

CELANEX® 2104UV

CELANEX® PBT

Celanex 2104UV is an unreinforced, impact modified, UV stabilized PBT designed for outdoor agricultural, industrial and automotive applications. Celanex 2104UV is suitable for injection molding applications.

Product information

Resin Identification	PBT	ISO 1043
Part Marking Code	>PBT<	ISO 11469

Rheological properties

Melt mass-flow rate	3 g/10min	ISO 1133
Melt mass-flow rate, Temperature	250 °C	
Melt mass-flow rate, Load	2.16 kg	
Moulding shrinkage range, parallel	2.2 - 3.3 %	ISO 294-4, 2577
Moulding shrinkage range, normal	2.2 - 3.3 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	2100 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	46 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	10 %	ISO 527-1/-2
Nominal strain at break	>50 %	ISO 527-1/-2
Flexural modulus	2080 MPa	ISO 178
Flexural strength	63 MPa	ISO 178
Charpy impact strength, 23°C	N kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	N kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	15 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	6.9 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	3.7 kJ/m ²	ISO 180/1A
Izod impact strength, 23°C	123 kJ/m ²	ISO 180/1U
Poisson's ratio	0.4 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	225 °C	ISO 11357-1/-3
Temperature of deflection under load, 0.45 MPa	130 °C	ISO 75-1/-2

Electrical properties

Relative permittivity, 100Hz	4	IEC 62631-2-1
Relative permittivity, 1MHz	3.5	IEC 62631-2-1
Dissipation factor, 100Hz	70 E-4	IEC 62631-2-1
Dissipation factor, 1MHz	200 E-4	IEC 62631-2-1
Volume resistivity	>1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 Ohm	IEC 62631-3-2
Electric strength	23 kV/mm	IEC 60243-1

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Physical/Other properties

Density	1310 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes
Drying Temperature	120 °C
Drying Time, Dehumidified Dryer	4 h
Processing Moisture Content	≤0.02 %
Melt Temperature Optimum	250 °C
Min. melt temperature	240 °C
Max. melt temperature	260 °C
Screw tangential speed	0.1 - 0.3 m/s
Mold Temperature Optimum	80 °C
Min. mould temperature	60 °C
Max. mould temperature	130 °C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Release agent
Special characteristics	High impact or impact modified, U.V. stabilised or stable to weather, Colourable

Additional information

Processing Notes

Pre-Drying

To avoid hydrolytic degradation during processing, CELANEX 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 <-40°F (-40°C) at 250°F (121°C) for 4 hours.

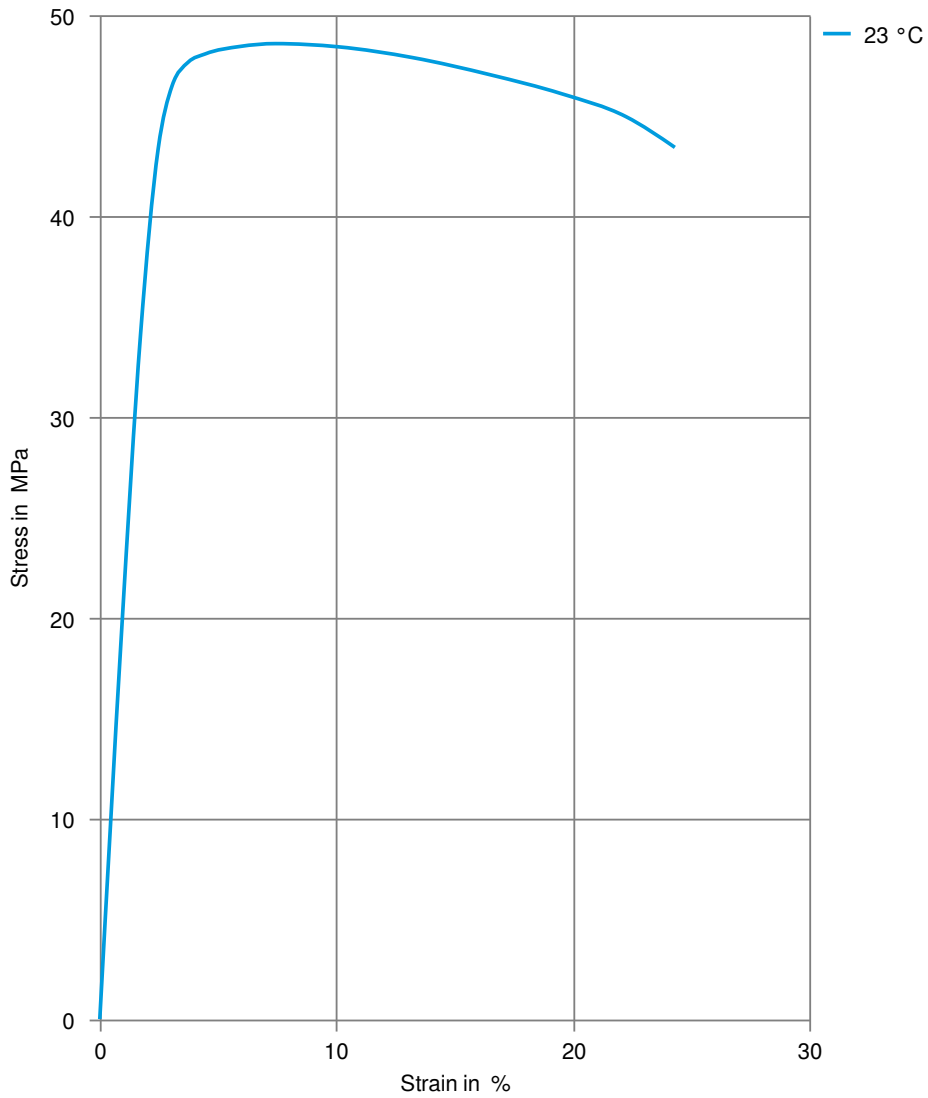
Storage

For subsequent storage of the material in the dryer until processed (≤ 60 h) it is necessary to lower the temperature to 100° C.

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Stress-strain



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Secant modulus-strain

