Technical Data Sheet

EtroX® I CM natural

PI

Typical characteristics

- Heat resistant
- High mechanical strength
- Low creep tendency
- High impact resistance
- High stiffness
- Good dimensional stability

Typical industries

- Electronics
- Semiconductor Industry
- Aerospace
- Vehicle Construction
- Semiconductor Front-End applications
- Semiconductor Wafer Handling
- Semiconductor Back-End applications
- Semiconductor High and low temperature
- Semiconductor Dicing

	Test method	Unit	Guideline value
General properties			
Density	DIN EN ISO 1183-1	g / cm^3	1,37
Water absorption	DIN EN ISO 62 (23°C / 24h)	%	0,6
Water absorption	DIN EN ISO 62 (23°C / 48h)	%	0,8
Water absorption	DIN EN ISO 62 (23°C / 3 Weeks)	%	2,4
Mechanical properties			
Elongation at break	DIN EN ISO 527	%	8
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3600
Tensile strength	DIN EN ISO 527	MPa	145
Notched impact strength	DIN EN ISO 179	kJ / m^2	10
Shore hardness	DIN EN ISO 868	scale D	89
Ball indentation hardness	DIN EN ISO 2039-1	MPa	240
Elastic modulus of compression	DIN EN ISO 604	MPa	4200
Tensile creep modulus, 1h	ISO 899-1	MPa	3390
Tensile creep modulus, 1000h	ISO 899-1	MPa	2730

	Test method	Unit	Guideline value
Thermal properties			
Glass transition temperature	ISO 11357-3	°C	323
Service temperature, short term (max.)	Average	°C	380
Mean coefficient of linear thermal expansion	ISO 11359-2	K^{-1}	41
Heat deflection temperature	DIN EN ISO 75	°C	319
Temp. of deflection under load, 1.80 MPa	ISO 75-1/-2	°C	319
Temp. of deflection under load, 0.45 MPa	ISO 75-1/-2	°C	343
Electrical properties			
Volume resistivity	DIN EN 62631-3-1	Ω * cm	$> 10^{15}$
Dielectric constant @ 100Hz	IEC 60250		4,2
Dielectric constant @ 1kHz	IEC 60250		4,2
Dielectric constant @ 10kHz	IEC 60250		4,1
Dielectric constant @ 100 kHz	IEC 60250		4,1
Dielectric constant @ 10GHz	IEC 61189-2-721		3,4
Dielectric constant @ 40GHz	IEC 61189-2-721		3,3
Dielectric constant @ 100GHz	IEC 61189-2-721		3,2
Specific Volume resistivity	IEC 60093	Ωm	$8*10^{13}$
Specific Surface resistivity	IEC 60093	Ω	$5*10^{15}$
Relative permittivity, 100Hz	IEC 62631-2-1	-	3,5
Relative permittivity, 1MHz	IEC 62631-2-1	-	3,4
Dissipation factor, 1 MHz	IEC 62631-2-1	E-4	80
Electric strength	IEC 60243-1	kV / mm	34