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URS is a member of Registrar of Standards (Holdings) Ltd.

Product: Virgin PTFE (Polytetrafluoroethylene)

Material Specification
(Typical Properties)

Property	Method	Units	Specification
Specific Graphic	ISO 13000-2	g/cm^3	2,130 – 2,180
Tensile Strength	ISO13000-2	MPa	>20
Elongation	ISO13000-2	%	>200
Hardness	ISO13000-2	Shore D	>54
Ball Hardness	ISO13000-2	MPa	>23
Compression Strength @ 1% deformation		KG/cm^2	>70
Deformation under load (140kg/cm^2 for 24hr. At 23^{o}C)	ASTM D621	%	10 - 17
Permanent deformation (After 24hrs. Relaxation at 23^{o}C)	ASTM D621	%	6 – 7,5
Coefficient of static friction	ASTM D621		0,08 – 0,10
Coefficient of dynamic friction	ASTM D621		0,06 – 0,08
Thermal Conductivity	ASTM D621	W / m.K	0,24
Dielectric Constant (ε) At 60Hz to 2Ghz	ASTM D621	/	2,1
Dielectric Strength	ASTM D621	KV/mm	20 – 70
Volume Resistivity	ASTM D621	Ohm·cm	10 ^{18}
Flammability	ASTM D621		VE-0
Water Absorption	ASTM D621	%	0,01

Service Temperature

Excellent resistance to continuous service temperatures up to 260 ^{o}C and, for limited periods, even to higher temperatures; the low temperature resistance of the product allows satisfactory performance at as low as -200 ^{o}C.

Chemical Resistance

PTFE Processes a high inertness towards nearly all known chemicals. It is only attacked by elemental alkali metals, chlorine trifluoride and elemental fluorine at high temperatures and pressure

Solvent Resistance

PTFE is insoluble in all solvents up to temperatures as high as 300 ^{o}C (572^{o}F) Certain highly fluorinated oils only swell and dissolve PTFE at temperatures close to the crystalline melting point.

FDA Approved

(Code of federal regulation 21 CFR Ch.1 revised as of April 1st 1991 edition), Sections 175.105 – 175.300 – 176.170 – 176.180 – 177.1520 - 177.1550 - 177.2600 – 178.3570. “Perfluorocarbon Resins” of the Food and Drug Administration

Disclaimer. These figures are typical values for the material and do not represent a product specification. Properties will vary depending on source of raw material, method of processing, physical from of product, direction of measurement etc.