

Arnitel[®] UM551

TPC-ES

Due to limited hydrolysis resistance, this material should only be used in dry environments.

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES		VALUE	
Melt volume-flow rate	13.8	cm ³ /10min	ISO 1133
Temperature	230	°C	ISO 1133
Load	2.16	kg	ISO 1133
Melt flow index MFI	14	g/10min	ISO 1133
MFI test load	2.16	kg	ISO 1133
MFI test temperature	230	°C	ISO 1133
Molding shrinkage (parallel)	1.45	%	ISO 294-4
Molding shrinkage (normal)	1.35	%	ISO 294-4
MECHANICAL PROPERTIES		VALUE	
Shore D Hardness (3s)	55	—	ISO 868
Shore D Hardness (15s)	55	—	ISO 868
Tensile modulus	158	MPa	ISO 527-1/-2
Yield stress	15	MPa	ISO 527-1/-2
Yield strain	22	%	ISO 527-1/-2
Stress at break	36	MPa	ISO 527-1/-2
Nominal strain at break	656	%	ISO 527-1/-2
Stress at 10% strain	10.8	MPa	ISO 527-1/-2
Stress at 50% strain	14.3	MPa	ISO 527-1/-2
Stress at 100% strain	14.1	MPa	ISO 527-1/-2
Charpy notched impact strength (+23°C)	N	kJ/m ²	ISO 179/1eA



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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Charpy notched impact strength (−30°C)	6	kJ/m²	ISO 179/1eA
Tear strength	165	kN/m	ISO 34–1; Method B

THERMAL PROPERTIES	VALUE		
Melting temperature (10°C/min)	200	°C	ISO 11357–1/–3
Temp. of deflection under load (0.45 MPa)	80	°C	ISO 75–1/–2
Vicat softening temperature (50°C/h 50N)	85	°C	ISO 306
Coeff. of linear therm. expansion (parallel)	1.6	E–4/°C	ISO 11359–1/–2
Burning Behav. at 0.75 mm nom. thickn.	HB	class	IEC 60695–11–10
Thickness tested	0.75	mm	IEC 60695–11–10
Burning Behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695–11–10
Thickness tested	1.5	mm	IEC 60695–11–10
Burning Behav. at 3.0 mm nom. thickn.	HB	class	IEC 60695–11–10
Thickness tested	3	mm	IEC 60695–11–10

ELECTRICAL PROPERTIES	VALUE		
Comparative tracking index	600	V	IEC 60112

OTHER PROPERTIES	VALUE		
Density	1260	kg/m³	ISO 1183
Water absorption	0.6	%	Sim. to ISO 62
Humidity absorption	0.25	%	Sim. to ISO 62

