Makroblend® UT250

Covestro - Polycarbonates - *Polycarbonate + PET*

General Information

Product Description

(PC+PET)-blend, impact modified, easy release, injection molding. Makroblend UT250 offers high heat resistance, good chemical resistance and flowability. Additionally, molded parts from UT250 having exceptional dimensional stability.

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

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.22	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (265°C/5.0 kg)	22	cm³/10min	ISO 1133
Molding Shrinkage			ISO 2577
Across Flow [2]	0.60 to 0.80	%	
Across Flow : 194°F, 1 hr	0.10 to 0.20	%	
Flow [2]	0.60 to 0.80	%	
Flow : 194°F, 1 hr	0.10 to 0.20	%	
Water Absorption (Saturation, 73°F)	0.55	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	326000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	7980	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	7250	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	5.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (73°F)	> 50	%	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	12800	psi	
Flexural Strain at Flexural Strength [4] (73°F)	6.1	%	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	14	ft·lb/in²	
73°F	33	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength			
-22°F	12	ft·lb/in²	ISO 180/A
-22°F	No Break		ISO 180/1C
-4°F	19	ft·lb/in²	ISO 180/A
73°F	29	ft·lb/in²	ISO 180/A

73°F	No Break		ISO 180/1C
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)	257	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	230	°F	ISO 75-2/A
Vicat Softening Temperature	284	°F	ISO 306/B120
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)	860	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
73°F, 100 Hz	3.20		
73°F, 1 MHz	3.00		
Dissipation Factor			IEC 60250
73°F, 100 Hz	1.6E-3		
73°F, 1 MHz	0.015		
Comparative Tracking Index (Solution A)	250	V	IEC 60112
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Drying Temperature	230	°F	ISO 294
Drying Time	4.0	hr	ISO 294
Residual Humidity	< 0.010	%	ISO 294

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

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

Notes

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

[2] 600 bar

[3] 0.079 in/min

[4] 2.0 mm/min