

CELANEX® MT2008

very high flow PBT polymer grade for medical nonwoven applications

Celanex MT2008 Natural is an unreinforced, low molecular weight PBT for melt blown applications that complies with the requirements of CFR 21 177.1660 of the Food and Drug Administration (FDA) and is listed in the Drug Master File (DMF) 10047 (US) / 10033 (EU) and the Device Master File (MAF) 443 (US) / 1078 (EU). MT2008 also complies with the corresponding EU and national registry regulatory requirements. MT2008 has displayed excellent biocompatibility in tests corresponding to USP 23 class VI. Celanex MT2008 contains no animal derived materials.

Product information

Part Marking Code	> PBT <	ISO 11469
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Rheological properties

Intrinsic viscosity	0.57	ISO 307, 1157, 1628
Moulding shrinkage range, parallel	1.8 - 2.0 %	ISO 294-4, 2577

Typical mechanical properties

Stress at break, 5mm/min	60 MPa	ISO 527-1/-2
Strain at break, 5mm/min	5 %	ISO 527-1/-2
Flexural Modulus	2200 MPa	ISO 178
Flexural Strength	80 MPa	ISO 178
Izod notched impact strength, 23 °C	3.1 kJ/m ²	ISO 180/1A
Hardness, Rockwell, M-scale	72	ISO 2039-2

Thermal properties

Melting temperature, 10 °C/min	225 °C	ISO 11357-1/-3
Glass transition temperature, 10 °C/min	60 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	57 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	155 °C	ISO 75-1/-2

Electrical properties

Relative permittivity, 1MHz	3.2	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	15 kV/mm	IEC 60243-1

Other properties

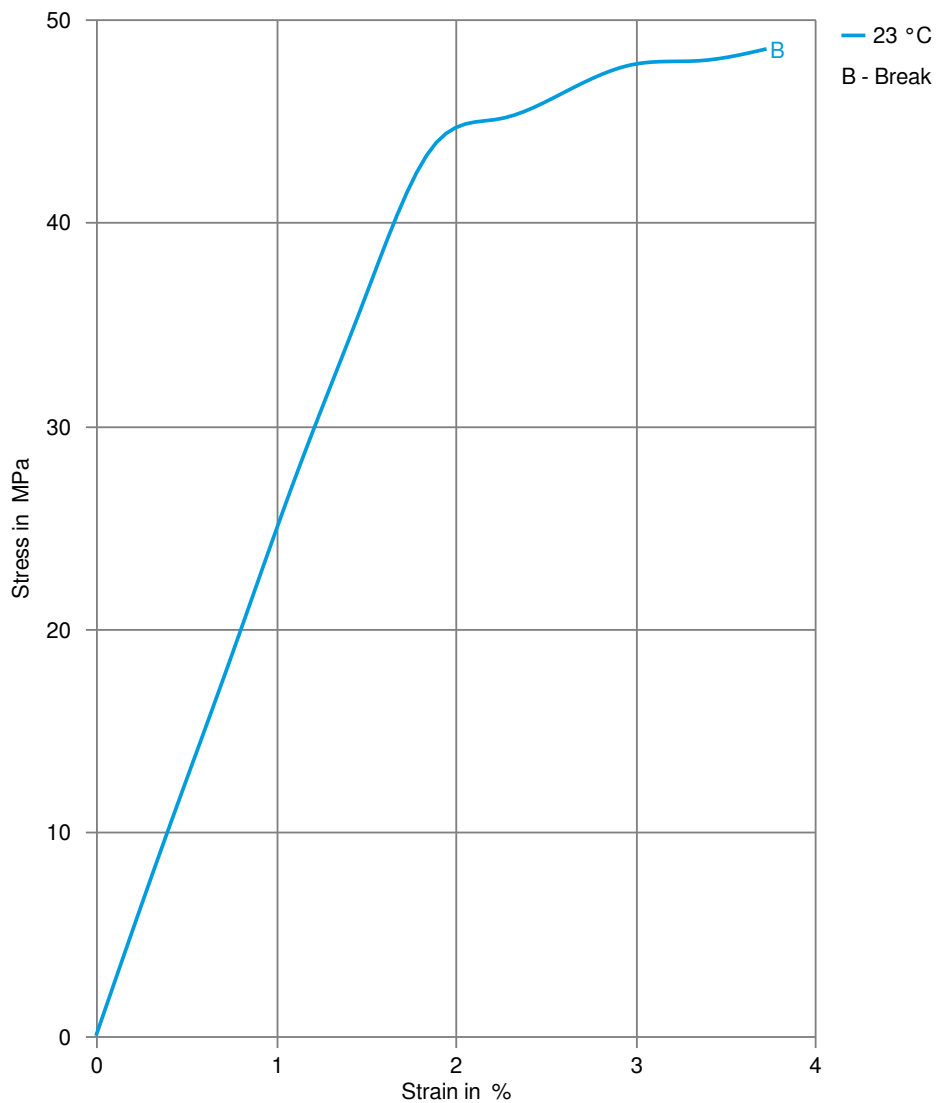
Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Water absorption, 2mm	0.45 %	Sim. to ISO 62
Density	1310 kg/m ³	ISO 1183

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Injection

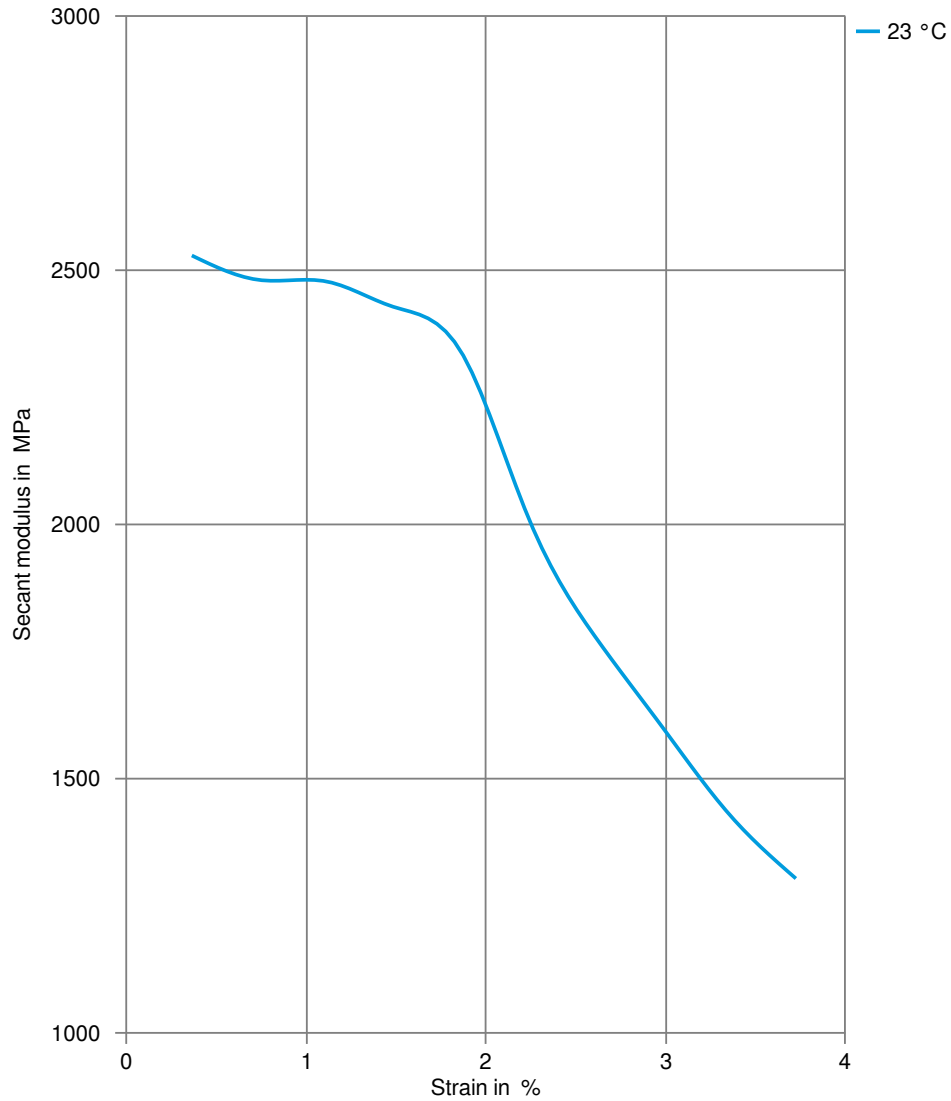
Drying Temperature	120 - 130 °C
Drying Time, Dehumidified Dryer	4 h
Processing Moisture Content	0.02 %
Max. mould temperature	65 - 93 °C
Injection speed	medium-fast

Stress-strain



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Secant modulus-strain



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Processing Texts

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 $< -40^{\circ}\text{F}$ (-40°C) at 250°F (121°C) for 4 hours.

Longer pre-drying times/storage

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