Makroblend® KU2-7912

Covestro - Polycarbonates - *Polycarbonate + PBT*

General Information

Product Description			
(PC+PBT)-blend, impact modified, Injection molding grade, medium flow, high toughness at low temperatures, ideal for painted application, unreinforced			
General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Impact Modifier		
Features	• Impact Modified • Low Temperature Toughness	• Medium Flow • Paintable	
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		
ISO Designation	• ISO 7792-1-PC/PBT,MHPR,-020		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.20	g/cm³	ISO 1183
Apparent (Bulk) Density	0.70	g/cm³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	21	cm³/10min	ISO 1133
Molding Shrinkage			ISO 2577
Across Flow [2]	0.70 to 0.90	%	
Across Flow : 194°F, 1 hr	0.10 to 0.20	%	
Flow [2]	0.70 to 0.90	%	
Flow : 194°F, 1 hr	0.10 to 0.20	%	
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)	305000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	7250	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	5800	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	4.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (73°F)	> 50	%	ISO 527-2/50
Flexural Modulus [3] (73°F)	290000	psi	ISO 178
Flexural Stress [3]			ISO 178
3.5% Strain, 73°F	10200	psi	
73°F	11600	psi	
Flexural Strain at Flexural Strength [4] (73°F)	5.6	%	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	21	ft·lb/in²	
73°F	29	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength			ISO 180/A
-22°F	21	ft·lb/in²	

-4°F	24	ft·lb/in²	
73°F	29	ft·lb/in²	
Unnotched Izod Impact Strength			ISO 180
-22°F	No Break		
73°F	No Break		
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness	14500	psi	ISO 2039-1
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	212	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	183	°F	ISO 75-2/A
Vicat Softening Temperature	248	°F	ISO 306/B120
Melting Temperature [5]	433	°F	ISO 11357-3
CLTE - Flow (73 to 131°F)	5.0E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	5.0E-5	in/in/°F	ISO 11359-2
Thermal Conductivity [6] (73°F)	1.4	Btu·in/hr/ft²/°F	ISO 8302
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+17	ohms	IEC 60093
Volume Resistivity (73°F)	> 1.0E+17	ohms·cm	IEC 60093
Electric Strength (73°F, 0.0394 in)	790	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	1.0E-3		
73°F, 1 MHz	0.013		
Comparative Tracking Index			IEC 60112
Solution A	600	V	
Solution B	125	V	
Electrolytic Corrosion (73°F)	A1		IEC 60426
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.031 in	HB		
0.06 in	HB		
Glow Wire Flammability Index (0.08 in)	1380	°F	IEC 60695-2-12
Oxygen Index [7]	21	%	ISO 4589-2
Burning Rate [8] (> 39.4 mil)	passed		ISO 3795
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Gottfert Melt Viscosity [9] (500°F)	570	Pa·s	Internal Method

Processing Information

Injection	**Nominal Value**	**Unit**
Drying Temperature - Dry Air Dryer	221	°F
Drying Time - Dry Air Dryer	2.0 to 4.0	hr
Suggested Max Moisture	< 0.020	%
Suggested Shot Size	30 to 70	%
Rear Temperature	446 to 464	°F
Middle Temperature	464 to 482	°F
Front Temperature	482 to 500	°F
Nozzle Temperature	500 to 518	°F
Processing (Melt) Temp	482 to 518	°F
Mold Temperature	140 to 176	°F
Back Pressure	725 to 1450	psi
Vent Depth	9.8E-4 to 3.0E-3	in

Injection Notes

Hold Pressure (% of Injection Pressure): 50 - 75%
Peripheral Screw Speed: 0.1-0.2 m/s
Standard Melt Temperature: 260°C