



## PTFE (TEFLON) RODS, SHEETS & COMPONENTS

A golden era has started in the world of materials science with the invention of Fluoro polymer – Poly Tetra Fluoro Ethylene (PTFE) on 6th April 1938 by Mr. Roy J Pluncket, a scientist of Du Pont Nemours U.S.A. later branded & patented as TEFLON (a registered trademark of DuPont De Nemours, U.S.A)

PTFE with its versatile characteristics like wide temperature withstanding capacity From -200<sup>0</sup> C to +260<sup>0</sup> C, chemically inert, excellent dielectric properties, low water absorption, lowest co-efficient of friction, resistance to ultra violets rays, low smoke emission non adhesive, non –ageing etc. has wide industrial applications in chemicals, petrochemicals, bio-medical, electrical, electronic, mechanical, aeronautical, environmental, defence & space engineering applications.



PTFE is available in a number of forms: rod, tube, sheet, plate, tape, thin wall tubing, electrical sleeving, spiral wrapping or custom mouldings. By a special process, PTFE sheets & tape can be given an sodium etched surface suitable for adhesive bonding.

### Filled Grades of PTFE (Teflon)

Improved materials properties can be achieved by the addition of selected fillers. These Fillers extend performance characteristics & allow for wider application – particularly in demanding thermal stability & load support situation. In addition, the friction & thermal properties of PTFE remain generally unaffected.

## PTFE (TEFLON) EXTRUDED RODS

Diameter: 3mm to 100mm (Standard)  
Length: 900mm or 1000mm (Standard)  
Make to Order: Specific Length & Diameter Available as per customer's requirements  
Materials : Virgin PTFE  
Specification No: ASTM – D 1710



## PTFE (TEFLON) EXTRUDED TUBES



Outer Diameter: 19mm to 100mm (Standard)  
Inner Diameter: 12mm to 90mm (Standard)  
Length: 1000mm (Standard)  
Make to Order: Specific Length, O. D. & I.D Available as per customer's Requirements. (Minimum 3mm Wall Thickness)  
Material: Virgin PTFE  
Specification No: ASTM – D 3295

For More Details, Please Contact:

### PETRORAYS PRODUCTS CO

Think Polymers..... Think Petrorays

126/128, Nagdevi Street, 3rd Floor, Masjid Bunder (W), Mumbai - 400003. India

Tel: +91 (022) 6634 9695 | 2340 3706 | 2346 3492 | (M) +91 98676 25101 | 93222 25101

Email: info@petrorays.com | [www.petrorays.com](http://www.petrorays.com)



**PTFE (TEFLON) MOULDED RODS**

Outer Diameter: 16mm to 400mm (Standard)  
Length: 300mm (Standard)  
Make to Order: Specific Length & Diameter Available as per customer's Requirements.  
Material: Virgin PTFE & filled PTFE  
Filler: Glass / Carbon / Graphite / Bronze / Bronze + Mos<sub>2</sub>  
Specification No: ASTM – D 1710



**PTFE (TEFLON) MOULDED BUSHES**

Outer Diameter: 19mm to 250mm (Standard)  
Inner Diameter: 12.5 mm to 200mm (Standard)  
Length: 100mm (Standard)  
Make to Order: Specific Length, O. D. & I.D Available as per customer's Requirements. (Minimum 3mm Wall Thickness)  
Material: Virgin PTFE & Filled PTFE  
Filler: Glass / Carbon / Graphite / Bronze / Bronze + Mos<sub>2</sub>  
Specification No: ASTM – D 1710



**PTFE (TEFLON) MOULDED SHEETS**

Standard Size: 300 x 300mm, 450 x 450mm  
600 x 600mm, 1000 x 1000mm  
1200 x 1200mm, 1500 x 1500  
Thickness: 3mm to 100mm  
Make to order: Specific Length, Width & Thickness available as per customer's requirements.  
Material: Virgin PTFE & Filled PTFE  
Filler: Glass / Carbon / Graphite / Bronze  
Specification No: ASTM – D 3293



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Teflon<sup>®</sup> | Nylon | Derlin<sup>®</sup> | Poly-Urethane | Poly-Propylene | PEEK<sup>®</sup> | UHMW-PE

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**CATALOGUE**

**PTFE (TEFLON) SKIVED SHEETS**



Standard Width: 300mm, 450mm, 600mm, 1000mm, 1200mm, 1500mm, 2000mm

Thickness: 0.1mm to 3.0mm (Standard)

Length: Available in Roll Form in any length

Make to Order: Specific Length, Width & Thickness available as per customer's requirements

Material: Virgin PTFE & Filled PTFE

Filler: Glass / Carbon / Graphite / Bronze.

Specification No: ASTM – D 3308

**PTFE (TEFLON) MACHINED COMPONENTS & PROFILES**

Chemical Industries	Mechanical Industries	Electronic & Electricals Inds.
Rods, Sheets, Bushes, Tubes	Liner for Machine tools &	Nozzles
Expansion Joints: Bellows	Guides, ways & side ways	Sintered Insulation tapes
Valves Bellows	Piston rings	Capacitor films
Gaskets: Ready-Cut Gaskets	Bush Bearings	Brush holders
Envelopes, Rope Gaskets	Guide bands	Thin walled spaghetti tubings for insulation
Mechanical Packings:	Thin wall tubings'	
O/V/D/U Rings, Cup seals	Hydraulic & Pneumatic seals	
Chevron packings	Hysteris - Friction	
Valves & pumps Components:	washers for clutches	
Balls & Diaphragm		
Lab Ware: Beaker, plug cork		



**STANDARD SPECIFICATIONS**

Sr. No.	Products	ASTM	BS
1	Raw Polymer	D – 1457	5184
2	Rods	D – 1710	4271 / 5130
3	Thick Walled Tubes	D – 1710	4271 / 5130
4	Thin Walled Tubes	D – 3295	4976
5	Moulded Sheets	D - 3293	3784
6	Skived Sheets / Tape	D – 3308	4893
7	Moulded Basis Shapes	D - 3294	3873

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GRADES OF PTFE	FILLER CONTENTS	PROPRERTIES
Pure PTFE	0%	<ul style="list-style-type: none"> <li>✓ Excellent chemical resistance</li> <li>✓ Excellent Electrical properties</li> <li>✓ Out standing Flexural properties</li> </ul>
Glass filled PTFE	15 - 25%	<ul style="list-style-type: none"> <li>✓ High compressive strength</li> <li>✓ Excellent chemical resistance</li> <li>✓ Better wear resistance</li> </ul>
Carbon Filled PTFE	25 - 35%	<ul style="list-style-type: none"> <li>✓ Lower coefficient of friction</li> <li>✓ Better Electrical conductivity</li> <li>✓ High compressive strength</li> <li>✓ Better wear resistance</li> </ul>
Graphite filled PTFE	15%	<ul style="list-style-type: none"> <li>✓ Better chemical resistance</li> <li>✓ High compressive strength</li> <li>✓ Better Electrical conductivity</li> <li>✓ Improved frictional properties</li> <li>✓ Better wear resistance</li> </ul>
Bronze filled PTFE	40 - 60%	<ul style="list-style-type: none"> <li>✓ Better thernal conductivity</li> <li>✓ Excellent chemical resistance</li> <li>✓ Lower coefficient of friction</li> <li>✓ High compressive strength</li> <li>✓ Better wear resistance</li> </ul>

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