Celanese
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FORTRON® CES51

Polyphenylene sulfide

Fortron CES51 is a 20% glass reinforced PPS resin with low chlorine content. 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

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

Typical mechanical properties

Tensile modulus	1.04E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	16000	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5	%	ISO 527-1/-2
Flexural modulus	1.02E6	psi	ISO 178
Flexural strength	25400	psi	ISO 178
Charpy impact strength, 23°C	23.8	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	8.09	ftlb/in²	ISO 179/1eA

Thermal properties

Temperature of deflection under load, 1.8 MPa	464	°F	ISO 75-1/-2

Physical/Other properties

Density	0.0513	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	266	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	626	°F
Min. melt temperature	590	°F
Max. melt temperature	644	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	302	°F
Min. mold temperature	284	°F
Max. mold temperature	320	°F
Hold pressure range	4350 - 10200	psi
Back pressure	435	psi

Characteristics

Processing	Injection Molding
Special characteristics	Flame retardant

Revised: 2026-09-08 Source: Celanese Materials Database

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