

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	40	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	2.0	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.9	%	ISO 294-4, 2577
^[C] Density of melt	1110	kg/m ³	-
^[C] Thermal conductivity of melt	0.133	W/(m K)	-
^[C] Spec. heat capacity of melt	1920	J/(kg K)	-
^[C] Ejection temperature	219	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	2700	MPa	ISO 527
^[C] Yield stress	62	MPa	ISO 527
^[C] Yield strain	4	%	ISO 527
^[C] Nominal strain at break	15	%	ISO 527
^[C] Charpy impact strength, +23°C	135	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	130	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	5	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	4.5	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] Temp. of deflection under load, 1.80 MPa	60	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	160	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	190	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	110	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	>1E15	Ohm	IEC 62631-3-2

[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	1310	kg/m ³	ISO 1183

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Additives

Release agent

Delivery form

Pellets

Regional Availability

Europe

Other text information

Injection molding

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0,02%. The drying should be done in a dry-air dryer (dew point < -30°C) with a temperature of 120 to 140 °C and a drying time of 4 to 2 hours. In case of longer residence times in the dry-air dryer, the temperature should be reduced to 100°C.

The time between drying and processing should be kept as short as possible. The processing machine feed hopper should be closed during the processing operation.

Melt Temperature 250-260 °C

Mold Temperature 75-85 °C

Maximum Barrel Residence Time *) 5-10 min

Injection Speed fast

Peripheral screw speed max.0,3 m/sec

Back Pressure 10-30 bar

Injection Pressure 600-1000 bar

Holding Pressure 400-800 bar

Nozzle Design open design preferred

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. For grades containing flame retardants, a maximum temperature of 265 °C should not be exceeded.

Celanese recommends only externally heated hot runner systems.

*) If the cylinder temperatures are higher than the recommended maximum temperatures, the max. residence time in the barrel has to be reduced.