

Grilon® BR 40

Polyamide 6

EMS-GRIVORY

Message:

Grilon® BR 40 is a Polyamide 6 (Nylon 6) material. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for extrusion or injection molding.

Important attributes of Grilon® BR 40 are:

Flame Rated

RoHS Compliant

High Viscosity

Medium Viscosity

Typical applications include:

Automotive

Consumer Goods

Electrical/Electronic Applications

Engineering/Industrial Parts

Hose/Tubing

General Information				
UL YellowCard		E53898-243871	E132701-237898	
Features		High Viscosity		
		Medium Viscosity		
Uses		Automotive Applications		
		Consumer Applications		
		Electrical/Electronic Applications		
		Engineering Parts		
		Hydraulic Applications		
		Industrial Applications		
		Pneumatic Applications		
		Power/Other Tools		
		Tubing		
		Wire & Cable Applications		
RoHS Compliance		RoHS Compliant		
Forms		Granules		
Processing Method		Extrusion		
		Injection Molding		
Multi-Point Data		Shear Modulus vs. Temperature (ISO 11403-1)		
		Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183

Molding Shrinkage				ISO 294-4
Across Flow	1.2	--	%	
Flow	0.80	--	%	
Water Absorption				ISO 62
Saturation, 23°C	9.0	--	%	
Equilibrium, 23°C, 50% RH	3.0	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	140	60.0	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	3300	900	MPa	ISO 527-2
Tensile Stress				ISO 527-2
Yield	90.0	40.0	MPa	
Break	60.0	--	MPa	
Tensile Strain (Yield)	4.0	25	%	ISO 527-2
Nominal Tensile Strain at Break	10	> 50	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	7.0	4.0	kJ/m ²	
23°C	6.0	35	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		
23°C	No Break	No Break		
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	170	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	55.0	--	°C	ISO 75-2/A
Continuous Use Temperature				Internal Method
-- ¹	80.0 to 110	--	°C	
-- ²	160	--	°C	
Melting Temperature ³	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	7.0E-5	--	cm/cm/°C	
Transverse	1.0E-4	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+14	1.0E+13	ohms · cm	IEC 60093
Electric Strength	30	28	kV/mm	IEC 60243-1

Comparative Tracking Index	--	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification (0.800 mm)	HB	--		IEC 60695-11-10, -20
Additional Information	Dry	Conditioned		Test Method
ISO Type	PA 6, GHR, 27-030 N	--		ISO 1874
NOTE				
1.	Long Term			
2.	Short Term			
3.	10°C/min			

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