DSM Engineering Plastics - Property Data

Arnitel® PM581

TPE-unfilled

55 Shore D, Extrusion Grade

Properties	Typical Data	Unit	Test Method
RHEOLOGICAL PROPERTIES			
Melt volume-flow rate	**3.5**	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
Stress at break	**24.5**	MPa	ISO 527-1/-2
Nominal strain at break	**200**	%	ISO 527-1/-2
Stress at 5% strain	**9.3**	MPa	ISO 527-1/-2
Stress at 10% strain	**13.1**	MPa	ISO 527-1/-2
Stress at 50% strain	**17**	MPa	ISO 527-1/-2
Stress at 100% strain	**17.9**	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)	**25**	kJ/m^2	ISO 180/1A
THERMAL PROPERTIES			
Melting temperature (10°C/min)	**218**	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 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 (100Hz)	**4.7**	-	IEC 60250
Relative permittivity (1 MHz)	**4.4**	-	IEC 60250
Dissipation factor (100 Hz)	**310**	E-4	IEC 60250
Dissipation factor (1 MHz)	**810**	E-4	IEC 60250
Volume resistivity	**>1E13**	Ohm*m	IEC 60093
Surface resistivity	**1E13**	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

DSM Product

Unlimited. DSM

Humidity absorption	**0.4**	%	Sim. to ISO 62