

Epratal® H-TF

This material is a Homopolymer polyacetal filled with PTFE fibers. Some properties change due to the addition of the PTFE fiber which is softer, less stiff and smoother than pure POM raw material. Sliding elements exhibit a low coefficient of friction, wear out and are practically free of stick-slip.

ISO code: ISO 1183 POM mod.	General properties	Test method	Value	Unit
Water absorption in Air (23°C / 50% RH) ISO 62 0,17 % Water absorption in Air (23°C / 100% RH) ISO 62 0,72 % Resistance to hot water n/a - Weather resistance n/a - Mechanical properties Elongation at break: ISO 527 8 % Ball indention hardness ISO 2039 140 MPa Tensile modules of elasticity ISO 527 2900 MPa Charpy impact strength - notched ISO 179 20 kJ/m2 Charpy impact strength - unnotched ISO 179 No Break kJ/m2 Compressive stress at 1% n/a 19 MPa Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature n/a 175 °C Max. allowable service temp (short period) n/a 150 °C Max. allowable service temp (long period) n/a 105 °C Min. service temperature n/a 20 °C <t< td=""><td>ISO code:</td><td>ISO 1183</td><td>POM mod.</td><td></td></t<>	ISO code:	ISO 1183	POM mod.	
Water absorption in Air (23°C / 100% RH) ISO 62 0,72 % Resistance to hot water n/a - Weather resistance n/a - Mechanical properties ISO 527 8 % Ball indention hardness ISO 2039 140 MPa Tensile modules of elasticity ISO 527 2900 MPa Charpy impact strength - notched ISO 179 20 kJ/m2 Charpy impact strength - unnotched ISO 179 No Break kJ/m2 Compressive stress at 1% n/a 19 MPa Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature n/a 175 °C Max. allowable service temp (short period) n/a 150 °C Max. allowable service temp (long period) n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 H	Density:	ISO 1183-1	1,5	g/cm3
Resistance to hot water	Water absorption in Air (23°C / 50% RH)	ISO 62	0,17	%
Weather resistance n/a - Mechanical properties ISO 527 8 % Ball indention hardness ISO 2039 140 MPa Tensile modules of elasticity ISO 527 2900 MPa Charpy impact strength - notched ISO 179 20 kJ/m2 Charpy impact strength - unnotched ISO 179 No Break kJ/m2 Compressive stress at 1% n/a 19 MPa Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature n/a 175 °C Max. allowable service temp (short period) n/a 150 °C Max. allowable service temp (long period) n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Water absorption in Air (23°C / 100% RH)	ISO 62	0,72	%
Mechanical properties Elongation at break: ISO 527 8 % Ball indention hardness ISO 2039 140 MPa Tensile modules of elasticity ISO 527 2900 MPa Charpy impact strength - notched ISO 179 20 kJ/m2 Charpy impact strength - unnotched ISO 179 No Break kJ/m2 Compressive stress at 1% n/a 19 MPa Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature n/a 175 °C Max. allowable service temp (short period) n/a 150 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Resistance to hot water	n/a	-	
Elongation at break: Ball indention hardness ISO 2039 140 MPa Tensile modules of elasticity ISO 527 2900 MPa Charpy impact strength - notched ISO 179 Charpy impact strength - unnotched ISO 179 No Break kJ/m2 Charpy impact strength - unnotched ISO 179 No Break kJ/m2 Compressive stress at 1% n/a 19 MPa Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature n/a 150 °C Max. allowable service temp (short period) n/a 105 °C Min. service temperature n/a 20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength	Weather resistance	n/a		
Ball indention hardness ISO 2039 140 MPa Tensile modules of elasticity ISO 527 2900 MPa Charpy impact strength - notched ISO 179 20 kJ/m2 Charpy impact strength - unnotched ISO 179 No Break kJ/m2 Compressive stress at 1% n/a 19 MPa Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature Max. allowable service temp (short period) Max. allowable service temp (long period) Min. service temperature n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Mechanical properties			
Tensile modules of elasticity ISO 527 2900 MPa Charpy impact strength - notched ISO 179 Charpy impact strength - unnotched ISO 179 No Break KJ/m2 Compressive stress at 1% n/a Coefficient of friction ASTM D 1894 Nogre-on-on-on-on-on-on-on-on-on-on-on-on-on-	Elongation at break:	ISO 527	8	%
Charpy impact strength - notchedISO 17920kJ/m2Charpy impact strength - unnotchedISO 179No BreakkJ/m2Compressive stress at 1%n/a19MPaCoefficient of frictionASTM D 18940,2-0,3Thermal propertiesMelting temperaturen/a175°CMax. allowable service temp (short period)n/a150°CMax. allowable service temp (long period)n/a105°CMin. service temperaturen/a-20°CCoefficient of linear expansionn/a95x10 -6 m/(m*K)FlammabilityUL94HBElectrical propertiesDielectric dissipation (at 1MHz)ISO 602500,008ΩElectric strengthISO 6024316kV/mm	Ball indention hardness	ISO 2039	140	MPa
Charpy impact strength - unnotched ISO 179 No Break kJ/m2 Compressive stress at 1% n/a 19 MPa Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature n/a 175 °C Max. allowable service temp (short period) n/a 150 °C Max. allowable service temp (long period) n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Tensile modules of elasticity	ISO 527	2900	MPa
Compressive stress at 1% n/a 19 MPa Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature n/a 175 °C Max. allowable service temp (short period) n/a 150 °C Max. allowable service temp (long period) n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Charpy impact strength - notched	ISO 179	20	kJ/m2
Coefficient of friction ASTM D 1894 0,2-0,3 Thermal properties Melting temperature n/a 175 °C Max. allowable service temp (short period) n/a 150 °C Min. service temperature n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength	Charpy impact strength - unnotched	ISO 179	No Break	kJ/m2
Thermal properties Melting temperature n/a 175 °C Max. allowable service temp (short period) n/a 150 °C Max. allowable service temp (long period) n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Compressive stress at 1%	n/a	19	MPa
Melting temperaturen/a175°CMax. allowable service temp (short period)n/a150°CMax. allowable service temp (long period)n/a105°CMin. service temperaturen/a-20°CCoefficient of linear expansionn/a95x10 -6 m/(m*K)FlammabilityUL94HBElectrical propertiesDielectric dissipation (at 1MHz)ISO 602500,008ΩElectric strengthISO 6024316kV/mm	Coefficient of friction	ASTM D 1894	0,2-0,3	
Max. allowable service temp (short period) n/a 150 °C Max. allowable service temp (long period) n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 $x10 - 6 m/(m*K)$ Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Thermal properties			
Max. allowable service temp (long period) n/a 105 °C Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 $x10 - 6 m/(m*K)$ Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Melting temperature	n/a	175	°C
Min. service temperature n/a -20 °C Coefficient of linear expansion n/a 95 $x10$ -6 $m/(m*K)$ Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Max. allowable service temp (short period)	n/a	150	°C
Coefficient of linear expansion n/a 95 x10 -6 m/(m*K) Flammability UL94 HB	Max. allowable service temp (long period)	n/a	105	°C
Flammability UL94 HB Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Min. service temperature	n/a	-20	°C
Electrical properties Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Coefficient of linear expansion	n/a	95	x10 -6 m/(m*K)
Dielectric dissipation (at 1MHz) ISO 60250 0,008 Ω Electric strength ISO 60243 16 kV/mm	Flammability	UL94	НВ	
Electric strength ISO 60243 16 kV/mm	Electrical properties			
	Dielectric dissipation (at 1MHz)	ISO 60250	0,008	Ω
Volume resistivity ISO 60093 $>10^14$ $\Omega.cm$	Electric strength	ISO 60243	16	kV/mm
	Volume resistivity	ISO 60093	>10^14	Ω.cm