Fortron® 0309

Polyphenylene Sulfide

Celanese Corporation

Message:

0309 exhibits a good balance of flow and melt strength for extrusion processes. The material demonstrates excellent heat and chemical resistance. The intended use of this product is for extruding monofilament/fibers. Available standard in powder (0309B4), pellet (0309P4) and crystallized pellet (0309C4) form.

General Information			
Features	Good liquidity Good melt strength Good chemical resistance Heat resistance, high		
Uses	monofilament Fiber		
RoHS Compliance	Contact manufacturer		
Forms	Powder Particle		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.40	g/cm³	ASTM D792
--	1.35	g/cm³	ISO 1183
Molding Shrinkage			ASTM D955
Flow	1.0 - 1.2	%	ASTM D955
Transverse flow	0.80 - 1.0	%	ASTM D955
Water Absorption (Saturation, 23°C)	0.020	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			
Class m	93		ASTM D785
M scale	90		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (Break)	90.0	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	8.0	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	4200	MPa	ISO 178
Flexural Stress (23°C)	145	MPa	ISO 178
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 [1]	90.0	°C	ISO 11357-2
Melting Temperature [2]	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	5.2E-5	cm/cm/°C	ISO 11359-2
Lateral	5.3E-5	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity			
--	1.0E+7	ohms·cm	ASTM D257
--	1.0E+11	ohms·cm	IEC 60093
Dielectric Strength			
-- [3]	18	kV/mm	ASTM D149
--	18	kV/mm	IEC 60243-1
Dielectric Constant			
1 kHz	3.00		ASTM D150
1 MHz	3.00		ASTM D150
1 MHz	4.60		IEC 60250
Dissipation Factor			
1 kHz	1.0E-3		ASTM D150
1 MHz	9.0E-4		ASTM D150
1 MHz	1.1E-3		IEC 60250
Arc Resistance	124	sec	ASTM D495
Comparative Tracking Index	125	V	IEC 60112
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Specific Heat Capacity of Melt	1830	J/kg/°C	Internal method
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.	10°C/min
2.	10°C/min
3.	Method A (short time)

Recommended distributors for this material

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