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-I		ISO 1043
Part Marking Code	>PBT-I<		ISO 11469

Rheological properties

Melt mass-flow rate	3	g/10min	ISO 1133
Melt mass-flow rate, Temperature	482	°F	
Melt mass-flow rate, Load	4.76	lb	
Molding shrinkage range, parallel	1.8 - 2	%	ISO 294-4, 2577
Molding shrinkage range, normal	1.8 - 2	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	305000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	6700	psi	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	302000	psi	ISO 178
Flexural strength	9140	psi	ISO 178
Charpy impact strength, 23°C	N	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	N	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	7.14	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	3.28	ftlb/in²	ISO 179/1eA
Izod impact strength, 23°C	58.5	ftlb/in²	ISO 180/1U

Thermal properties

Melting temperature, 10°C/min	437	°F	ISO 11357-1/-3
Temperature of deflection under load, 0.45 MPa	266	°F	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	584	kV/in	IEC 60243-1

Physical/Other properties

Density	0.0473	lb/in³	ISO 1183

Revised: 2025-09-12 Source: Celanese Materials Database

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Injection

Drying Recommended	yes	
Drying Temperature	248	°F
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	482	°F
Min. melt temperature	464	°F
Max. melt temperature	500	°F
Max. screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	140	°F
Max. mold temperature	266	°F

Characteristics

Processing	Injection Molding, Extrusion
Additives	Release agent
Special characteristics	High impact or impact modified, U.V. stabilized or stable to weather, Colorable

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.

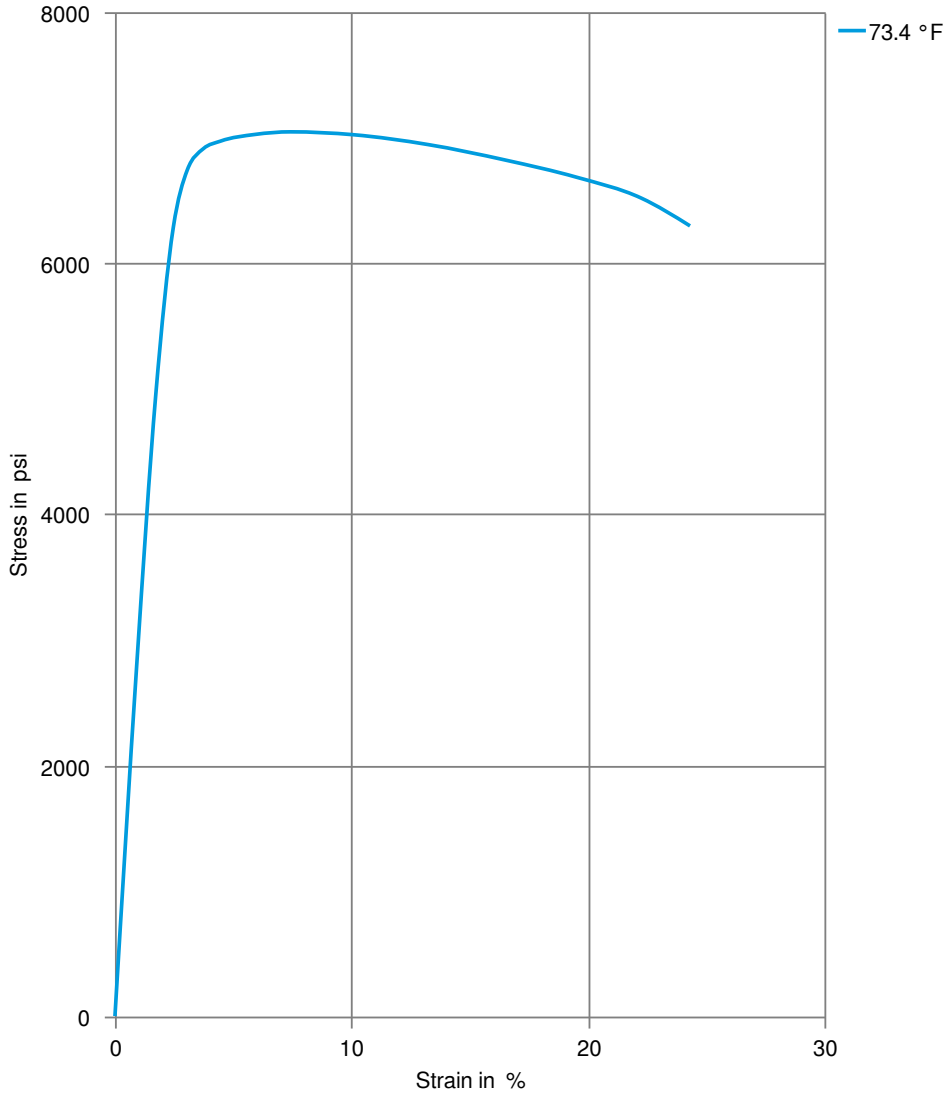
Storage

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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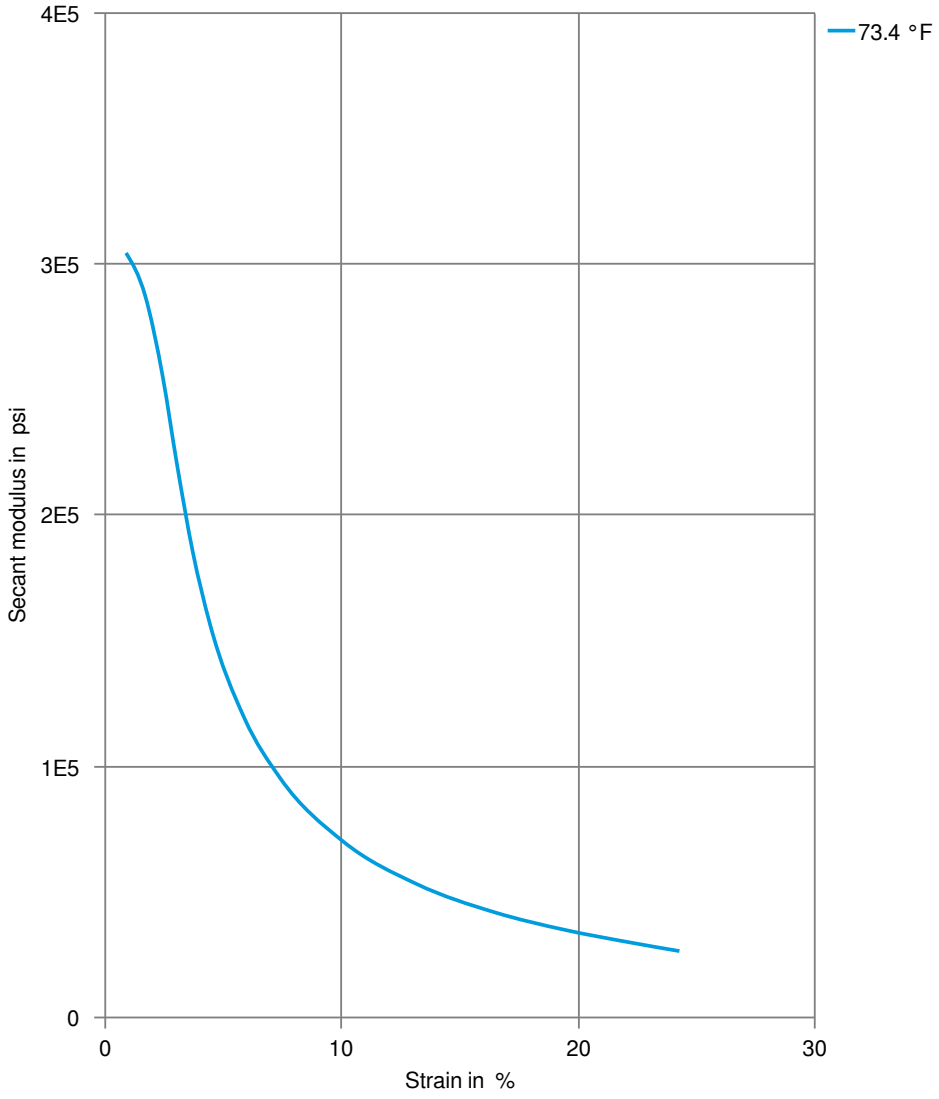
Stress-strain



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Secant modulus-strain



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