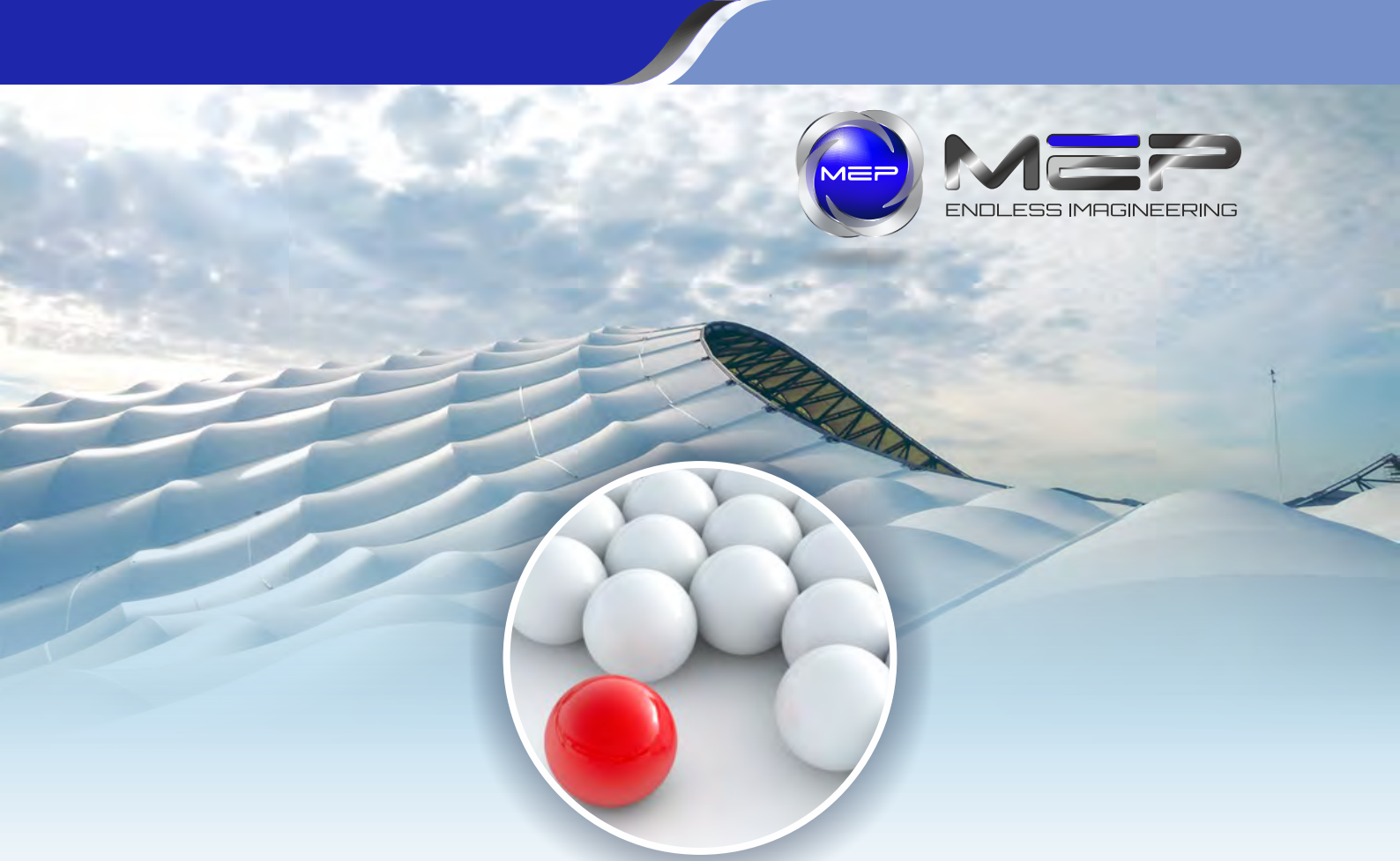




MEP
ENDLESS IMAGINEERING



★ QUALITY ★ RELIABILITY ★ CUSTOMER SATISFACTION



Meenakshi Engineering Plastics

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HOME

Meenakshi Engineering Plastics is established during the year 2015 to excel in Fluoro Polymer industry with adequate knowledge and latest technology. We Meenakshi Engineering Plastics engaged in manufacturing a wide range of fluoro polymer products in order to meet the various category of industrial market requirement.

We manufacturer standard PTFE products in its standard sizes mainly PTFE RODS, PTFE BUSHES, PTFE SHEETS, Gaskets, Washers, Bellows, Piston Rings, Rings(O,U,V Types), Cut Gaskets, Envelops, Chevron Packing's, Balls, etc.

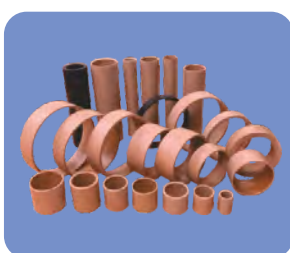
We are also specialized in manufacturing non standard sizes as per customer's requirement and demand. We also manufacturer products in other PTFE Filler Grades specially in Glass Filled, Carbon Filled, Graphite Filled, Bronze Filled, GL10GR10, Peek PTFE, Pigmented PTFE, Mos2 Filled PTFE.

We are specialized in manufacturing non standards PTFE Product in various ranges and have machining facility to supply as finished component as per Customers requirement and drawing with required quality and committed to on delivery. We have an active team with vast experience of more than 20 years in fluoro polymer industry especially in PTFE Products. We are equipped with automatic & semi automatic machines their by achieving high quality products in order to meet our customers requirement.

Meenakshi Engineering Plastics situated at Kattur Industrial Estate well equipped with modern facility and good infrastructure. We are very well connected with Road, Railway, Sea & Airport in terms of transportation.

We also supply other Fluoro Polymer components like PP, Nylon, Nylo cast, Delrin, UHMW and supply as finished component as per Customers requirement.

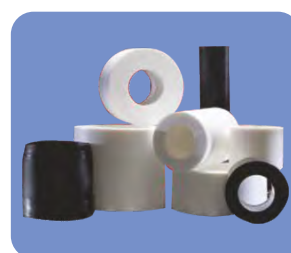
We Meenakshi Engineering Plastics are into reduction of supply chain by supplying components as finished as per customer drawing requirement. We have manufactured and supplied Seal Ring up to OD 1850 mm after machining.



PEEK BUSHES



PTFE EXTRUDED RODS



BUSHES



MODIFIED PTFE



Quality

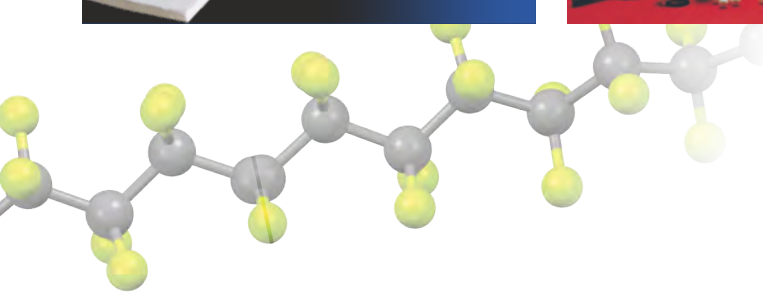
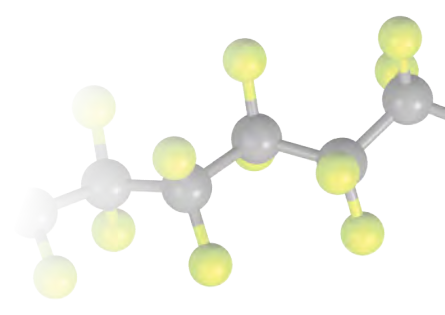
Technical angle, PTFE products are highly sensitive products. This is the reason why technology behind its production plays a major role in quality and quantity of the products. We keep all the modern production facilities with us. To ensure best quality products to the customers we have following tools and techniques in our quality assurance department:

Quality Inspection :

- ✓ Quality and Quantity of Raw Materials before production process start up.
- ✓ Line Inspection is continuously carried out throughout the production process.
- ✓ Batch Inspection is done after manufacturing every batch of the products.
- ✓ Out Sourcing for testing of PTFE from Govt. approved labs like NABL / ISI / CIPET approved labs is done as and when needed.

Quality Techniques

- ✓ Density Testing
- ✓ Hardness Testing
- ✓ Tensile Testing
- ✓ Elongation at Break
- ✓ Compression Testing
- ✓ Heat Resisting Test



Technology

In a technical angle, PTFE products are highly sensitive products. This is the reason why technology behind its production plays a major role in quality and quantity of the products. We keep all the modern production facilities with us. These technologies mainly includes :

Compression Moulding facility with 100 Ton, 40 Ton, 30 Ton, 20 Ton, Hydraulic press upto 1200 MM and molding Dia upto 1500 MM

- ❖ Skiving Machines
- ❖ Heat Treatment furnaces of various capacities
- ❖ For Machining purpose ultra modern lathes
- ❖ Drilling Machines
- ❖ Milling Machines
- ❖ Shaping Machines
- ❖ Quality Assurance with all the testing facilities

PTFE

PTFE (polytetrafluoroethylene) is synthetic fluoropolymer of polytetrafluoroethylene that has numerous applications. PTFE is fluorocarbon solid, as it is high molecular- weight compound consisting wholly of carbon and fluorine PTFE is hydrophobic: neither water nor water containing substances wet PTFE, as fluorocarbons demonstrate mitigated dispersion forces due to the high electro negativity of fluorine.

Due to its versatile and wonderful properties, PTFE finds diverse applications in various industries such as chemical, pharmaceutical electrical, power plants, fertilizers, paper, railways, shipping, aircrafts, spacecraft, and machine tools manufacturing etc., practically all kinds of industries are demanding PTFE for existing and new applications due to its unique and exceptional properties.



Basic Properties of PTFE

PTFE has an impressive array of physical, chemical and mechanical properties that makes it the material of choice for the demanding applications.

- ❖ Extremely low coefficient of friction
- ❖ Low dielectric constant and loss factor
- ❖ Broad range of service temperature (-260 c to + 260)
- ❖ Inherent UV resistance
- ❖ Excellent chemical resistance
- ❖ FDA compliance for food contact
- ❖ Low smoke and flammability resistance (limiting oxygenindex=95%)
- ❖ Non-adhesive propertise
- ❖ Low water absorption
- ❖ Non toxic
- ❖ Resistance to magnetic field

PTFE Grades

- ◆ 100% virgin ptfe
- ◆ 15-35% carbon filled ptfe
- ◆ 15 - 25% glass filled ptfe
- ◆ 15% graphite filled ptfe
- ◆ 40-60% bronze filled ptfe
- ◆ 5-10% SS filled ptfe
- ◆ 5-10% mica filled ptfe
- ◆ 55%bronze + 5% mos 2 (molydenumdisulphide) filled ptfe
- ◆ Mos 2 filled ptfe
- ◆ Mos 2 filled glass andd carbon ptfe
- ◆ Pigment ptfe
- ◆ Peek filled ptfe Turcite
- ◆ Ceramic filled ptfe
- ◆ Modified ptfe -M- ptfe

PTFE VALVE SEATS & COMPONENTS

Exceptional chemical & thermal resistance, low permeability, reduced deformation under load, High creep resistance & dimensional stability, exceptionally smooth surfaces.

AVAILABLE GRADES : PTFE, MODIFIED PTFE, GLASS FILLED, CARBON FILLED, MOLY FILLED, BRONZE FILLED, GRAPHITE FILLED & SPECIFIED GRADES BY CUSTOMER



PTFE PLUG VALVE SLEEVES



PTFE BUTTERFLY VALVE SEAT



PFA PLUG VALVE SLEEVES



PTFE BALL VALVE SEAT



PTFE DIAPHRAGM

Main characteristics of PFA

- ◆ Very high service temperature up to 260°C
- ◆ Excellent chemical and heat resistance
- ◆ Very high toughness and impact strength
- ◆ Excellent weatherability and release properties
- ◆ Very good electrical insulating and dielectrical properties
- ◆ Excellent stress crack resistance
- ◆ Co-efficient friction
- ◆ Smooth surface

Typical Applications:

Valve seat inserts
Clamps
Bundle spacers
Rollers & Bearings

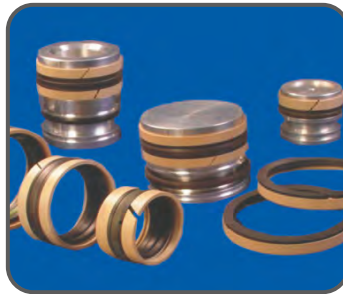


PTFE General Components

HYDRAULICS SEALS



**PTFE Piston Seal
& Backup Rings**



High Pressure Piston Seals

RANGE : Upto 1850 mm

Meenakshi Engineering Plastics

Manufactures a wide range of seal options with differing fluid and temperature thresholds, surface speeds and pressures.

AVAILABLE GRADES

PTFE, MODIFIED PTFE, GLASS FILLED, CARBON FILLED, MOLY FILLED, BRONZE FILLED, GRAPHITE FILLED & SPECIFIED BY CUSTOMER



PTFE Transmission Seals



Hydraulic Seals

CHEVRON PACKING



Chevron Packing Set

Chevron packing is used for hydraulic, pneumatic cylinder, higher pressure pumps and Valve Stem Packing.

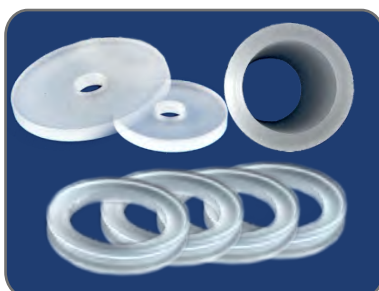
AVAILABLE GRADES

PTFE
PEEK
(TFM)

Chevron Packing Set



PCTFE



Applications:

PCTFE characterized by its excellent stability at low temperatures, is used for the seat of the valve for safety, and at sealing area for easy operation, making highly reliable sealing performance possible.

Because PCTFE has high mechanical strength and shrinkage rate at low temperatures, it is widely used for low-temperature machineries, equipment, etc.,

PEEK - Virgin

- ✔ Excellent strength, stiffness and dimensional stability temperature and harsh environment.
- ✔ Easy to process and lightweight compared to steel, aluminum and titanium.
- ✔ Low co-efficient of friction and high wear resistance without lubrication.
- ✔ Chemically resistant and insoluble in common solvents including acids, salts and oil.
- ✔ Features low out gassing, low particle generation and inherent purity for reduced contamination.



PEEK TUBE

PEEK TUBE SUPPLY RANGE :

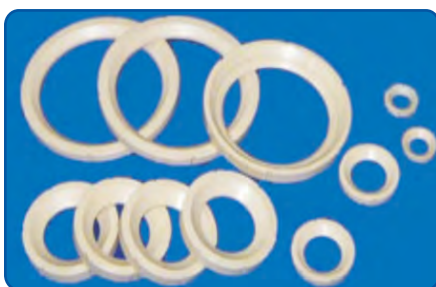
DIA - FROM 25 TO 1000 MM

Applications:

VALVE SEATS & SEALS, THRUST WASHERS, THRUST BEARING, STEM BUSHINGS, GASKETS, SEAL RINGS TRANSMISSION COMPONENTS AND OTHER SPECIFIED COMPONENTS BY CUSTOMER.



PEEK HYDRAULIC & PNEUMATIC SEALS



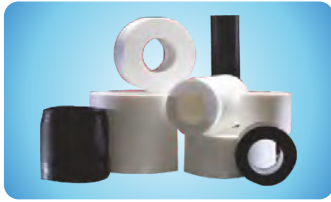
PEEK BALL VALVE SEAT



FILLED GRADE PEEK THRUST WASHERS, THRUST BEARING, STEM BUSHINGS



PRODUCT RANGE



PTFE BUSHES

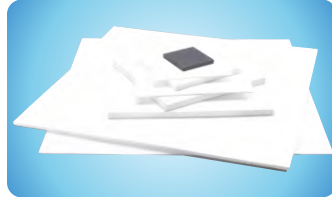
Length : 100 MM (Standard) Non Standard Sizes available upto 1500 MM
Dia and Length upto 600 MM.
Size : OD 12.5 X ID 6 MM To OD 300 X ID 275 MM (Standard)
 As per customer's specifications and drawings



PTFE EXTRUDED ROD

Diameter : 3 MM To 200 MM (Standard)
Length : 900 MM To 1000 MM

PTFE MOLDED SHEETS
Standard Size : 300 mm2 / 400 mm2 / 450 mm2 / 500 mm2 600 mm2 / 900 mm2 / 1000 mm2 / 1200 mm2
Special size - 1000 mm X 2000 mm
Thickness : From 1.5mm to 100 mm
 All non standard sizes available as per customer specifications



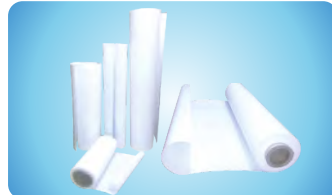
PTFE MOLDED ROD

Dia : 12.5 To 500 MM (Standard)
Length : 300 MM (Standard)
 Specific Length and Diameter available as per customer's requirement.



PTFE RING / WASHER / GASKET

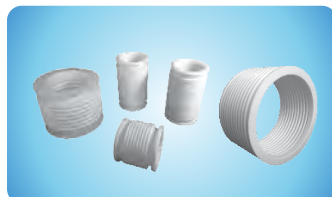
Range : Specific Size & Thickness available as per customer's requirements upto 1600 MM Dia.
 Readycut Gasket, Flange Gasket Etc.



PTFE SKIVED SHEETS

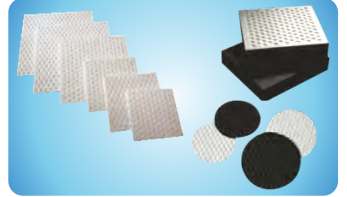
Standard Size : 300mm W / 450mm W / 600mm W / 1000mm W / 1200mm W / 1500mm W
Thickness : from 0.1 mm To 6 mm
 All non standard sizes available as per

PTFE BELLOWS
Range : Line Bellows, Expansion Bellows, Valve Bellows, Special Bellows, Composite Bellows available as per Customer Requirement in all PTFE Grades.
Size : NB - 1/2" To 24" Class #150/300
Length : 67.5 MM (Standard) to As per



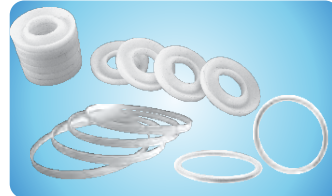
PTFE DIMPLE SHEET / BRIDGE BEARING PAD

PTFE Bridge Bearing Pad also known as PTFE Dimple Sheet, mostly used in fastly growing infrastructural projects like Metro Projects, Railway Bridges, Fly-overs etc.
Range : As per customer's specifications and drawings



PTFE ENVELOPS

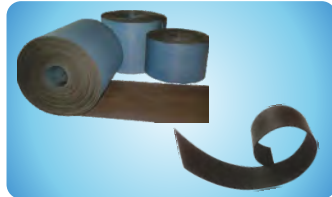
Range : 0.5 + 0.5 Envelops, 0.5 + 2 to 5mm + 0.5 milled Envelops
 Manufacturing s per customer's specifications and drawings upto 1600 MM Dia.
Size : NB - 1/2" To 24" Class #150/300



PTFE O/V/C/U/D Rings

Chevron Packing, Piston Ring, Guide Ring, Compressor Ring, Oil Seal etc.
Range : Manufacturing s per customer's specifications and drawings upto 1600 MM Dia.

TURCITE SHEET
 Turcite known as various names like Bearing linear / trexon etc. extensively used in mechanical machine tool manufacturing industries, Hydraulics & Pneumatic Manufacturing Industries.
Turcite Green Sheet with one side chemical etching.



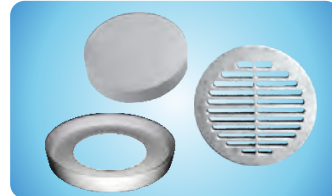
Expanded PTFE

Expanded PTFE Sheet 1500 X 1500mm in thickness 1.5 mm , 2 mm, 3 mm
 also Gasket in Thickness 1.5 mm , 2 mm, 3 mm
 Strip with one side adhesive



PTFE Ball Valve Seat - Seal - Thrust Washer Gland Packing

Ball Valve Seat - Seal & Packing as per Customer Specification & Drawings its also available in R-PTFE



PTFE DISC / CIRCLE

Sizes up to Dia 1.6 Mtr Thickness up to 100
 Manufacturing s per customer's specifications and drawings.

MODIFIED PTFE - M-PTFE
M-PTFE is a next generation moulding grade which is chemically modified to give superior performance than standard PTFE.
 * Reduced deformation under load
 * Good weldability * High chemical resistance



PEEK PTFE

5 to 20% Peek PTFE Products as per Customer Specification Excellent Dimension Stability than PTFE. Ideal for stop - start application to eliminate stick - sleep high continues use temperature up to 260 c



OTHER PRODUCT RANGE -

PTFE STRIPS, PTFE FLOAT, PTFE CUP TYPE PACKING, PIGMENTED PTFE, PTFE BALL, PTFE DIAPHRAMS, PTFE NOZZLE, GLASS FILLED PTFE, CARBON FILLED PTFE, BRONZE FILLED PTFE, MOS2 FILLED PTFE ETC.

PHYSICAL PROPERTIES OF PTFE FILLED COMPOUNDS

Sr. No.	Property	Unit	Test Method	Virgin PTFE	25% Glass Filled PTFE	15 % Glass + 5% Mos ₂ Filled PTFE	25 % Carbon Filled PTFE	15 % Graphite Filled PTFE	40 % Bronze Filled PTFE	60% Bronze Filled PTFE	55 % Bronze + 5% Mos ₂ Filled PTFE
1.	Density	gm/cc	ASTM D-792	2.1 - 2.2	2.24 - 2.25	2.23 - 2.24	2.12 - 2.14	2.14 - 2.16	3.1 - 3.2	3.75 - 3.8	3.8 - 3.9
2.	Tensile Strength	kgf/cm ²	ASTM D-638	210 - 350	125 - 200	150 - 220	120 - 155	150 - 200	125 - 150	105 - 140	110 - 145
3.	Elongation of Break	%	ASTM D-638	250 - 400	200 - 300	220 - 320	100 - 150	175 - 225	100 - 175	80 - 160	90 - 165
4.	Compressive Strength	kgf/cm ²	ASTM D-695	40 - 50	75 - 85	65 - 75	75 - 85	65 - 75	85 - 100	115 - 125	115 - 125
5.	Compressive Modulus	kgf/cm ²	ASTM D-695	4000	7000	6000	8400	8000	8500	8800	8800
6.	Deformation under Load										
	A. 2 Hrs. 23° C 113 kg.cm ²	%	ASTM D-621	12	9	10	5	6	5	4	4
	B. 24 Hrs. 23° C 113 kg.cm ²						7	8	6	5	5
	C. Permanent						3.5	4.5	3	2.5	2.5
	D. 2 Hrs. 150°C 113 kg.cm ²			55	50	50	35	43	42	40	
7.	Flexural Strength	kgf/cm ²	ASTM D-790	57	42	50	96	60	85	80	80
8.	Flexural Modulus	kgf/cm ²	ASTM D-790	3500 - 6300	16700	20000	11900	11000	14000	13800	13500
9.	Impact Strength										
	A. - 20°C	cmkgf/cm ²	ASTM D-256	9	9.5	9	8	10	11	11	11
	B. - 20°C			15	11	12	10	14	9	10	10
10.	Hardness	Shore-D	ASTM D-2240	60 - 65	70 - 75	62 - 68	70 - 75	60 - 65	70- 75	70- 75	70- 75
11.	Co-efficient of Friction										
	A. Dynamic P-7 kg/cm ² V-0.5 m/s			0.04 - 0.06	0.5 - 0.54	0.15 - 0.20	0.12 - 0.17	0.11 - 0.16	0.11 - 0.15	0.12 - 0.16	0.1 - 0.14
	B. Static P-35 kg/cm ²	-	-	0.05 - 0.08	0.11 - 0.13	0.08- 0.01	0.09- 0.11	0.08- 0.10	0.08- 0.10	0.08- 0.1	0.07 - 0.09
12.	Water Absorption	%	ASTM D-570	0	0.013	0.015	0	0	0	0	0
13.	Heat Resistance at Atm. Pressure	°C	-	-250 to + 260							
14.	Thermal Conductivity	$\frac{10^4 \text{ cal}}{\text{Cal S}^\circ \text{C}}$	Cenco Fitch	6	9	9	13	14	17	19	19
15.	Linear Thermal Expansion	%	ASTM D-696	Axial Radial	Axial Radial	Axial Radial	Axial Radial	Axial Radial	Axial Radial	Axial Radial	Axial Radial
	A. 30- 150°C			1.5 1.5	1.5 0.7	1.5 1.0	1.2 1.0	1.3 1.0	1.15 0.95	1.1 0.9	1.1 0.9
	B. 30- 250°C			2.4 2.3	2.2 1.0	2.3 1.8	1.9 1.5	2.0 1.7	1.8 5 1.55	1.8 1.5	1.8 1.5
	C. 30- 250°C			3.4 3.6	3.2 1.4	3.3 2.2	2.7 2.4	3.0 2.5	2.55 2.25	2.5 2.2	2.5 2.2
16.	Dielectric Strength	Kv/mm	ASTM D-149	24	12	16	2	2	Conductive	Conductive	Conductive
17.	Volume Resistivity	ohm cm	ASTM D-257	10 ¹⁵	10 ¹⁵	10 ¹⁵	10 ⁴	10 ³	10 ⁷	10 ⁷	10 ⁷
18.	Surface Resistivity	ohm	ASTM D-258	10 ¹⁵	10 ¹⁵	10 ¹⁵	10 ⁷	10 ⁶	10 ⁹	10 ⁹	10 ⁹
19.	Chemical Resistance: PTFE is chemically inert & unaffected by all known Chemical except molten or dissolved alkali metals sodium, potassium, rubidium, cesium, francium & fluorine gas, certain fluorine compounds & complexes at elevated temperatures. Filled PTFE Has Interior Chemical resistance depending upon the particular filler.										
20.	We also manufacture filled grade products with percentage of fillers as per customer's specifications.										
Note : 1. Data quoted are average values & may vary with source and grade of raw material. 2. Values may be used for design with consideration of factor of safety. 3. Company do not accepts any responsibility of results obtained and infringement of any patents.											



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