Celanese
The chemistry inside innovation™

CELANEX® 2002FC GM SW1

nucleated and tribological modified grade with improved HDT, for use in food contact applications
Celanex 2002FC GM SW1 Natural is a mineral filled PBT with excellent friction/wear properties, complying to FDA 21 CFR 177.1660 and EU regulation 10/2011

Product information

Part Marking Code	> (PBT+PTFE)-MD6 <	ISO 11469

Rheological properties

Melt volume-flow rate	20	cm^3/10min	ISO 1133
Temperature	250	°C	
Load	2.16	kg	

Typical mechanical properties

Tensile Modulus	3000	MPa	ISO 527-1/-2
Yield stress, 50mm/min	56	MPa	ISO 527-1/-2
Nominal strain at break	12	%	ISO 527-1/-2
Charpy notched impact strength, 23°C	3.2	kJ/m^2	ISO 179/1eA

Thermal properties

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

Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Density	1360	kg/m^3	ISO 1183

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	

Characteristics

Additives	Mineral Filler
Food contact	FDA 21 CFR

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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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