical Processing

We supply a vast range of high performance components that allow operation over a wide temperature range, whilst offering outstanding chemical resistance and flexibility.

### Off-highway

The arduous off-highway and construction industry requires products that can withstand extreme physical displacement. With this in mind, we design and manufacture resilient components that also offer exceptional weather and abrasion resistance.

### Food

Offering a wide range of products to suit applications in the food & beverage and industrial bakeware market, we take great care to ensure that FDA approvals are met.

### Oil, Gas & Petrochemical

The oil and gas industry is provided with a wide variety of components for applications designed to withstand the most extreme pressures and temperatures such as sub-sea constructions, platforms and process plants.

### Medical & Pharmaceutical

Chemical resistant components are developed specifically to meet the rigorous demands of sensitive medical device applications.

### Semi-conductor

Semicon OEMs across the world are supplied with critical components for use in sophisticated wafer-processing equipment.

### Water & Environmental

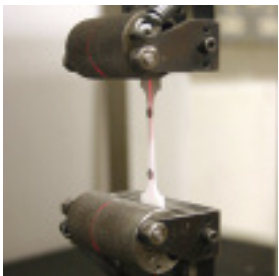
Our high purity and ozone resistant products are designed to offer longevity and perform in specific customer environments.



## Quality

**At Fluorocarbon it is our policy to continually improve our Quality Management System and every level of our organisation is focused on satisfying and exceeding the needs and expectations of our customers.**

Emphasis is placed on quality throughout the production process, commencing with incoming raw materials, through manufacture and concluding with inspection and delivery of the finished product. We ensure that everyone who has a direct influence on the quality of our products has the skills and training to achieve these ideals.



### Approvals

- BS.EN.ISO. 9001: 2000
- AS9100 Aerospace Approval
- BAE Systems Military Programme activities. (Approval no. BAE/AG/10755/MAA)
- Rolls Royce
- Airbus UK Limited (Approval no. AUK/SA/30043)
- Dowty - GE
- Raytheon
- Pattonaire

### Laboratory Testing

Using our modern, qualified laboratory, we offer full traceability on all products and materials and ensure the highest quality finish. Day-to-day testing and analysis to international standards includes ASTM, DIN, BSI and ISO.

Testing carried out includes, but is not limited to: tensile, elongation, density, hardness zero strength time and peel testing.

### Environmental Policy

We continuously seek to improve environmental performance.

From the stages of product design through manufacturing, use, and recycling, we strive to minimise any potential impact on employees, customers, the general public and the natural environment by complying with all relevant legislation.

## Research & Development

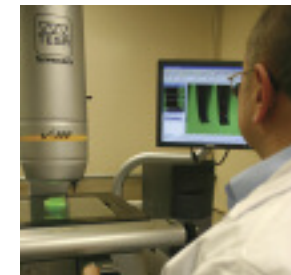
**Offering design, development and laboratory testing facilities to handle projects from concept to full scale manufacture, our team of qualified R&D engineers and material specialists carry out on-going new material and product development projects. Using our strong relationships with worldwide partners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

### Materials

Based on elastomer, PTFE and thermoplastic technologies, our Fluorinoid® company register includes over 400 materials that offer exceptional characteristics enabling them to operate in demanding environmental conditions at temperatures to over 300°C.

#### Materials include:

PTFE, PEEK, PCTFE, PFA, PPS, ETFE and ECTFE.



### Our Service

- Advice on material selection to meet specific applications
- Customer specific blends including colour pigments to provide exclusivity
- Formulation and in-house blending of special material compounds in a clean and controlled environment
- A variety of fillers including Glass, Carbon, Graphite, Bronze, Ekonol and Aluminium
- Testing of materials and finished products to a wide range of European, US and International standards

# Fluorocarbon Products

An extensive range of standard and bespoke solutions in fluoropolymer materials, coatings and advanced engineering thermoplastics



## High Performance Surface Coatings

**Fluorocarbon has 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 chemical or environmental protection, low friction, non-stick and decorative coatings.**

As a leading coatings provider we offer a wide range of fluoropolymers such as PTFE, FEP, PFA, ECTFE and ETFE – backed by our strong partnerships with major suppliers including Dupont (Teflon®), Whitford (Xylan®), Solvay (Halar®), Arkema (Rilsan®) and SBS®. Other industrial paint systems are available to suit specific customer requirements.

Our robotic spray plant and conveyor ovens are capable of high volume production, whilst large and small single batch ovens take care of low volume or one-off coating requirements.

Working with our customers to understand their needs, our experience ensures we recommend the most accurate and cost-effective coating to add product value and a distinct competitive advantage.

Markets supplied include aerospace, automotive, food, chemical, oil & gas and pharmaceutical.

### Fluoralon HB Coatings

Fluoralon® High Build coatings have been developed to provide the ultimate in chemical protection.

The range, based on high performance melt processible fluoropolymers such as ECTFE, PFA and ETFE, has been formulated to provide enhanced toughness and chemical protection.

### Surface & Blast Cleaning

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



#### Services include:

- Solvent and aqueous degreasing
- Grit/shotblasting
- Aluminium oxide
- Chilled iron
- Steel grit
- Glass bead
- Flame spraying
- Other blast media are available

### Refurbishment

Our maintenance and refurbishment service offers the controlled removal of surface coatings to restore products to their original condition.

Our service covers most types of process and engineering equipment including:

- Bakery equipment (dough hoppers, chutes & rollers)
- Chemical processing equipment (centrifuges, agitators & process vessels)
- Handling equipment (guide rails, conveyor slats, feed chutes)
- Packaging machinery (heat seal bars, cutting blades)



## Industrial Bakeware

**FBS Prestige is a leading designer and manufacturer of industrial bakeware servicing the accounts of many of Europe's leading bread and cake manufacturers.**

In close co-operation with our customers, we develop specifically designed standard and custom made breadtins, barbanded trays and baking moulds, that are generally required for the high volume production of accurately shaped baked products. The resulting shapes are constructed into custom designed units enabling them to be used on all types of automated handling and conveying systems.



Much more than just a manufacturer, our highly experienced, innovative design team provides a complete service by utilising the most effective CAD/CAM design and manufacturing techniques. This, coupled with our new generation of oil free release coatings has transformed the working and commercial baking environment by providing realistic and affordable solutions guaranteed to meet customer needs and requirements.

**Our extensive product range includes:**

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

### Monitoring and Scheduling Service

Product hygiene, plant efficiency and overall profitability depend upon clean equipment. Our after sales care offers a complete management service that will monitor and implement a planned cleaning and refurbish schedule relating to all types of industrial bakeware items.

This tailored service has been designed as a continuous rotation cycle to suit individual needs and ensure minimum disruption to the day-to-day operation of the bakery.

### Coatings Product Range

Significant investment in the latest release coating technology allows us to supply the best range of coating solutions developed specifically for the baking industry.

Our close association with DuPont® and SBS®, together with our company owned Hallmark system enables us to provide a wide and effective range of non-stick coatings that eliminates the need for oil or grease therefore offering an improved product appearance and a cleaner work environment.

We also offer anodising, traditional silicone glaze and rubber coatings.



As a leading fluoropolymer processor with over 40 year's experience, our products and coating services can be found worldwide throughout many markets



## Fluid Technology

**We specialise in a full range of fluoropolymer lined pipes, fittings, expansion joints and hoses to provide protection against the most aggressive of chemicals and other fluids.**

### PTFE Expansion Joints

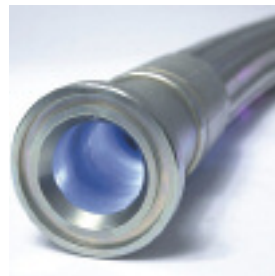
For over 20 years we have been successfully manufacturing contour moulded expansion joints of which are used to compensate for axial and angular movement, misalignment and vibration in piping systems.



Our standard range of joints, designed to offer maximum hoop strength and an excellent pressure/vacuum performance, combined with long life and low maintenance, are available in a range of sizes covering up to 800mm nominal bore, between 2 and 10 convolutions.

### Hose

We offer an extensive range of Fluoroline® PTFE hose and hose assemblies in many configurations including smoothbore, convoluted, braided, unbraided, heat shielded & pre-formed. All assemblies can be supplied with standard or bespoke end fittings.



PTFE hoses are designed for numerous applications involving high and low temperature, corrosive chemicals, high pressure, steam, food transfer, gases, hydraulic fluids and sterile material.

Our hoses are successfully deployed across various industries including power generation, aerospace, military and chemical processing.

### PTFE Lined Pipe & Fittings

Fluorocarbon's Fluoroline® fluoropolymer lined pipework and accessories are manufactured in a wide range of sizes conforming to ANSI and DIN standards.

Our system is designed to handle highly corrosive and hazardous fluids over a wide temperature range, combining the strength of traditional metal pipework with the chemical resistance of fluoropolymer materials. Using our network of international manufacturing partners, distributors and agents we are able to provide a fast and efficient service worldwide.

### Materials available include:

- PTFE
- PFA
- PP
- Anti-static PTFE and PFA

## Machined Components

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

Whether prototype or volume manufacturing, our state of the art facilities including milling, turning centres, CNC lathes and multi axis CNC and sliding head machines enable us to offer a service tailored to meet specific customer requirements.



### CNC Sliding Head & Automatics

With over 15 auto bar-fed machines spread over 2 areas we offer faster, more precise and cost-effective machined parts that brings benefits to our customers.

### CNC Turning & Milling

Our extensive experience in turning and milling offers precision machining to tight tolerance, which results in the highest accuracy and quality parts tailored to individual customer requirements.

## 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. In addition, complex PTFE components are produced by isostatic and automatic moulding processes.**

Our high quality products are supplied for some of the world's most prestigious projects and used across many markets including chemical, medical, fluid handling and aerospace.

Moulding technologies are enhanced by first class technical support, material advice, product and mould design.

### Injection Moulding

Fluorocarbon's range of specially modified, high temperature, injection moulding machines manufacture a wide variety of customer components from thermoplastics and fluoropolymers including PFA, FEP, PCTFE, PEEK, ETFE, ECTFE, PES, PAI and PPS.



Optimised for cost and reliability, our facilities mould complex shapes in high volume production and/or one-off bespoke parts for a specific application. Using our unique tooling system we can supply samples and prototypes prior to production.

### Isostatic Moulding

Isostatic moulding, originally developed for the manufacture of ceramics, can provide the solution to enable intricate and contoured shapes to be produced with little or no machining. We have the ability to produce high quality, large and complex shapes in PTFE which, to date, has been virtually impossible to produce other than by extensive machining and fabrication.

We offer custom solutions for use throughout many industries including chemical, pharmaceutical, food processing, aerospace, automotive and offshore



## Seals

At Fluorocarbon we are dedicated to the design and manufacture of high performance energised PTFE seals, Fluoroglide® PTFE bearings, metal sealing rings and PTFE lipped rotary shaft seals. Seals are available with rubber or metallic spring energisers in a wide range of forms and materials to meet almost any sealing application.

We offer custom solutions for use throughout many industries including chemical, pharmaceutical, food processing, aerospace, automotive and offshore, as well as custom designs for special applications.



Designed for use in the most demanding conditions our seals offer the following benefits:

- Excellent chemical resistance
- Wide operating temperature range
- Very low coefficient of friction
- No stick/slip effect
- High resistance to wear
- Good dry running properties

Whether a standard seal or a custom design requirement our dedicated technical team can provide you with innovative and effective solutions to your needs.

## Our full range of seals

### Bespoke Designed Seals

Using our team of engineers we design, develop and specify a range of sealing and bearing components to meet the demands of a variety of applications.

### Elastomeric Energised Seals

Our range of elastomeric energised seals incorporate O rings or square section rings in a selection of materials.

### Metallic Sealing Rings

Metal O and C rings are used as a deformable seal in a static sealing situation.

### Rotary Shaft Seals

PTFE rotary seals are designed to seal liquid and gaseous media in rotating hardware.

### Spring Energised Seals

Our range of spring energised seals incorporate a metallic energiser of either a 'V' or coil section.

### Fluoroglide® Bearings

Fluoroglide® PTFE bearing strips are used to guide pistons and piston rods in hydraulic and pneumatic cylinders to prevent metal-to-metal contact.

### Polyurethane Seals

A range of polyurethane seals has been developed for both hydraulic and pneumatic use, all to fit within the ISO standard groove dimensions.

## Semi-finished Products

**With over 40 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.**

The Fluorinoid® range is available in many variants including in-house blended grades to incorporate fillers such as glass, carbon fibre, graphite and bronze as well as unfilled virgin materials. This, combined with our latest machining and measuring technologies offers a high quality, end-to-end service that is second to none.



### Melt Fluoropolymers

Using our specialised processing equipment and wide tooling range we are able to convert high performance and melt fluoropolymer materials into semi-finished shapes for post machining or low to high volumes of moulded components.

Available in materials including PEEK, PCTFE, PFA and FEP our range of products includes extruded and hot compression moulded rod, heavy tubing, sheet and custom shapes.

### PTFE Rod & Tube

We specialise in high quality PTFE compression moulded and extruded rod and tube in a wide range of diameters and lengths all suitable for today's modern machining.



### Services:

- Stress relieving service available to enable machining to tight tolerances
- In-house tensile strength and elongation testing
- Precision grinding service to ensure close tolerances for modern machining

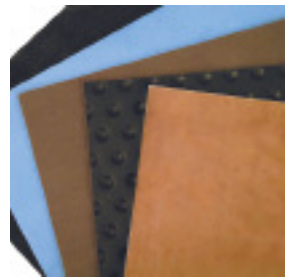
### PTFE Sheet & Tape

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 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® etching process (please refer to page 11 for more details of our Fluoroetch® service).



Our core values of customer focus, high quality and commitment ensure we differentiate from our competitors



## Fluoroglide® Slide Bearings, Pipe Supports & Skidways



**The science of managing very heavy load movement requires special understanding. Utilising our range of Fluorinoid® load bearing low friction materials we have gained a global reputation for providing slide bearing and skidway solutions to the construction, oil and gas industries.**

Based on our 30 years of technical experience we offer a professional design, manufacturing and onsite consultancy service dedicated to resolve slide bearing and skidway needs. We also supply PTFE plain and dimpled inserts to leading manufacturers of pot bearings for road and bridge applications.



### Fluoroglide® Slide Bearings & Pipe Supports

Fluoroglide® slide bearings are superior to conventional expansion plates, rollers and rocker arms, accommodating expansion, contraction and other reciprocating motions of any structure that moves as a result of thermal, seismic or differential forces. Such bearings operate at high loads and low speeds, and it is under these conditions, together with its no stick-slip and anti-weathering characteristics, that the self-lubricating properties of Fluorinoid® PTFE are at a maximum.

We produce Fluoroglide® slide bearings in a range of configurations using either virgin or glass filled Fluorinoid® PTFE as the bearing material. Each bearing is designed specifically to suit the application.

### Applications:

- Expansion movement in pipelines, heat exchangers, concrete decks or pipes
- Cryogenic, vibration and acoustic affects on pipelines
- Steam heated pipelines on North Sea oil production modules
- Oil, water & gas transportation - above ground pipe mains
- Large, complex concrete buildings - multi-storey car parks, civic centres etc
- Pedestrian walkways

### 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.

Fluoroglide® skidway plates are used in construction yards around the world to assist in skidding oil jackets, semi-submersible modules and heavy structures. Jackets, decks and semi-subs with weights up to 30,000 tonnes have been successfully loaded out on Fluoroglide® skidway plates.

In addition, to aid effectiveness of our bearings and reduce breakout friction, we also provide Fluoroslip® 415 and Fluoroslip® 414 with PTFE additive.



## Valve Seats

We manufacture a wide range of soft seat configurations across many industries supplying major global customers. Standard valve component materials include all grades of PTFE and modified PTFE, all types of fluoropolymers, high performance plastics and rubber; they are also available in standard sizes, with larger sizes and specially developed materials being available on request.

### Applications:

- Valve seats and seat inserts - seats for all types of valves including ball valves, butterfly valves, gate valves, chokes and plug valves
- Valve stem seals, including chevron packing and all types of energised seals
- Complete valves, valve liners and linings



## PU & Rubber Finished Products

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. We supply some of the world's largest companies with a range of elastomeric components including:

- Pipe clamps
- Valve seats
- Seals
- Grommets
- Bellows
- Diaphragms
- Bump-stops

### Other custom moulded products

We offer a wide range of materials including cast or injection moulded Polyurethane, NBR, Fluorocarbon, EPDM, and Silicone.



## Services



### Etching & Bonding

**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.**

Using the Fluoroetch® process we offer a full in-house service of chemical etching and bonding of fluoropolymers including PTFE, PFA, ECTFE, PCTFE, FEP and TFM.

Etching and bonding of free-issue material is available.

# Contacts

## UK & Export Sales & Manufacturing

### Hertford Head Office

Fluorocarbon Company Ltd  
Caxton Hill  
Hertford  
Herts  
SG13 7NH  
United Kingdom

**Tel:** +44 (0)1992 550731  
**Fax:** +44 (0)1992 584697

### Manchester Office

Fluorocarbon Company Ltd  
Northbank Industrial Park  
Excalibur Way  
Irlam  
Manchester  
M44 5DL  
United Kingdom

**Tel:** +44 (0)161 777 6300  
**Fax:** +44 (0)161 776 2503/7

## Manufacturing

### Livingston Office

Fluorocarbon Company Ltd  
6 Rutherford Square  
Brucefield Industrial Estate  
Livingston  
West Lothian  
EH54 9BU  
Scotland

**Tel:** +44 (0)1506 411865  
**Fax:** +44 (0)1506 412720

### Nottingham Office

FBS Prestige  
Unit B  
Lilac Grove  
Beeston  
Nottingham  
NG9 1PF  
United Kingdom

**Tel:** +44 (0)115 943 1111  
**Fax:** +44 (0)115 943 1177

### Sheffield Office

FBS Prestige  
Birley Vale Avenue  
Sheffield  
S12 2AX  
United Kingdom

**Tel:** +44 (0)114 253 0353  
**Fax:** +44 (0)114 253 0355

## International

### European Sales Office

Fluorocarbon Company Ltd  
Van Doesburg - ERF 50  
3315 RB Dordrecht  
The Netherlands

**Tel:** +31 78 654 0851  
**Fax:** +31 78 654 0852

### European Manufacturing Office

SC Fluorocarbon SRL  
Strada Dunarii Nr. 277, Corp C10  
Alexandria  
Judetul Teleorman  
Romania

**Tel:** +40 247 314245/421075  
**Fax:** +40 247 421076

### USA Sales Office

Fluorocarbon Company Ltd  
6000 Fairview Road  
Suite 1200  
Charlotte  
NC 28210  
USA

**Tel:** +1 704 552 3612  
**Fax:** +1 704 552 3613

World leading innovations in  
fluoropolymer processing



**FLUOROCARBON**