DURACON® M90-44

Acetal (POM) Copolymer

Polyplastics

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Technical Data

Product Description

DURACON® M90-44 is an Acetal (POM) Copolymer product. It can be processed by injection molding and is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America. Typical application: Automotive. Primary characteristic: flame rated.

General

Material Status	• Commercial: Active		
Literature [1]	• Processing - Molding Conditions (English) • Technical Datasheet (English)		
UL Yellow Card [2]	• E45034-100337529 • E45034-235766		
Search for UL Yellow Card	• Polyplastics • DURACON®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
UL File Number	• E45034		
Forms	• Pellets		
Processing Method	• Injection Molding		
Part Marking Code (ISO 11469)	• >POM<		

Physical	Nominal Value	Unit	Test Method
Density	1.41	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)	9.0	g/10 min	ASTM D1238 ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	8.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow : 2.00 mm	2.0	%	
Flow : 2.00 mm	2.0	%	
Water Absorption (24 hr, 23°C)	0.50	%	ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2700	MPa	ISO 527-2
Tensile Stress	62.0	MPa	ISO 527-2
Nominal Tensile Strain at Break	35	%	ISO 527-2
Flexural Modulus	2500	MPa	ISO 178
Flexural Stress	87.0	MPa	ISO 178
Coefficient of Friction			JIS K7218
Dynamic [4]	0.37		
vs. Steel - Dynamic [5]	0.40		
vs. Steel - Dynamic [6]	0.46		
Wear Factor			JIS K7218
0.49 MPa, 0.30 m/sec [7]	< 1.0	10^-8 mm³/N·m	
0.98 MPa, 0.30 m/sec [7]	< 1.0	10^-8 mm³/N·m	
0.98 MPa, 0.30 m/sec [8]	30	10^-8 mm³/N·m	
0.49 MPa, 0.30 m/sec [8]	65	10^-8 mm³/N·m	

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.0	kJ/m²	ISO 179/1eA

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	80		ISO 2039-2

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Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			ISO 75-2/A
1.8 MPa, Unannealed	95.0	°C	
CLTE			Internal Method
Flow : 23 to 55°C	1.2E-4	cm/cm/°C	
Transverse : 23 to 55°C	1.2E-4	cm/cm/°C	

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohms·cm	IEC 60093
Electric Strength (3.00 mm)	19	kV/mm	IEC 60243-1

Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94

Additional Information	Nominal Value	Unit
Color Number	CF2001/CD3068	

Injection	Nominal Value	Unit
Drying Temperature	80 to 90	°C
Drying Time	3.0 to 4.0	hr
Processing (Melt) Temp	190 to 210	°C
Mold Temperature	60 to 80	°C
Injection Pressure	50.0 to 100	MPa
Screw Speed	100 to 150	rpm
Injection Velocity	0 to 3	m/min

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] vs M90-44, 0.06 MPa, 15 cm/s

[5] 0.98 MPa, 30 cm/s

[6] 0.49 MPa, 30 cm/s

[7] Thrust, vs C-Steel, Steel Side

[8] Thrust, vs C-Steel, Material Side

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