

Product Texts

SILTEM™ STM1700 resin is a flexible polyetherimide(PEI)-siloxane copolymer designed for wire and cable applications. It offers a halogen free (according VDE 0472) flame retardant solution that also offers low smoke emission and toxicity. It is an amber colored transparent material that can be selfcolored and easily processed on conventional equipment. The material may also have a fit in flexible profiles or injection molded parts.

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Melt Flow Index, MFI	7	g/10min	ASTM D 1238
Temperature	295	°C	-
Load	6.6	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2300	MPa	ISO 527
Yield stress	68	MPa	ISO 527
Yield strain	5	%	ISO 527
Stress at break	59	MPa	ISO 527
Strain at break	15	%	ISO 527
Flexural modulus	2000	MPa	ISO 178
Izod notched impact strength, +23°C, 4mm	16	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	8	kJ/m ²	ISO 180/1A
Tear strength	37	kN/m	ISO 34-1

ASTM Data			
Tensile Modulus	2400	MPa	ASTM D 638
Tensile Strength at Yield	62	MPa	ASTM D 638
Tensile Strength at Break	53	MPa	ASTM D 638
Elongation at Yield	5	%	ASTM D 638
Elongation at Break	20	%	ASTM D 638
Flexural Modulus	2150	MPa	ASTM D 790
Flexural Strength	94	MPa	ASTM D 790
Shore D Hardness	80	-	ASTM D 2240
Taber Abrasion Resistance	50	mg/1000 cycles	ASTM D 1044
Izod Impact notched, 1/8 in	175	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 0.45 MPa	164	°C	ISO 75-1/-2
Vicat softening temperature, 120°C/h 50N	180	°C	ISO 306
ASTM Data			
DTUL @ 264 psi	145	°C	ASTM D 648

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Dielectric Strength, Short Time	16.7	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.0054	-	ASTM D 150
Dielectric Constant, 1 MHz	3.04	-	ASTM D 150
Surface Resistivity	1E15	Ohm	ASTM D 257
Volume Resistivity	>1E15	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
Water absorption	0.76	%	Sim. to ISO 62
Density	1200	kg/m ³	ISO 1183
Density	1200	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	105	°C	-
Pre-drying - Time	4 - 6	h	-

Processing humidity	≤0.02	%	-
Melt temperature	320 - 330	°C	-
Mold temperature	110 - 120	°C	-
Zone 1	320 - 330	°C	-
Zone 2	320 - 330	°C	-
Zone 3	320 - 330	°C	-
Screw speed	50 - 100	rpm	-
Back pressure	0.3 - 0.7	MPa	-

Characteristics**Processing**

Injection Molding

Special Characteristics

Flame retardant, Transparent

Additives

Flame retarding agent

Regional Availability

North America