

**TECHNICAL DATA SHEET**

# Arnitel® EM400

Envalior  
TPC

**Processing**

Injection molding, Film extrusion

Pellets

**Certifications**

Food contact, Drinking water contact

**Delivery Form**

## Product Text

**Product Information**

Injection Molding, Film Extrusion, Food Contact Quality

ISO 18064 TPC-ET

Processing/Physical Characteristics	Value	Unit	Standard
Melt volume-flow rate, MVR	33	cm <sup>3</sup> /10min	ISO 1133
Temperature	230	°C	
Load	2.16	kg	
Density of melt	896	kg/m <sup>3</sup>	
Thermal conductivity of melt	0.1	W/(m K)	
Spec. heat capacity of melt	1700	J/(kg K)	
Eff. thermal diffusivity	6.56E-8	m <sup>2</sup> /s	
Mechanical Properties	Value	Unit	Standard
Charpy impact strength, +23°C	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	N	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	N	kJ/m <sup>2</sup>	ISO 179/1eA
Tensile notched impact strength, +23°C	218	kJ/m <sup>2</sup>	ISO 8256/1
Stress at 10% elongation	3.8	MPa	ISO 527
Stress at 100% elongation	7.5	MPa	
Strain at break TPE	>300	%	ISO 527
Stress at break TPE	20	MPa	ISO 527

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Thermal Properties	Value	Unit	Standard
Melting temperature, 10°C/min	195	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	-78	°C	ISO 11357-1/-2
Coeff. of linear therm. expansion, parallel	220	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	220	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	
Yellow card available	yes		

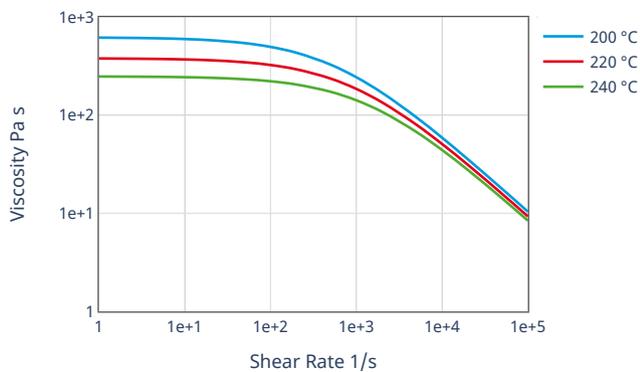
Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	4.1		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	10	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	170	E-4	IEC 62631-2-1
Volume resistivity	1E13	Ohm*m	IEC 62631-3-1
Electric strength	20	kV/mm	IEC 60243-1
Comparative tracking index	600		IEC 60112

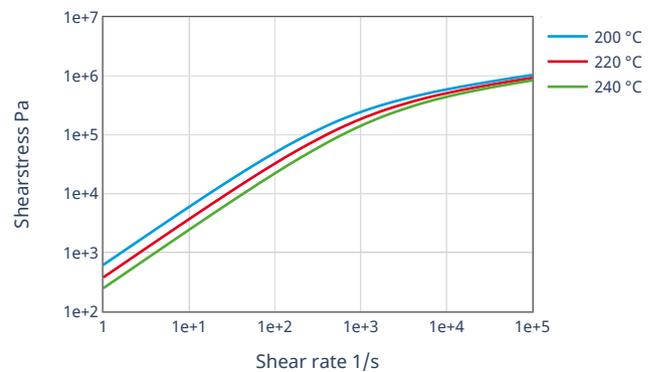
Other Properties	Value	Unit	Standard
Water absorption	0.75	%	Sim. to ISO 62
Humidity absorption	0.3	%	Sim. to ISO 62
Density	1110	kg/m <sup>3</sup>	ISO 1183

## Diagrams

Viscosity-shear rate



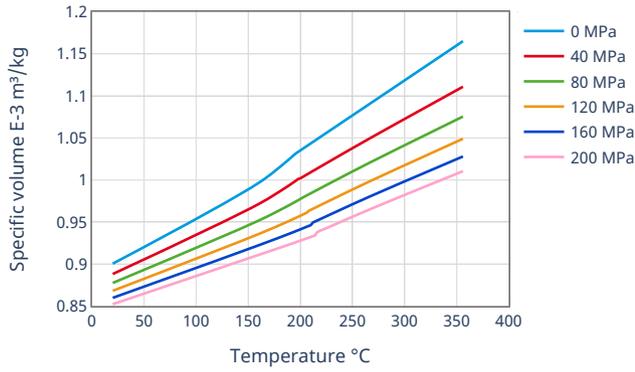
Shearstress-shear rate



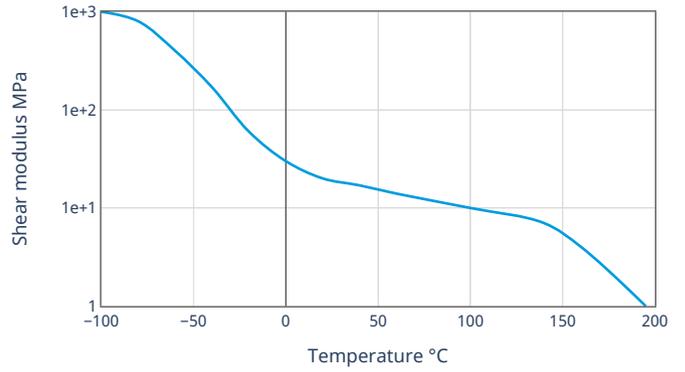
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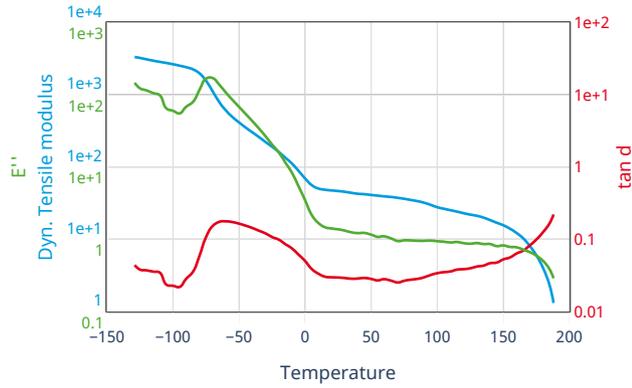
Spec. volume-Temperature (pVT)



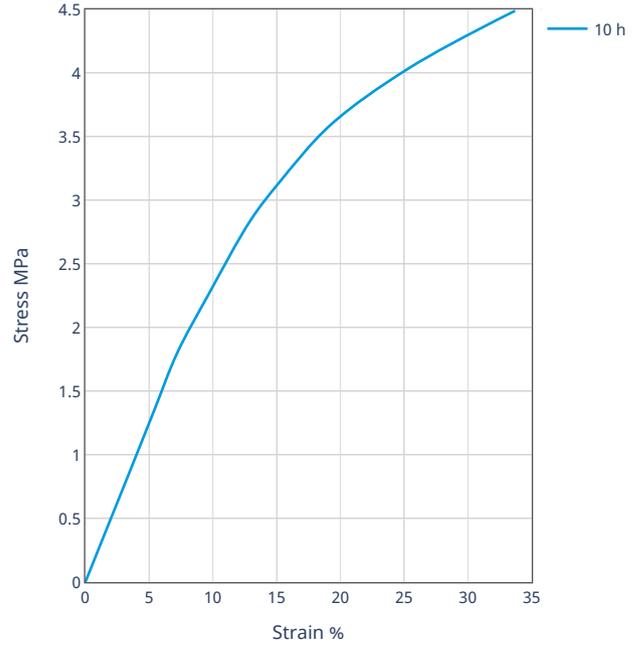
Dynamic shear modulus-temperature



Dynamic tensile modulus-temperature

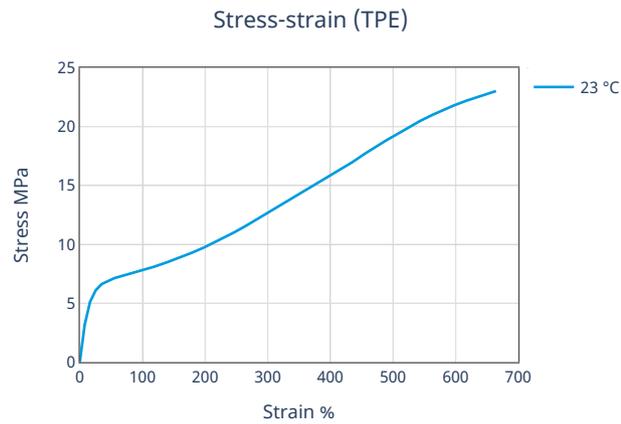


Stress-strain (isochronous) 23°C



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## Processing Information

### Injection molding

Injection Molding Recommendations

Steel recommendations for molds screws and barrels

Trouble shooting guideline for injection molding

### Film extrusion

Arnitel® Recommendations for Extrusion