Arnitel® EM460 - Shore 40 D

TPC DSM Engineering Plastics

Product Texts

Injection Molding or Extrusion Grade

ISO 18064 TPC-ET

Arnitel website

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	46	cm³/10min	ISO 1133
Temperature	230	°C	ISO 1133
Load	2.16	kg	ISO 1133

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	85	MPa	ISO 527-1/-2
Yield stress	9	MPa	ISO 527-1/-2
Yield strain	45	%	ISO 527-1/-2
Nominal strain at break	>50	%	ISO 527-1/-2
Charpy notched impact strength (+23°C)	N	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	N	kJ/m²	ISO 179/1eA
Tensile notched impact strength, +23°C	187	kJ/m²	ISO 8256/1
Stress at 10% elongation	6.6	MPa	ISO 527-1/-2
Stress at 100% elongation	9.3	MPa	ISO 527-1/-2
Stress at 300% elongation	11.8	MPa	ISO 527-1/-2
Strain at break TPE	>300	%	ISO 527-1/-2
Stress at break TPE	23	MPa	ISO 527-1/-2
Compression Set under constant strain, 23°C	26	%	ISO 815
Compression Set under constant strain, 70°C	50	%	ISO 815
Tear strength	100	kN/m	ISO 34-1

Thermal properties	Value	Unit	Test Standard
ISO Data			
Melting temperature (10°C/min)	189	°C	ISO 11357-1/-3
Vicat softening temperature, 50°C/h 50N	50	°C	ISO 306
Coeff. of linear therm. expansion, parallel	160	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	160	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
ISO Data			
Relative permittivity, 1MHz	4.4	-	IEC 60250
Dissipation factor, 1MHz	350	E-4	IEC 60250
Volume resistivity	1E11	Ohm*m	IEC 60093
Electric strength	20	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

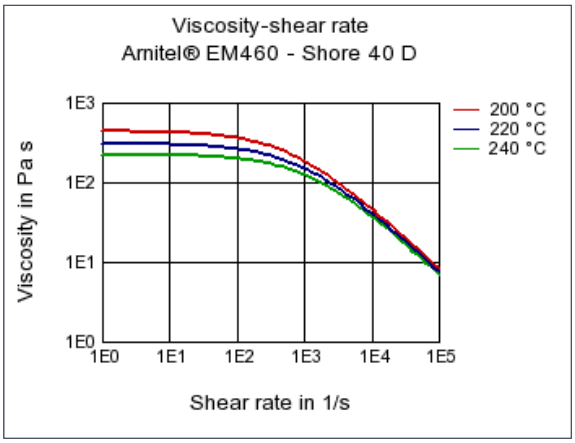
Other properties	Value	Unit	Test Standard
ISO Data			
Water absorption	0.7	%	Sim. to ISO 62
Humidity absorption	0.3	%	Sim. to ISO 62

Density	1150	kg/m³	ISO 1183

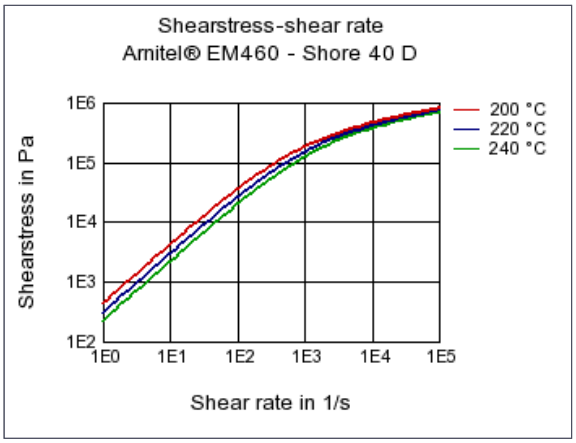
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	928	kg/m³	-
Thermal conductivity of melt	0.1	W/(m K)	-
Spec. heat capacity of melt	1800	J/(kg K)	-
Eff. thermal diffusivity	5.99E-8	m²/s	-

Diagrams

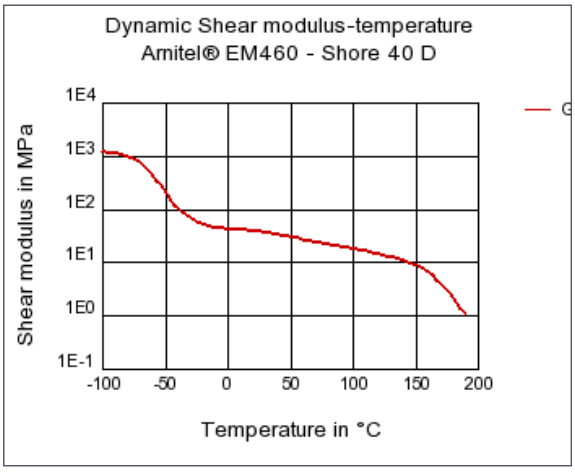
Viscosity-shear rate



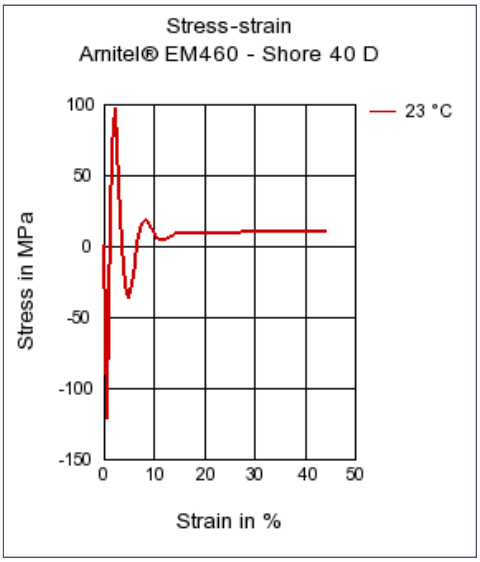
Shearstress-shear rate



Dynamic Shear modulus-temperature



Stress-strain



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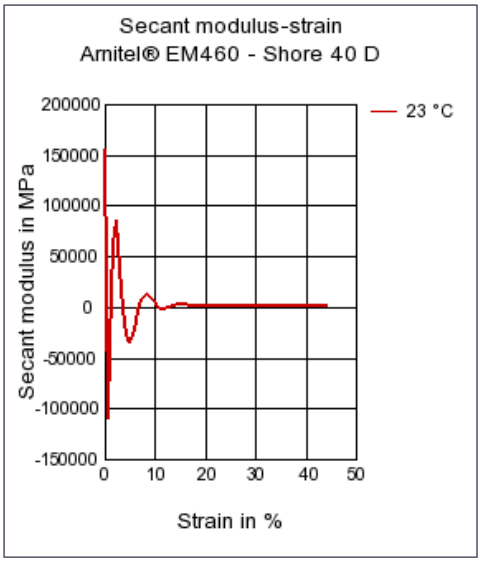
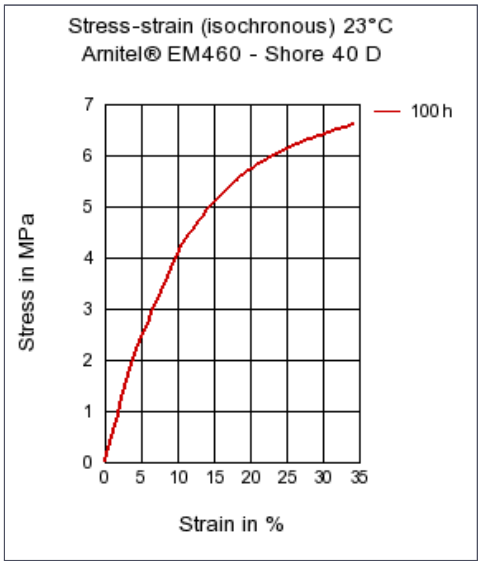
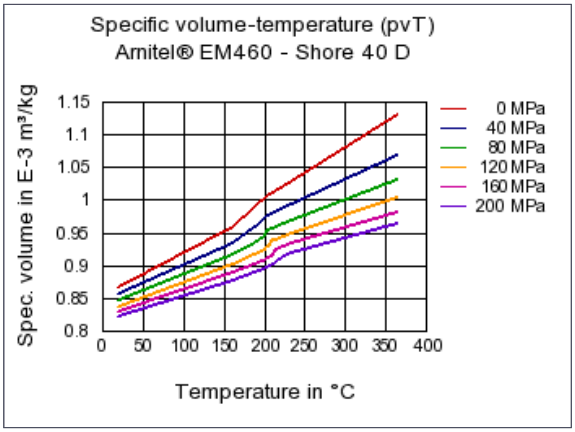
Secant modulus-strain



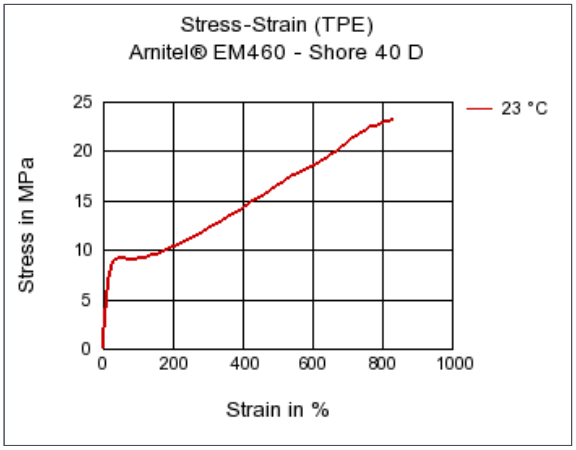
Stress-strain (isochronous) 23°C



Specific volume-temperature (pvT)



Stress-Strain (TPE)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Other text information

Injection Molding

Injection Molding Recommendations