

Ultraform® S 1320 0021

Acetal (POM) Copolymer

BASF Corporation

Message:

Free-flowing, rapidly solidifying grade with increased stiffness and heat distortion resistance. Highly stabilized to resist aggressive fuels including hot diesel fuel.

General Information			
Additive	Unspecified stabilizer		
Features	Rigid, good		
	Copolymer		
	Good liquidity		
	Fuel resistance		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS compliance		
Forms	Particles		
Processing Method	Injection molding		
Multi-Point Data	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
	Specific Heat vs. Temperature (ISO 11403-2)		
	Specific Volume vs Temperature (ISO 11403-2)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Resin ID (ISO 1043)	POM		
Physical	Nominal Value	Unit	Test Method
Density	1.41	g/cm³	ISO 1183
Apparent Density	0.85	g/cm³	
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	11.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction	2.1	%	ISO 294-4
Flow direction	2.1	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C	0.80	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	155	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus	3000	MPa	ISO 527-2
Tensile Stress (Yield)	66.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	9.0	%	ISO 527-2/50
Nominal Tensile Strain at Break	30	%	ISO 527-2/50
Tensile Creep Modulus ¹ (1000 hr)	1450	MPa	ISO 899-1
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	5.5	kJ/m ²	ISO 179/1eA
23°C	5.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	170	kJ/m ²	ISO 179/1eU
23°C	170	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	100	°C	ISO 75-2/A
Melting Temperature	171	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	1.1E-4	cm/cm/°C	ISO 11359-2
Maximum operating temperature-short cycle operation	100	°C	
Automotive Materials (> 1.00 mm)	Passed		FMVSS 302
ISO Type	POM-K, M-GNR, 04-002		ISO 9988-1
Screw Speed		mm/sec	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohms · cm	IEC 60093
Dielectric Strength	85	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.70		IEC 60250
Dissipation Factor (1 MHz)	5.0E-3		IEC 60250
Comparative Tracking Index (Solution A)	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	100	°C	
Drying Time	3.0	hr	
Suggested Max Moisture	0.20	%	
Hopper Temperature	200	°C	
Rear Temperature	200	°C	
Middle Temperature	200	°C	
Front Temperature	200	°C	
Nozzle Temperature	200	°C	
Processing (Melt) Temp	190 - 230	°C	
Mold Temperature	60.0 - 120	°C	
Injection instructions			

Residence Time : <10 min

NOTE

1. strain $\leq 0,5\%$, 23°C

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