

Minlon® EFE6053 BK413 (Dry)

Polyamide 66

DuPont Engineering Polymers



Prospector

Product Description

Minlon® EFE6053 BK413 is a 40% mineral/glass reinforced, heat stabilized polyamide 66 resin for injection molding.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass\Mineral, 40% Filler by Weight
Additive	• Heat Stabilizer
Features	• Heat Stabilized • Ultrasonic Weldable
RoHS Compliance	• Contact Manufacturer
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1) • Shear Modulus vs. Temperature (ISO 11403-2)
Part Marking Code (ISO 11469)	• >PA66-(GF+MD)40<
Resin ID (ISO 1043)	• PA66-(GF+MD)40

Physical	Nominal Value	Unit	Test Method
Density	1.47	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow: 2.00 mm	1.1	%	
Flow: 2.00 mm	0.40	%	
Water Absorption			ISO 62
Saturation, 23°C	5.0	%	
Equilibrium, 23°C, 50% RH	1.5	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	10000	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	160	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.2	%	ISO 527-2
Flexural Modulus (23°C)	9900	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.00	kJ/m ²	
23°C	4.50	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	40.0	kJ/m ²	
23°C	45.0	kJ/m ²	
Notched Izod Impact Strength (-30°C)	4.00	kJ/m ²	ISO 180/1A

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	256	°C	ISO 75-2/B
1.8 MPa, Unannealed	240	°C	ISO 75-2/A
Melting Temperature (DSC) ²	262	°C	ISO 11357-3
CLTE			ASTM E831 ISO 11359-2
Flow: 23 to 55°C	0.000028	cm/cm/°C	
Transverse: 23 to 55°C	0.000087	cm/cm/°C	

Minlon® EFE6053 BK413 (Dry)

Saturday, May 09, 2009

Polyamide 66**DuPont Engineering Polymers**

Electrical	Nominal Value	Unit	Test Method
Relative Permittivity			IEC 60250
23°C, 100 Hz	4.90		
23°C, 1E+6 Hz	4.80		
Dissipation Factor			IEC 60250
23°C, 100 Hz	0.014		
23°C, 1E+6 Hz	0.013		
Electric Strength (23°C, 1.00 mm)	28 kV/mm		IEC 60243-1
Additional Information	Nominal Value	Unit	
Drying Recommended	Yes, if moisture content of resin exceeds recommended level		
Melt Temperature, Optimum	295	°C	
Mold Temperature, Optimum	100	°C	
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.20	%	
Processing (Melt) Temp	285 to 305	°C	
Mold Temperature	70.0 to 120	°C	

Notes¹ Typical properties: these are not to be construed as specifications.² 10°C/min