

Ecomass® 1700CO93

Polyamide 12

Ecomass Technologies

Message:

Ecomass® 1700CO93 is a polyamide 12 (nylon 12) material containing a copper filler. This product is available in North America and is processed by injection molding.

Ecomass® The main features of 1700CO93 are:

Good stiffness

non-toxic

General Information			
Filler / Reinforcement	Copper filler		
Features	Rigid, good		
	High density		
	Non-toxic		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	5.69	g/cm ³	ASTM D792
Molding Shrinkage - Flow	0.50 - 0.60	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9650	MPa	ASTM D638
Tensile Strength	44.8	MPa	ASTM D638
Tensile Elongation (Break)	< 1.0	%	ASTM D638
Flexural Modulus	8620	MPa	ASTM D790
Flexural Strength	65.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	67	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	159	°C	ASTM D648
1.8 MPa, not annealed	155	°C	ASTM D648
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	0.21	ohms	ASTM D257
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	73.9	°C	
Drying Time - Desiccant Dryer	4.0	hr	
Processing (Melt) Temp	204 - 254	°C	
Mold Temperature	57.2 - 79.4	°C	
Injection Rate	Moderate-Fast		

Back Pressure	0.103 - 0.172	MPa
Screw Speed	100 - 250	rpm
Clamp Tonnage	3.4 - 5.5	kN/cm ²
Cushion	6.35 - 12.7	mm
Screw L/D Ratio	20.0:1.0	
Screw Compression Ratio	2.5:1.0	

Injection instructions

Pack (Hold) Pressure: 65 to 75% of Injection Pressure
 Fill Time: 1.0 to 2.0 in/sec
 Pack (Hold) Time: 10 to 15 sec
 Cooling Time: As required
 Feed Throat: Cooled
 Nozzle Type: Reverse Taper
 Check Type: Free Flow
 Maximum Drying Temp: 200 °F
 Dryer Dew Point: -20 to -40 °F
 Minimum Air Flow: 0.8 to 1.0 CFM
 Injection Pressure: As Required

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