Beetle® PP809M

Polypropylene Homopolymer

Teknor Apex Company (Chem Polymer)

Message:

PP809M is a 9% mineral filled polypropylene homopolymer injection moulding grade, primarily intended for electrical applications. It is heat stabilised and contains a RoHS permissible Brominated flame retardant system. It has good electrical and glow wire performance, combined with reasonable mechanical properties and surface finish.

General Information			
Filler / Reinforcement	Mineral filler, 9.0% filler by weight		
Additive	Flame retardancy 2		
Features	Good liquidity		
	Thermal Stability		
	Excellent appearance		
	Medium hardness		
	Flame retardancy		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.00	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16			
kg)	15	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/2.16	20.0	$cm^3/10min$	ISO 1132
Ng/ Molding Shrinkago ¹	14 20	0/	Internal method
	1:4 - 2:0	/0	Internal method
Machanical	Naminal Value	Linit	Test Mathed
Mechanical	Nominal Value	Unit	Test Method
Mechanical Tensile Stress (Yield)	Nominal Value 27.0	Unit MPa	Test Method ISO 527-2
Mechanical Tensile Stress (Yield) Tensile Strain (Yield)	Nominal Value 27.0 10	Unit MPa %	Test Method ISO 527-2 ISO 527-2
Mechanical Tensile Stress (Yield) Tensile Strain (Yield) Flexural Modulus	Nominal Value 27.0 10 1900	Unit MPa % MPa	Test Method ISO 527-2 ISO 527-2 ISO 527-2 ISO 178
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress	Nominal Value 27.0 10 1900	Unit MPa % MPa	Test Method ISO 527-2 ISO 527-2 ISO 178 ISO 178
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strain	Nominal Value 27.0 10 1900 42.0	Unit MPa % MPa MPa	Test Method ISO 527-2 ISO 527-2 ISO 178 ISO 178 ISO 178 ISO 178
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strain	Nominal Value 27.0 10 1900 42.0 48.0	Unit MPa % MPa MPa MPa MPa	Test Method ISO 527-2 ISO 527-2 ISO 178 ISO 178 ISO 178 ISO 178 ISO 178 ISO 178
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stress	Nominal Value 27.0 10 1900 42.0 48.0 6.5	UnitMPa%MPaMPaMPaMPaMPa%	Test Method ISO 527-2 ISO 527-2 ISO 178
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stressImpact	Nominal Value 27.0 10 1900 42.0 48.0 6.5 Nominal Value	UnitMPa%MPaMPaMPaMPaMPaMIDA<	Test Method ISO 527-2 ISO 527-2 ISO 178
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stressImpactNotched Izod Impact (23°C)	Nominal Value 27.0 10 1900 42.0 48.0 6.5 Nominal Value 3.5	Unit MPa % MPa MPa MPa % Unit	Test Method ISO 527-2 ISO 527-2 ISO 178
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stressImpactNotched Izod Impact (23°C)Thermal	Nominal Value 27.0 10 1900 42.0 48.0 6.5 Nominal Value 3.5 Nominal Value	UnitMPa%MPaMPaMPaMPaKJ/m²Unit	Test Method ISO 527-2 ISO 527-2 ISO 178
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stressImpactNotched Izod Impact (23°C)ThermalHeat Deflection Temperature	Nominal Value 27.0 10 1900 42.0 48.0 6.5 Nominal Value 3.5 Nominal Value	Unit MPa % MPa MPa % Unit Unit Unit	Test Method ISO 527-2 ISO 527-2 ISO 178 Test Method Test Method
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stressImpactNotched Izod Impact (23°C)ThermalHeat Deflection Temperature0.45 MPa, not annealed	Nominal Value 27.0 10 1900 42.0 48.0 6.5 Nominal Value 3.5 Nominal Value 95.0	Unit MPa % MPa MPa MPa MPa Unit Unit Unit	Test Method ISO 527-2 ISO 527-2 ISO 178 ISO 180 ISO 180 ISO 180 ISO 195-2/B
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stressImpactNotched Izod Impact (23°C)ThermalHeat Deflection Temperature0.45 MPa, not annealed1.8 MPa, not annealed	Nominal Value 27.0 10 10 1900 42.0 48.0 6.5 Nominal Value 3.5 Nominal Value 95.0 60.0	Unit MPa % MPa MPa MPa % Unit Unit Unit Unit	Test Method ISO 527-2 ISO 178 ISO 180 ISO 75-2/B ISO 75-2/A
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stressImpactNotched Izod Impact (23°C)ThermalHeat Deflection Temperature0.45 MPa, not annealed1.8 MPa, not annealedElectrical	Nominal Value 27.0 10 1900 42.0 48.0 6.5 Nominal Value 3.5 Nominal Value 6.0 Nominal Value	Unit MPa % MPa MPa MPa % Unit Unit Unit Unit Unit	Test Method ISO 527-2 ISO 527-2 ISO 178 ISO 180 ISO 75-2/B ISO 75-2/A Test Method
MechanicalTensile Stress (Yield)Tensile Strain (Yield)Flexural ModulusFlexural Stress3.5% strainBending strain-at peak stressImpactNotched Izod Impact (23°C)ThermalHeat Deflection Temperature0.45 MPa, not annealed1.8 MPa, not annealedElectricalSurface Resistivity	Nominal Value 27.0 10 1900 42.0 48.0 6.5 Nominal Value 3.5 Nominal Value 95.0 60.0 Nominal Value 1.0E+14	Unit MPa % MPa MPa MPa MPa MPa MPa MPa MPa MPa MPa	Test Method ISO 527-2 ISO 178 ISO 180 ISO 75-2/B ISO 75-2/A Test Method IEC 60093

Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Comparative Tracking Index	300	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index (1.50 mm)	960	°C	IEC 60695-2-12
Injection	Nominal Value	Unit	
Drying Temperature	< 60.0	°C	
Rear Temperature	170 - 220	°C	
Middle Temperature	180 - 220	°C	
Front Temperature	190 - 220	°C	
Processing (Melt) Temp	< 230	°C	
Mold Temperature	30.0 - 70.0	°C	
Injection Rate	Moderate		
Screw Speed	50 - 200	rpm	
Injection instructions			

Back Pressure: Low

Injection Pressure: High

PP materials are not hygroscopic and drying should not normally be necessary. If surface moisture is present on the granules, drying is permissible but temperature should not exceed 60°C to avoid risk of agglomeration.

NOTE

Mould shrinkage is significantly influenced by many factors including wall thickness, gating, component shape and moulding conditions. The range values stated were determined from specimen bar mouldings of 1.5mm to 4mm wall thickness. They are provided as a guide for comparison purposes only and no guarantee should be inferred from their inclusion. (Specimens measured 24 hours after moulding).

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