

Product Texts

Vandar 4612R is a high impact polyester alloy containing 7% glass. It possesses excellent impact properties as well as toughness and moldability. Dimensional stability, chemical resistance, and low moisture absorption are other key features.

Flammability at thickness h (0.85 HB mm)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	8.5	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	5	kg	-
^[C] Molding shrinkage, parallel	0.7	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.3	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	2800	MPa	ISO 527
^[C] Yield stress	50	MPa	ISO 527
^[C] Yield strain	4	%	ISO 527
^[C] Nominal strain at break	6	%	ISO 527
^[C] Charpy impact strength, +23°C	60	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	50	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	14	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	5	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	60	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	92	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	200	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	170	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	40	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	138	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.8	mm	-

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.3	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.8	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	60	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	290	E-4	IEC 62631-2-1
^[C] Volume resistivity	1E12	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	1E14	Ohm	IEC 62631-3-2
^[C] Electric strength	26	kV/mm	IEC 60243-1

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Water absorption	0.45	%	Sim. to ISO 62
^[C] Humidity absorption	0.2	%	Sim. to ISO 62
^[C] Density	1300	kg/m ³	ISO 1183

[C]: CAMPUS

Characteristics**Processing**

Injection Molding

Special Characteristics

High impact or impact modified

Delivery form

Pellets

Chemical Resistance

General Chemical Resistance

Additives

Lubricants

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information**Injection molding**

To avoid hydrolytic degradation during processing, Vandar resins have to be dried to a moisture level equal to or less than 0.02%.

Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-30°F (-34°C) at 250°F (121°C) for 4 hours.

Rear Temperature 450-480(230-250) deg F (deg C)

Center Temperature 460-490(235-255) deg F (deg C)

Front Temperature 470-500(240-260) deg F (deg C)

Nozzle Temperature 470-510(240-265) deg F (deg C)

Melt Temperature 470-510(240-265) deg F (deg C)

Mold Temperature 100-200(40-95) deg F (deg C)

Back Pressure 0-50 psi

Screw Speed Moderate

Injection Speed Fast

Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used.