

FLUOROCARBON

**ROD, TUBE, SHEET, TAPE
& CUSTOM SHAPES**

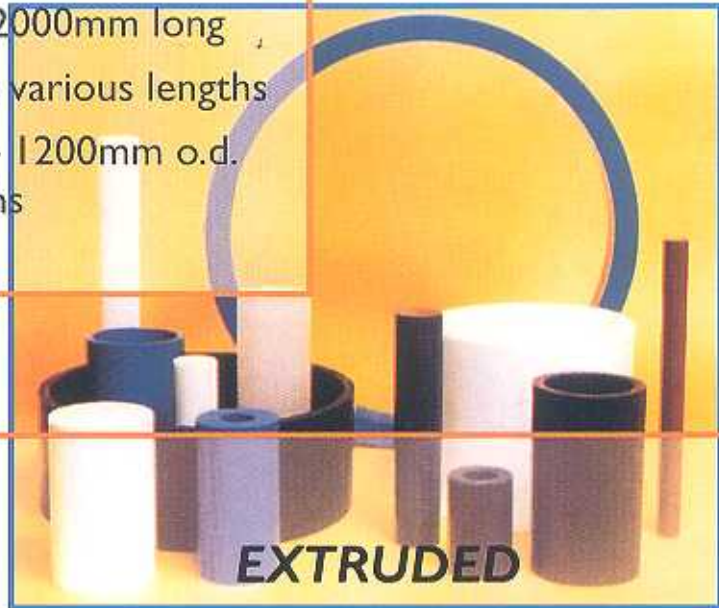
FLUORINOID® PTFE ROD & TUBE

COMPRESSION MOULDED

Rods 3mm – 50mm \varnothing x 2000mm long
Rods 50mm – 1000mm \varnothing x various lengths
Heavy wall tube 20mm – 1200mm o.d.
various lengths

ISOSTATICALLY MOULDED

Rods 50mm –
100mm o.d.
1000mm
lengths



Rods 6mm – 50mm \varnothing x 4000mm long
Tubes 15mm – 150mm \varnothing x 4000mm long

FILLED GRADES

Fluorocarbon offers the full range shown above in virgin or filled grades including customers' special blends. Filled grades: Glass, Carbon, Graphite, Bronze, Aluminium, Ekonol, Molybdenum either individual or combinations.

ISOSTATIC AND AUTOMATIC MOULDING

Both processes are available for specific custom moulded products – large shapes in small volume and small parts in large volume.

SPECIAL PRODUCTS

- Compression moulded rods are manufactured by a special process to produce 2000mm lengths of low stress material for high precision machining within a narrow tolerance band.
- Short lengths of heavy wall tube can be manufactured for production of small quantities of valve seats in virgin or filled grades. A machining service is available, seats may be machined up to 1350mm diameter.
- Centreless ground extruded rods up to 4000mm long are available for automatic production of components used in the electronic industry.

SPECIAL SERVICES

- CNC, Auto and conventional machining.
- Etching and bonding.

FLUORINOID® PTFE SHEET & TAPE

SKIVED TAPE

0.1mm – 5mm thick, maximum width 1220mm.

Available as continuous rolls, cut sheets or slit to a specific width



MOULDED SHEET

6mm – 100mm thick, maximum 1220mm square, also available as cut pieces or individual shapes

FILLED GRADES

Fluorocarbon offers the full range shown above in virgin or filled grades including customers' special blends. Filled grades include: Glass, Carbon, Graphite, Bronze, Aluminium, Molybdenum, Ekonol, either individual or combinations.

PROPRIETARY GRADES

Hoechst TFM compounds supplied as skived tape or moulded sheet.

SPECIAL PRODUCTS

- Self-adhesive backed tape available in four standard thicknesses 0.13, 0.25, 0.40, 0.50mm x 1000mm wide. Supplied as continuous rolls or slit to specific widths.
- Dimpled PTFE, virgin or glass filled, 3mm, 4.5mm or 5mm thick x 1220mm square for pot bearings – BS5400.
- Fluoropak® PTFE/Cork laminate 2.5mm thick x 600mm x 1200mm, for blister pack tools.
- PTFE coated glasscloth available as 1000mm wide rolls or slit to customers' requirements.
- Tank and Vessel Linings: Fluorocarbon offers a range of Fluoropolymer materials as sheet and tape for lining applications.

SPECIAL SERVICES

- Etching and Bonding: Virgin or filled PTFE supplied chemically etched one or both sides to allow bonding to a wide range of substrates. Etched sheet can be factory bonded within the Fluorocarbon Group for the manufacture of expansion sliding plates, skidways or isolation mounts.
- Machining Service: Sheet material may be cut to size or machined to a finished profile.
- A specialised gasket cutting and punching service is available if required.

ENGINEERING THERMOPLASTICS & FLUOROPOLYMERS

RODS SIZE RANGE

3mm – 25mm \varnothing x 1000mm long
28mm – 50mm \varnothing x 200mm long
51mm – 100mm \varnothing x 100mm long
101mm – 200mm \varnothing x 75mm long

SHEET SIZE RANGE

Nominal Size

300 x
300mm

Thickness

1.5mm –
25mm

TUBES SIZE RANGE

I.D. x O.D.

25mm x 50mm

10mm x 125mm

275mm x 350mm

525mm x 600mm

I.D. x O.D.

100mm x 150mm

250mm x 300mm

500mm x 550mm

850mm x 940mm

LENGTH

200mm long

150mm long

100mm long

60mm long

The Special Products Division has specialised processing equipment and a wide range of tooling to convert Thermoplastic and Thermoplastic Fluoropolymer materials (melts) into semi finished shapes for post machining or low to high volumes of moulded components and lined steelwork.

MATERIALS

ENGINEERING THERMOPLASTICS

Polyamide, Polyphenylene Sulphide (PPS), Polysulphone (PS), Polyethersulphone (PES), Polyetheretherketone (PEEK), Polyetherimide (PEI), Polyarylimide (PAI), Liquid Crystal Polymer (LCP), Ultra High Molecular Weight Polyethylene (UHMWPE).

FLUOROPOLYMERS

Perfluoroalkoxy (PFA), Fluorinated Ethylene-Propylene (FEP), Halar Ethylene-Chlorotrifluoroethylene (ECTFE), Polychlorotrifluoroethylene (PCTFE), Tefzel Ethylene-Tetrafluoroethylene (ETFE), Polyvinylidene Fluorine (PVDF).

Specially filled grades or proprietary blends of the polymers listed above.

SPECIAL PRODUCTS

- Amorphous clear PCTFE sheet for chemically resistant sight-glass covers.
- Custom shaped large billets and sheet made by transfer moulding using low cost tooling. Max shot weight 10kgs.
- Lining of customer steelwork.

SPECIAL SERVICES

- The range of Fluoropolymers can be supplied plain or chemically etched ready for bonding.
- A full bonding service is available for slide bearings and skidways.
- Post moulding machining.

PRODUCTION FACILITIES

Volume quantities of components can be produced by compression, transfer, or injection moulding, with prototype quantities for trials and evaluation available from low-cost tooling.

Physical Properties Table – Fluoropolymers and Engineering Plastics

Fluorinoid Grade	Property	General			Mechanical				Electrical		Thermal		
		Density	Flammability	Water absorption	Tensile strength at 23°C	Elongation at break at 23°C	Rockwell hardness	Shore hardness D	Coefficient of friction	Volume resistivity	Dielectric strength	Coefficient of linear expansion	Maximum continuous operating temperature
	Unit	g/cm ³		%	N/mm ²	%				Ωcm	KV/mm	1/K 10 ⁵	°C
100	PTFE Virgin	2,14-2,19	NC	0,00	20-40	200-450		55-65	0,05-0,2	10 ¹⁸	40-80	12-16	250-260
105	PTFE 25% Glass	2,24	NC		12-20	200-300		60-70	0,07-0,2			11-15	250-260
115	PTFE 25% Carbon	2,10	NC		11-16	70-150		60-70	0,1-0,2			8-11	250-260
141	PTFE 60% Bronze	3,90	NC		10-14	80-160		65-75	0,07-0,2			9-14	250-260
305	PFA	2,12-2,17	NC	<0,03	25-32	300		60-65	0,2-0,3	>10 ¹⁷	50-80	12-16	250-260
304	FEP	2,12-2,17	NC	<0,01	19-25	250-350		55-60	0,2-0,3	>10 ¹⁶	50-80	8-14	200-205
300	ETFE Tefzel ®	1,70-1,75	SE	<0,1	36-48	200-500	R45-55	70-75	0,3-0,5	>10 ¹⁶	60-90	8-12	150-180
308	PVDF	1,75-1,78	SE	0,05	30-50	20-250	R100-115	75-85	0,2-0,5	10 ¹⁴	40-80	8-12	150-170
346	ECTFE Halar ®	1,67-1,70	SE	<0,1	41-54	200-300	R85-95	70-80	0,3	10 ¹⁵	50	4-8	150-180
325	PCTFE	2,10-2,16	NC	<0,01	31-42	80-250	R103-118	70-90		>10 ¹⁷	50-70	4-8	150-180
347	VESPEL ®	1,35-1,45	SE	1-1,3	45-86	2-8	E45-60		0,20,35	10 ¹⁵ -10 ¹⁶		4-6	300
348	PPS	1,34	NC	0,07	70	3	M93		0,24-0,3	10 ¹⁶	20	7	200
341	PES	1,37	NC	2,2	85	30	M88		0,27-0,32	10 ¹⁶	16	3-6	180
350	PEEK	1,30	NC	0,5	105	110	M99		0,2-0,25	10 ¹⁶	19	7	260
340	UHMPE	0,94	C		20-40	300-500		60-70	0,15-0,3	10 ¹¹	90	20	80
349	NYLON 6	1,10-1,15	C	9-10	40-80	80-100	M80		0,22-0,26	10 ¹¹	35	8	90
328	NYLON 66	1,10-1,15	C	7,5-9,5	40-85	60	M80		0,2-0,28	10 ¹¹	30	7-10	90
333	NYLON 12	1,01-1,05	C	1,5-2	40-60	150-350	M82			10 ¹¹	35	8-15	70
339	PE High Density	0,945-0,963	C		19-35	300-500	M75-80	62-69	0,3-0,35	10 ¹¹	60-90	15-20	80
321	ACETAL	1,40-1,42	C	0,8	70	15	M80		0,14-0,35	10 ¹¹	20	11	160

NC – Non-combustible SE – Self-extinguishing C – Combustible

The above physical properties are typical values for comparative purposes only and do not represent a product specification. Properties will vary depending on the source of raw material, method of processing, physical form of the product, direction of measurement, etc. The above properties must not be used for design purposes. For the correct properties in a specific application please refer to our Technical Department.

FLUOROCARBON

Company Profile

Fluorocarbon Co Ltd is a wholly British owned private limited company formed in 1962 to manufacture and market PTFE products. It has become the largest processor of PTFE in the UK and has expanded its range to encompass the full spectrum of fluoropolymer materials, high-performance polymers and elastomers.

ISO 9002 quality system is operated, together with approvals from major industrial companies, and all national and international standards are observed, to ensure that products are world class.

See all our products at www.fluorocarbon.co.uk or email your enquiry to info@fluorocarbon.co.uk

Fluorocarbon Company Ltd

Caxton Hill, Hertford SG13 7NH (UK)
Tel: +44 (0)1992 550731 Fax: +44 (0)1992 584697

Polymer Division

PTFE finished and semi-finished products. Subcontract precision machined components, assemblies and tools

Special Products Division

Speciality mouldings in Fluoropolymers and high performance plastics, PTFE slide bearings

Coatings Division

Surface coatings in Fluoropolymers and other advanced plastics

Fluorocarbon Seals Ltd

High Performance PTFE seals and bearings
Tel: +44 (0)1992 550731 Fax: +44 (0)1992 587983

Export Sales Office

Worldwide Sales and Marketing
Tel: +44 (0)1992 550731 Fax: +44 (0)1992 504550

Fluorocarbon Bakeware Systems Ltd

Lilac Grove, Beeston, Nottingham NG9 1PF
Tel: +44 (0)115 943 1111 Fax: +44 (0)115 943 1177
Pans, racks, hoops and trays for the bakery industry

Fluorocarbon Bakeware Systems Ltd

Birley Vale Avenue, Sheffield S12 2AX
Tel: +44 (0)114 253 0353 Fax: +44 (0)114 253 0355
Advanced non-stick coatings for industrial bakeware and the food industry

Fluorocarbon Engineering Plastics Division (Scotland)

6 Rutherford Square, Brucefield Industrial Estate,
Livingstone, West Lothian EH54 9BU (UK)
Tel: +44 (0)150 641 1865 Fax: +44 (0)150 641 2720
Machined components in PTFE, Nylon and engineering plastics

® Registered trade name:

Fluorinoid - Fluorocarbon Co. Ltd
Fluoroglide - Fluorocarbon Co. Ltd
Fluoralon - Fluorocarbon Co. Ltd
Fluoropak - Fluorocarbon Co. Ltd
Fluoroline - Fluorocarbon Co. Ltd
Fluoroetch - Fluorocarbon Co. Ltd

Fluorocarbon Company Ltd

European Sales Office
Van Doesburg-Erf 50, 3315 RB Dordrecht,
The Netherlands
Tel: +31.78 6 540 851 Fax: +31.78 6 540 852

FLUOROCARBON LTD

Northbank Industrial Park, Excalibur Way, Irlam,
Manchester M44 5BL
Tel: +44 (0)161 777 6300
Fax: +44 (0)161 776 2503/2507

Linings Division

Corrosion resistant lined piping and accessories for the Chemical Process Industry. Arduo® lined pumps

High-build coatings applied in Halar and PFA, for chemical process plant, equipment and accessories

PTFE Custom Mouldings by Isostatic Moulding

Sheet and Tape Division

PTFE Sheet and Tape products

Bellows Division

PTFE expansion joints

Hose Division

PTFE lined hoses



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