

# RTP ESD A 1380

Polyphenylene Sulfide

RTP Company

Message:

Warning: The status of this material is 'Commercial: Limited Issue'  
The data for this material has not been recently verified.  
Please contact RTP Company for current information prior to specifying this grade.  
ESD 1380 Series is PPS resin with carbon fiber added for electrical conductivity. This property has excellent static dissipation characteristics and is non-sloughing. ESD A 1380 is static dissipative, ESD C 1380 is conductive.

General Information			
Filler / Reinforcement	Carbon fiber reinforced material		
Features	Electrostatic discharge protection		
	Antistatic property		
Agency Ratings	MIL B-81705C		
RoHS Compliance	Contact manufacturer		
Appearance	Black		
	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.37	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.10 - 0.30	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.020	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8270	MPa	ASTM D638
Tensile Strength	89.6	MPa	ASTM D638
Tensile Elongation (Break)	1.5	%	ASTM D638
Flexural Modulus	6890	MPa	ASTM D790
Flexural Strength	138	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	32	J/m	ASTM D256
Unnotched Izod Impact (3.18 mm)	160	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	260	°C	ASTM D648
1.8 MPa, not annealed	232	°C	ASTM D648
CLTE - Flow	2.7E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method

Surface Resistivity	1.0E+6	ohms	ASTM D257
Volume Resistivity	1.0E+3	ohms·cm	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.59 mm, RTP Tested)	V-0		UL 94

#### Additional Information

Volume Resistivity, ASTM D257: 10E3 -10E9 ohm-cmSurface Resistivity, ASTM D257: 10E6 -10E12 ohm/sqStatic Decay, FTMS-4046.1, Mil B-81705C: <2.0 seconds

Injection	Nominal Value	Unit
Drying Temperature	149	°C
Drying Time	6.0	hr
Suggested Max Regrind	20	%
Rear Temperature	285 - 343	°C
Middle Temperature	285 - 343	°C
Front Temperature	285 - 343	°C
Mold Temperature	65.6 - 177	°C
Injection Pressure	68.9 - 103	MPa
Back Pressure	0.345 - 0.689	MPa
Screw Speed	60 - 90	rpm
Clamp Tonnage	1.4	kN/cm <sup>2</sup>

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#### Recommended distributors for this material

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