

Arnitel® EL550 - Shore 51 D

TPC

DSM Engineering Plastics

Product Texts

Injection Molding

ISO 18064 TPC-ET

[Arnitel website](#)

Rheological properties	Value	Unit	Test Standard
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ISO Data

Melt volume-flow rate, MVR	36	cm ³ /10min	ISO 1133
Temperature	230	°C	ISO 1133
Load	2.16	kg	ISO 1133

Mechanical properties	Value	Unit	Test Standard
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ISO Data

Tensile Modulus	170	MPa	ISO 527-1/-2
Yield stress	14	MPa	ISO 527-1/-2
Yield strain	33	%	ISO 527-1/-2
Nominal strain at break	>50	%	ISO 527-1/-2
Charpy notched impact strength (+23°C)	N	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	25	kJ/m ²	ISO 179/1eA
Tensile notched impact strength, +23°C	216	kJ/m ²	ISO 8256/1
Stress at 10% elongation	11.1	MPa	ISO 527-1/-2
Stress at 100% elongation	13.7	MPa	ISO 527-1/-2
Strain at break TPE	>300	%	ISO 527-1/-2
Stress at break TPE	32	MPa	ISO 527-1/-2
Compression Set under constant strain, 23°C	24	%	ISO 815
Compression Set under constant strain, 70°C	40	%	ISO 815
Tear strength	150	kN/m	ISO 34-1

Thermal properties	Value	Unit	Test Standard
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ISO Data

Melting temperature (10°C/min)	207	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	-64	°C	ISO 11357-1/-2
Temp. of deflection under load (0.45 MPa)	110	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	90	°C	ISO 306
Coeff. of linear therm. expansion, parallel	200	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	200	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.6	mm	IEC 60695-11-10
UL recognition	UL	-	-

Electrical properties	Value	Unit	Test Standard
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ISO Data

Relative permittivity, 100Hz	4.4	-	IEC 60250
Relative permittivity, 1MHz	4	-	IEC 60250
Dissipation factor, 1MHz	400	E-4	IEC 60250
Volume resistivity	1E11	Ohm*m	IEC 60093
Electric strength	21	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

Other properties	Value	Unit	Test Standard
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ISO Data

Arnitel® EL550 - Shore 51 D

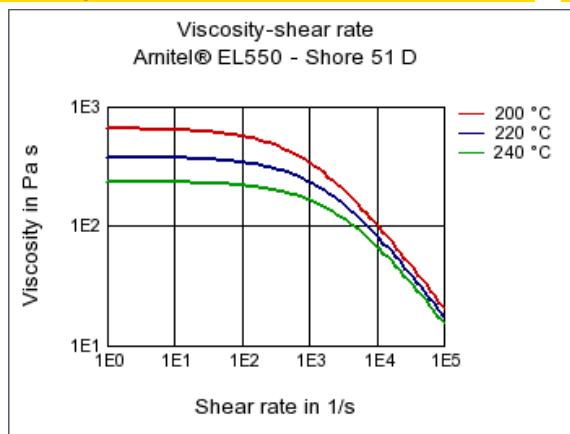
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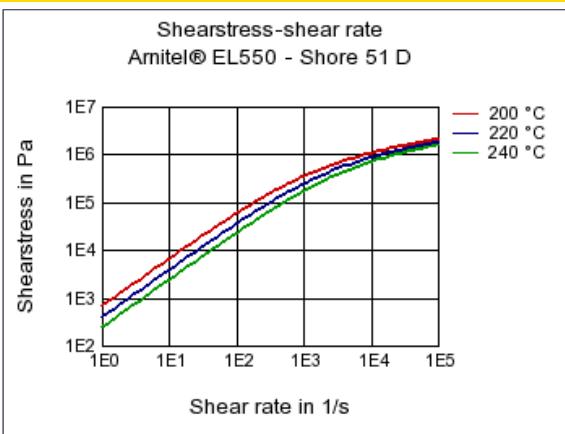
Water absorption	0.65	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1200	kg/m ³	ISO 1183

Diagrams

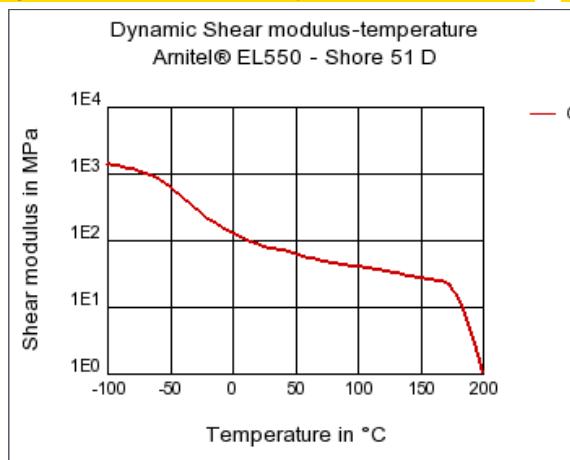
Viscosity-shear rate



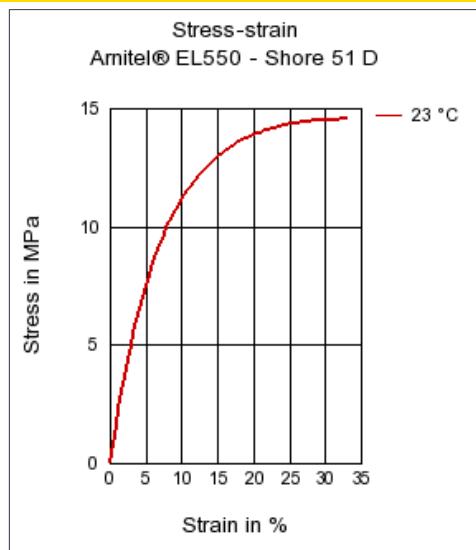
Shearstress-shear rate



Dynamic Shear modulus-temperature



Stress-strain

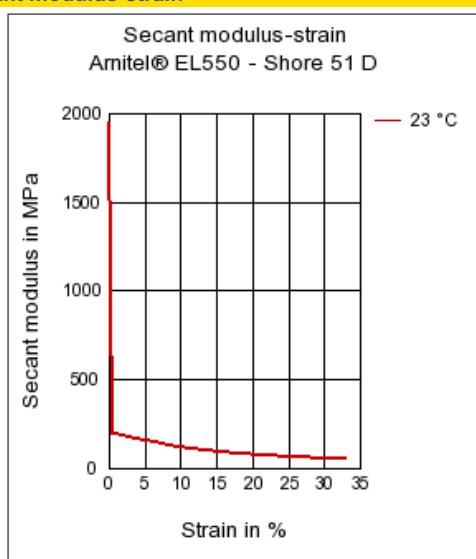


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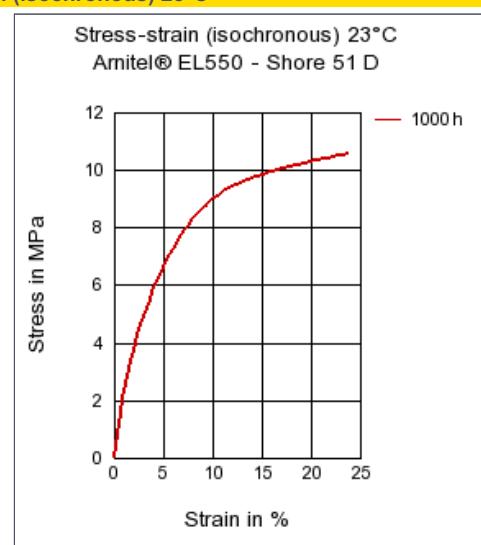
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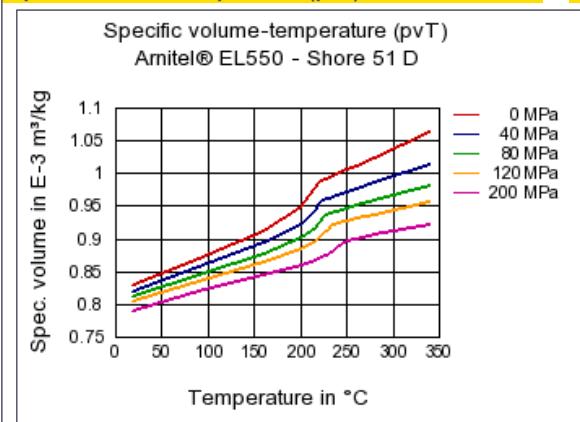
Secant modulus-strain



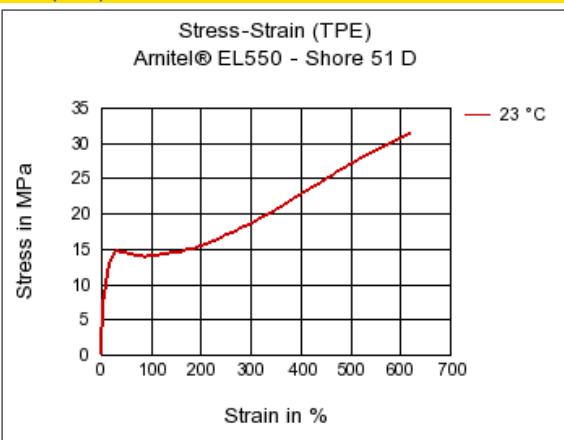
Stress-strain (isochronous) 23°C



Specific volume-temperature (pvT)



Stress-Strain (TPE)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Other text information

Injection Molding

[Injection Molding Recommendations](#)