Ultraform® N 2320 003 UNC Q600

BASF Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

General Information

Product Description

Ultraform N 2320 003 UNC Q600 is a rapidly freezing general-purpose injection-molding POM grade. It contains a mold release agent.

Applications
Typical applications include spring elements, clips, gas filler caps, gear wheels, small motor parts, curtain hooks and release buttons for safety belts.

General			
Material Status	• Commercial: Active		
Availability	• North America		
Additive	• Mold Release		
Features	• Copolymer	• General Purpose	• Good Mold Release
Uses	• Caps • Gears	• General Purpose • Springs	• Wheels
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• CHRYSLER MS-DB-100 CPN1532 Color: Natural		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.40		ASTM D792
Density	1.40	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	7.50	cm³/10min	ISO 1133
Molding Shrinkage - Flow (0.125 in)	0.020	in/in	
Molding Shrinkage			ISO 294-4
Across Flow	2.1	%	
Flow	2.1	%	
Water Absorption (Saturation)	0.80	%	ASTM D570
Water Absorption (Saturation, 73°F)	0.80	%	ISO 62
Water Absorption (Equilibrium, 50% RH)	0.20	%	ASTM D570
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	392000	psi	ISO 527-2
Tensile Strength (Yield, 73°F)	9430	psi	ASTM D638
Tensile Stress			ISO 527-2
Yield, -40°F	13500	psi	
Yield, 73°F	9430	psi	
Yield, 176°F	4790	psi	
Tensile Elongation (Yield, 73°F)	9.4	%	ASTM D638
Tensile Strain (Yield, 73°F)	9.4	%	ISO 527-2
Nominal Tensile Strain at Break (73°F)	27	%	ISO 527-2
Tensile Creep Modulus (1 hr)	261000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	203000	psi	ISO 899-1

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Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus (73°F)	358000	psi	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179
-22°F	2.6	ft·lb/in²	
73°F	2.9	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179
-22°F	90	ft·lb/in²	
73°F	100	ft·lb/in²	
Notched Izod Impact			ASTM D256
-40°F	1.1	ft·lb/in	
73°F	1.3	ft·lb/in	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	309	°F	ASTM D648
Heat Deflection Temperature (66 psi, Unannealed)	313	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	210	°F	
Heat Deflection Temperature (264 psi, Unannealed)	212	°F	ISO 75-2/A
Peak Melting Temperature	333	°F	ASTM D3418
Melting Temperature (DSC)	333	°F	ISO 3146
CLTE - Flow	3.3E-5	in/in/°F	ASTM E831
CLTE - Flow	6.1E-5	in/in/°F	
RTI Elec			UL 746
0.06 in	221	°F	
0.12 in	221	°F	
RTI Imp			UL 746
0.06 in	194	°F	
0.12 in	194	°F	
RTI Str			UL 746
0.06 in	194	°F	
0.12 in	221	°F	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity (0.0591 in)	1.0E+13	ohms	ASTM D257
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity (0.0591 in)	1.0E+15	ohms·cm	ASTM D257
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Electric Strength	1000	V/mil	IEC 60243-1
Dielectric Constant			IEC 60250
100 Hz	3.80		
1 MHz	3.80		
Dissipation Factor			IEC 60250
100 Hz	1.0E-3		
1 MHz	5.0E-3		
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.06 in	HB		
0.12 in	HB		

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Processing Information		
Injection	**Nominal Value**	**Unit**
Drying Temperature	176 to 230	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Processing (Melt) Temp	374 to 446	°F
Mold Temperature	140 to 248	°F
Injection Pressure	508 to 1020	psi

Notes

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