

DSM Engineering Plastics - Property Data

Arnitel® PL581

TPE-unfilled

55 Shore D, Injection Grade

Properties	Typical Data	Unit	Test Method
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RHEOLOGICAL PROPERTIES

Melt volume-flow rate	11	cm ³ /10min	ISO 1133
Temperature	230	°C	ISO 1133
Load	2.16	kg	ISO 1133

MECHANICAL PROPERTIES

Shore D Hardness (3s)	55	-	ISO 868
Tensile modulus	300	MPa	ISO 527-1/-2
Nominal strain at break	300	%	ISO 527-1/-2
Stress at 5% strain	10	MPa	ISO 527-1/-2
Stress at 10% strain	13.7	MPa	ISO 527-1/-2
Stress at 50% strain	16.8	MPa	ISO 527-1/-2
Stress at 100% strain	18.5	MPa	ISO 527-1/-2
Charpy notched impact strength (+23°C)	N	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	16	kJ/m ²	ISO 179/1eA
Izod notched impact strength (23°C)	N	kJ/m ²	ISO 180/1A
Izod notched impact strength (-30°C)	15	kJ/m ²	ISO 180/1A

THERMAL PROPERTIES

Melting temperature (10°C/min)	218	°C	ISO 11357-1/-3
Temp. of deflection under load (0.45 MPa)	100	°C	ISO 75-1/-2
Vicat softening temperature (50°C/h 50N)	105	°C	ISO 306
Vicat softening temperature (50°C/h 10N)	205	°C	ISO 306
Coeff. of linear therm. expansion (parallel)	1.1	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1.1	E-4/°C	ISO 11359-1/-2
Burning Behav. at 1.6 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.6	mm	IEC 60695-11-10

ELECTRICAL PROPERTIES

Relative permittivity (1 MHz)	4	-	IEC 60250
Dissipation factor (1 MHz)	400	E-4	IEC 60250
Volume resistivity	>1E13	Ohm*m	IEC 60093
Surface resistivity	1E14	Ohm	IEC 60093
Electric strength	21	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

OTHER PROPERTIES

Density	1230	kg/m ³	ISO 1183
Water absorption	2.5	%	Sim. to ISO 62
Humidity absorption	0.4	%	Sim. to ISO 62

DSM Product

Unlimited. DSM

