

Makroblend® UT403

Covestro - Polycarbonates - *Polycarbonate + PET*

General Information

Product Description

(PC+PET) blend, unreinforced; UV-stabilized; impact modified; high flow; injection molding grade. Good impact strength, dimensional stability and chemical resistance. UL746C f1 rated.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Impact Modifier	• UV Stabilizer	
Features	• Chemical Resistant • Good Dimensional Stability	• Good Impact Resistance • High Flow	• Impact Modified • UV Stabilized
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.23	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (270°C/5.0 kg)	34	cm ³ /10min	ISO 1133
Molding Shrinkage ²			ISO 2577
Across Flow	0.60 to 0.80	%	
Flow	0.60 to 0.80	%	
Water Absorption (Saturation, 73°F)	0.50	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	348000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	8410	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	8410	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	5.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (73°F)	100	%	ISO 527-2/50
Flexural Modulus ³ (73°F)	334000	psi	ISO 178
Flexural Stress ³			ISO 178
3.5% Strain, 73°F	10400	psi	
73°F	12500	psi	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength ⁴			ISO 180/A
-22°F	9.5	ft·lb/in ²	
73°F	33	ft·lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	255	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	208	°F	ISO 75-2/A
Vicat Softening Temperature	282	°F	ISO 306/B120
CLTE - Flow (73 to 131°F)	3.9E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	4.4E-5	in/in/°F	ISO 11359-2
Thermal Conductivity ⁵ (73°F)	1.4	Btu·in/hr/ft ² /°F	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (73°F)	1.0E+16	ohms·cm	IEC 60093
Electric Strength (73°F, 0.0394 in)	860	V/mil	IEC 60243-1



Relative Permittivity		IEC 60250
73°F, 100 Hz	3.20	
73°F, 1 MHz	3.10	
Dissipation Factor		IEC 60250
73°F, 100 Hz	1.7E-3	
73°F, 1 MHz	0.015	
Comparative Tracking Index (Solution A)	200 V	IEC 60112
Flammability	Nominal Value	Unit
Flame Rating		UL 94
0.06 in	HB	
0.12 in	HB	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Dry Air Dryer	230	°F
Drying Time - Dry Air Dryer	2.0 to 4.0	hr
Suggested Max Moisture	< 0.010	%
Suggested Shot Size	30 to 70	%
Rear Temperature	473 to 491	°F
Middle Temperature	482 to 500	°F
Front Temperature	491 to 509	°F
Nozzle Temperature	491 to 518	°F
Processing (Melt) Temp	500 to 536	°F
Mold Temperature	122 to 212	°F
Back Pressure	725 to 2180	psi
Vent Depth	9.8E-4 to 3.0E-3	in

Injection Notes

Hold Pressure (% of Injection Pressure): 50 - 75%
Peripheral Screw Speed: 0.05 - 0.2 m/s
Standard Melt Temperature: 270°C

Notes

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

² 600 bar

³ 0.079 in/min

⁴ 3 mm

⁵ Across Flow

