FORTRON® CES50 | PPS | Specialty

Description

Fortron CES50 is a 40% glass fiber reinforced material with a total chlorine content less than or equal to 900 ppm. It offers excellent physical properties similar to those of the Fortron 1140L6 product.

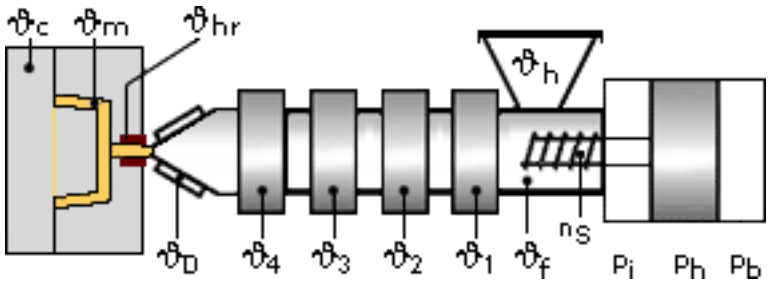
Physical properties	Value	Unit	Test Standard
Density	**1630**	kg/m³	ISO 1183

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	**13900**	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	**170**	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	**1.9**	%	ISO 527-2/1A
Flexural modulus (23°C)	**13300**	MPa	ISO 178
Flexural strength (23°C)	**240**	MPa	ISO 178
Charpy impact strength @ 23°C	**51.0**	kJ/m²	ISO 179/1eU
Charpy notched impact strength @ 23°C	**9.0**	kJ/m²	ISO 179/1eA
Unnotched impact str (Izod) @ 23°C	**44**	kJ/m²	ISO 180/1U
Notched impact strength (Izod) @ 23°C	**10.0**	kJ/m²	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
DTUL @ 1.8 MPa	**262**	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	**0.15**	E-4/°C	ISO 11359-2
Coeff.of linear therm. expansion (normal)	**0.5**	E-4/°C	ISO 11359-2
Flammability at thickness h	**V-0**	class	UL94
thickness tested (h)	**0.2**	mm	UL94

Electrical properties	Value	Unit	Test Standard
Relative permittivity - 1 MHz	**4.5**	-	IEC 60250
Dissipation factor - 1 MHz	**10**	E-4	IEC 60250
Volume resistivity	**>1E14**	Ohm*m	IEC 60093
Surface resistivity	**>1E14**	Ohm	IEC 60093
Electric strength	**30**	kV/mm	IEC 60243-1
Comparative tracking index CTI	**125**	-	IEC 60112

Typical injection moulding processing conditions



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Pre Drying:

Necessary low maximum residual moisture content: 0.02%

FORTRON should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< - 30° C. The time between drying and processing should be as short as possible.

For subsequent storage the material should be stored dry in the dryer until processed (<= 60 h).

Drying time: 3 - 4 h

Drying temperature: 130 - 140 °C

Temperature:

	Manifold	Mold	Melt	Nozzle	Zone4	Zone3	Zone2	Zone1	Feed	Hopper
min (°C)	330	60	330	310	330	330	310	290	60	20
max (°C)	340	80	340	330	340	340	320	300	80	30

Pressure:

	Inj press	Hold press	Back pressure
min (bar)	500	300	0
max (bar)	1000	700	30

Speed:

Injection speed: fast

Screw speed

Screw diameter (mm)	16	25	40	55	75
Screw speed (RPM)	-	120	75	50	-

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General Disclaimer

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