

CELANEX[®] 2002SW1

unfilled medium flow grade, for friction and wear applications Celanex 2002SW1 Natural is an unreinforced PTFE-modified PBT with improved friction, sliding, and wear properties.

| Product information | | |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------|
| Part Marking Code | PBT+PTFE | ISO 11469 |
| Rheological properties | | |
| Melt volume-flow rate Temperature Load | 21 cm ³ /10min 250 °C 2.16 kg | ISO 1133 |
| Moulding shrinkage range, parallel Moulding shrinkage range, normal | 1.7 - 2.1 % 1.6 - 1.9 % | ISO 294-4, 2577 ISO 294-4, 2577 |
| Typical mechanical properties | | |
| Tensile Modulus Yield stress, 50mm/min Yield strain, 50mm/min Nominal strain at break Charpy notched impact strength, 23°C | 2600 MPa 56 MPa 7 % 19 % 3.3 kJ/m ² | ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 179/1eA |
| Thermal properties | | |
| Melting temperature, 10°C/min Glass transition temperature, 10°C/min | 225 °C 60 °C | ISO 11357-1/-3 ISO 11357-1/-3 |
| Electrical properties | | |
| Comparative tracking index | PLC 0 PLC | UL 746A |
| Other properties | | |
| Humidity absorption, 2mm | 0.2 % | Sim. to ISO 62 |
| Injection | | |
| Drying Temperature Drying Time, Dehumidified Dryer Processing Moisture Content | 120 - 130 °C 4 h 0.02 % | |
| Melt Temperature Optimum Max. mould temperature Injection speed | 0.02 /% 255 °C 65 - 93 °C medium-fast | Internal |







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| Additional information | |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Injection molding | Rear Temperature 450-470(230-240) deg F (deg C) Center Temperature 460-480(235-250) deg F (deg C) Front Temperature 470-500(240-260) deg F (deg C) Nozzle Temperature 480-500(250-260) deg F (deg C) Melt Temperature 460-500(235-260) deg F (deg C) Mold Temperature 150-200(65-93) deg F (deg C) Back Pressure 0-50 psi Screw Speed Medium 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. |
| 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°F (-40°C) at 250°F (120°C) for minimum 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. |
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