Celanese
The chemistry inside innovation™

FORTRON® CES51 N

Polyphenylene sulfide

Fortron CES51 N is a 20% glass reinforced PPS resin in black. It offers excellent physical properties and good adhesion to metal with nano molding technology treatment.

Product information

Resin Identification	PPS-GF20	ISO 1043
Part Marking Code	>PPS-GF20<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.4	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	7200	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	110	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5	%	ISO 527-1/-2
Flexural modulus	7000	MPa	ISO 178
Flexural strength	180	MPa	ISO 178
Charpy impact strength, 23 °C	50	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23 °C	17	kJ/m²	ISO 179/1eA
Poisson's ratio	0.35[C]		

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	240	°C	ISO 75-1/-2

Physical/Other properties

Density	1420	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	130	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	330	°C
Min. melt temperature	310	°C
Max. melt temperature	340	°C
Screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	150	°C
Min. mould temperature	140	°C
Max. mould temperature	160	°C
Hold pressure range	30 - 70	MPa
Back pressure	3	MPa

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Characteristics

Processing	Injection Moulding
Special characteristics	Flame retardant

Automotive

OEM	ADDITIONAL INFORMATION
VW Group	No Spec, special part approval

Revised: 2024-10-23 Source: Celanese Materials Database