

Fortron® 0205

Polyphenylene Sulfide

Celanese Corporation

Message:

0205 is an easy flowing unfilled grade. It demonstrates excellent chemical resistance and thermal stability. Intended for compounding with various fillers. Available standard in pellet (0205P4) and powder (0205B4) form.

General Information	
Features	Good liquidity Good chemical resistance Thermal stability, good Medium viscosity
Uses	Composite
RoHS Compliance	Contact manufacturer
Forms	Powder Particle

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.40	g/cm ³	ASTM D792
--	1.35	g/cm ³	ISO 1183
Specific Volume	0.715	cm ³ /g	ASTM D792
Specific Heat Capacity of Melt	1830	J/kg/°C	Internal method
Molding Shrinkage			
Flow	1.0 - 1.2	%	ASTM D955
Transverse flow	0.80 - 1.0	%	ASTM D955
Vertical flow direction	1.5 - 1.8	%	ISO 294-4
Flow direction	1.2 - 1.5	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.020	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
Class m	93		ASTM D785
M scale	95		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	4000	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	86.2	MPa	ASTM D638
Fracture	66.0	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.0	%	ISO 527-2/1A/5

Flexural Modulus (23°C)	3900	MPa	ISO 178
Flexural Stress ¹	130	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	2.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	30	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, annealed	204	°C	ASTM D648
1.8 MPa, not annealed	104	°C	ASTM D648
1.8 MPa, not annealed	115	°C	ISO 75-2/A
8.0 MPa, not annealed	95.0	°C	ISO 75-2/C
Glass Transition Temperature ²	90.0	°C	ISO 11357-2
Melting Temperature ³	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	5.3E-5	cm/cm/°C	ISO 11359-2
Lateral	5.2E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			
--	1.0E+16	ohms·cm	ASTM D257
--	1.0E+11	ohms·cm	IEC 60093
Dielectric Strength	17	kV/mm	IEC 60243-1
Dielectric Constant			ASTM D150
1 kHz	3.00		ASTM D150
1 MHz	3.00		ASTM D150
Dissipation Factor			ASTM D150
1 kHz	1.0E-3		ASTM D150
1 MHz	9.0E-4		ASTM D150
Arc Resistance	124	sec	ASTM D495
Comparative Tracking Index	100	V	IEC 60112
Injection	Nominal Value	Unit	
Drying Temperature	110 - 120	°C	
Drying Time	3.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	20.0 - 30.0	°C	
Rear Temperature	290 - 300	°C	
Middle Temperature	300 - 310	°C	
Front Temperature	310 - 320	°C	
Nozzle Temperature	300 - 310	°C	
Processing (Melt) Temp	310 - 320	°C	
Mold Temperature	140 - 160	°C	
Injection Pressure	40.0 - 80.0	MPa	
Injection Rate	Fast		

Holding Pressure	30.0 - 60.0	MPa
Back Pressure	0.00 - 3.00	MPa
Injection instructions		
Manifold Temperature: 310 to 320°CZone 4 Temperature: 310 to 320°CFeed Temperature: 60 to 80°C		
NOTE		
1.	Break	
2.	10°C/min	
3.	10°C/min	

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