## Fluorocarbon Company Ltd Company Overview





## **Company Profile**

- > Founded in 1962
- One of the UK's largest fluoropolymer processors and a global supplier of PTFE and polymer related components and semifinished 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



## **European Presence**

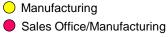


#### **Manufacturing Sites**

- → 4 UK
- → 1 European
- Hertford
- Romania
- Irlam, Manchester
- Nottingham
- Sheffield

#### **Sales Offices**

- Hertford
- Houston
- Irlam, Manchester
- Nottingham
- Romania





## **Global Presence**



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**1960s** → Fluorocarbon founded and became a pioneer in the moulding of PTFE polymers in the UK

**1970s** -> Acquisition of a small engineering company

Introduction of machined finished components

**1980s** -> Completion of the Fluorocarbon Hertford head office and manufacturing site

→ 6-acre site in Irlam, Manchester acquired to accommodate further development of the PTFE range

1990s 

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

Acquisition of a Nottingham based metal working company leading to the formation of Fluorocarbon Bakeware Systems

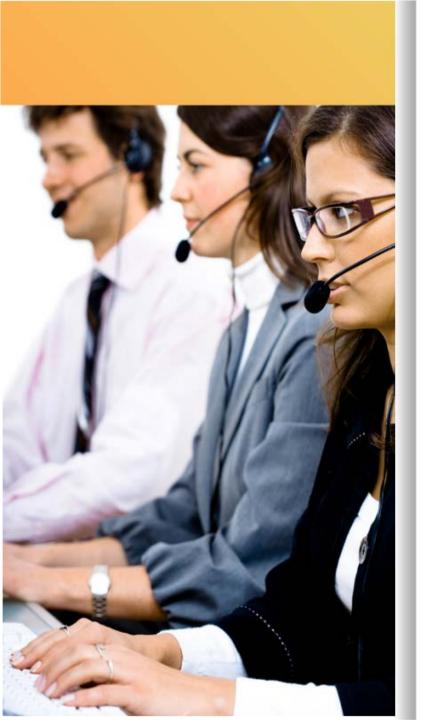
## **Company History**

- **2000s** > Fluorocarbon Hose Ltd established specialising in reinforced and unreinforced PTFF hoses
  - Fluorocarbon acquired a manufacturing site in Romania and launched USA sales office

#### Present ->

- Fluorocarbon has acquired full managerial ownership of all shares and announced a new global strategy
- Fluorocarbon Group Ltd acquires Prestige Industrial Ltd
- Romanian manufacturing site launched March 2009
- August 2009 launch of the FBS Prestige brand
- Sales office opened in Houston





## **Company Values**

At Fluorocarbon we strive to differentiate our value proposition from that of our competitors.

Our number one aim:

"To make it easier for customers to do business with us"

through our ability to identify, understand and focus on the specific needs of our customers.





- → Improve current products, services and processes to provide best tailored solutions to our customers
- Reduce customer supply chain cost through providing full product value cycle activities
- Develop and introduce new products, services and processes to attract new customers to Fluorocarbon
- Build and promote equity into the Fluorocarbon brand to become the number one valued brand in the precision polymer and bakeware market place



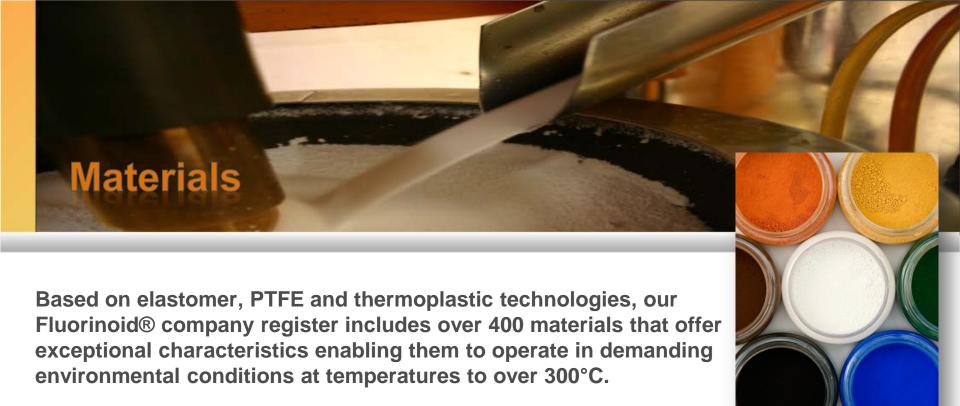


- Aerospace
- Automotive
- Chemical Processing
- → Construction & Off-highway
- → Food
- Medical & Pharmaceutical
- Oil, Gas & Petrochemical
- Semi-conductor
- Water & Environmental









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 compositions, including glass, carbon, graphite, bronze, ekonol and aluminium...

### **Products**

























# 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







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





## Fluid Technology Hose

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









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









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.)





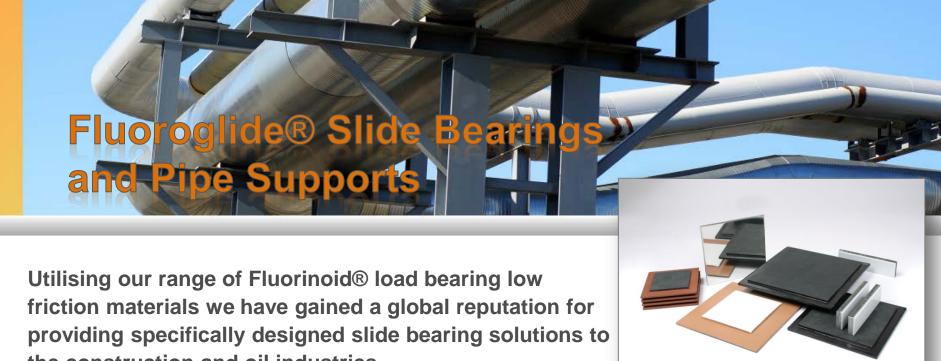


At Fluorocarbon we are dedicated to the design and manufacture of high performance seals for use throughout many industries, including chemical, pharmaceutical, food processing, aerospace, automotive and offshore, as well as custom designs for special applications.

- Elastomeric energised seals
- Fluoroglide® bearing strips
- Metallic sealing rings
- Polyurethane seals
- Rotary shaft seals
- Spring energised seals



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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 415 and Fluoroslip 414 with PTFE additive to aid effectiveness of bearings





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 30,000 tonnes

Customer approvals include Aramco, Saipem, JGC and Shell



## **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.

#### **Skived Tape**

- 0.05mm 6mm thick, max width 1220mm
- Available in continuous rolls, cut sheets or slit to a specific width
- Filled grades can be manufactured up to 1000mm wide

#### **Moulded Sheets**

- 8mm 100mm thick to a maximum size of 1200mm2
- Sheets may be supplied as cut pieces or machined into

individual shapes

#### **Dimpled Sheets**

- 3.0mm, 4.5mm and 5.0mm thick up to 1220mm2
- Bridge and pot bearings: 4.5mm or 5.0mm thick; supplied as sheet or machined to size
- Available in filled grades of PTFE
- Dimpled sheets either to BS 5400 or EN1337-2





#### **Self-Adhesive Backed Tape (Fluoroetch® SA)**

- Four standard thicknesses; 0.13mm, 0.25mm, 0.40mm
- and 0.50mm
- Available as continuous rolls and slit to specific widths
- Food approval (FDA & ISO) used for lining, hoppers and chutes

#### **PTFE Coated Glass Cloth**

- Available as 1000mm wide rolls or slit to customer requirements
- Ideal for heat wrapped packaging

#### Fluoropack® PTFE/Cork Laminate

 Sheets available 1200mm x 600mm by 2.5mm thick - for blister pack tools



## **Etching**



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 Def standard 93-68 and certified under our ISO 9001:2000 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







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

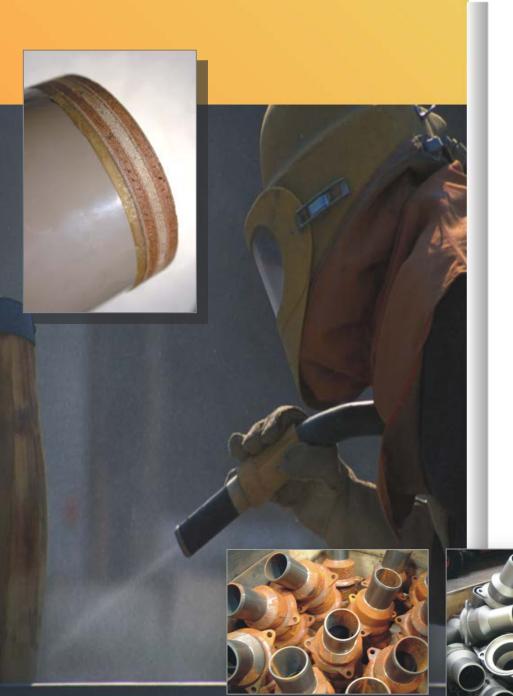




We manufacture a wide range of soft seat configurations across many industries supplying major global customers.

- → 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 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

**Product Menu** 





FBS Prestige (incorporating Fluorocarbon Bakeware Systems Ltd and Prestige Industrial Ltd) 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

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## FBS Prestige 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 breadpans



## Bakeware Coatings Applications

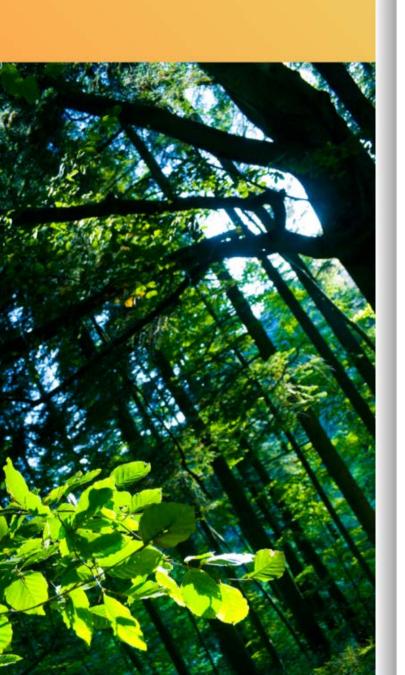
Significant investment in the latest food approved release coating technology allows us to provide the finest range of coating solutions developed specifically for the baking industry.

- Approved applicator SBS® non-stick release coating system
- Company owned Fluoralon ® multi coat non-stick release coating system
- Silicone glaze
- Silicone rubber elastomer
- Black anodising









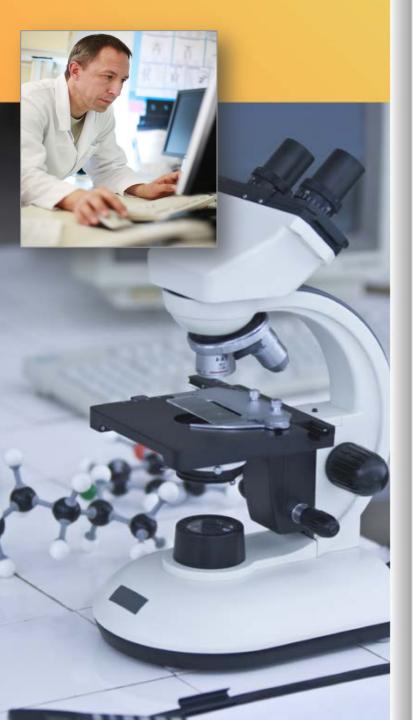
### **Environment**

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







## **Research and 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.

- Strong relationships with worldwide partners
- Engineering solutions tailored to suit specific applications
- On-site consultations
- Non-disclosure and joint development agreements
- State of the art CAD/CAM technology
- Advice on materials from our range of over 400 grades
- Laboratory testing; polymers physical properties testing

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**Product Menu** 



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





## **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





#### Approved Applications

- DuPont® licensed industrial coating applicator
- SBS® BakewareTechnologies licensed coating applicator
- Whitford Worldwide coating applicator
- Weilburger coating applicator
- Arkema Rilsan® approved coating applicator
- Acheson approved coating applicator

#### Customer Approvals

- AS9100 Aerospace Approval
- NORSOK
- Rolls Royce
- Airbus UK Ltd

- BAE Systems
- Dowty GE
- Raytheon
- Pattonaire



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