

Arnitel® PL381-H

TPC-ET

Injection Molding, Heat Stabilized

Properties	Typical Data	Unit	Test Method
Rheological properties			
	Value		
Melt volume-flow rate	32	cm ³ /10min	ISO 1133
Temperature	230	°C	ISO 1133
Load	2.16	kg	ISO 1133
Molding shrinkage (parallel)	1.55	%	ISO 294-4
Molding shrinkage (normal)	1.75	%	ISO 294-4
Mechanical properties			
	Value		
Shore D Hardness (3s)	32	-	ISO 868
Tensile modulus	45	MPa	ISO 527-1/-2
Stress at break	14	MPa	ISO 527-1/-2
Nominal strain at break	450	%	ISO 527-1/-2
Stress at 5% strain	2.2	MPa	ISO 527-1/-2
Stress at 10% strain	4	MPa	ISO 527-1/-2
Stress at 50% strain	7	MPa	ISO 527-1/-2
Stress at 100% strain	8	MPa	ISO 527-1/-2
Charpy notched impact strength (+23°C)	N	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	N	kJ/m ²	ISO 179/1eA
Izod notched impact strength (+23°C)	N	kJ/m ²	ISO 180/1A
Izod notched impact strength (-20°C)	N	kJ/m ²	ISO 180/1A
Izod notched impact strength (-30°C)	N	kJ/m ²	ISO 180/1A
Flexural modulus	45	MPa	ISO 178

Mechanical properties (die cutting)

Value



Property Data

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Properties	Typical Data	Unit	Test Method
Stress at break (normal)	18	MPa	ISO 527-1/-2
Tear strength (normal)	95	kN/m	ISO 34-1; Method B
Tear strength (parallel)	93	kN/m	ISO 34-1; Method B
Strain at break (normal)	810	%	ISO 527-1/-2

Thermal properties

Value

Melting temperature (10°C/min)	212	°C	ISO 11357-1/-3
Vicat softening temperature (50°C/h 10N)	124	°C	ISO 306
Coeff. of linear therm. expansion (parallel)	1.5	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1.5	E-4/°C	ISO 11359-1/-2

Electrical properties

Value

Relative permittivity (100Hz)	4.7	-	IEC 62631-2-1
Relative permittivity (1 MHz)	4.4	-	IEC 62631-2-1
Dissipation factor (100 Hz)	310	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	810	E-4	IEC 62631-2-1
Volume resistivity	1E12	Ohm*m	IEC 62631-3-1
Electric strength	20	kV/mm	IEC 60243-1
Comparative tracking index	600	V	IEC 60112

Other properties

Value

Density	1160	kg/m ³	ISO 1183
Water absorption	7	%	Sim. to ISO 62
Humidity absorption	0.4	%	Sim. to ISO 62

