

Makroblend® UT250 HR

Polycarbonate + PET

Covestro - Polycarbonates

Message:

(PC+PET)-blend, impact modified, improved hydrolysis resistance compared to standard Makroblend UT grades, injection molding grade. Good low-temperature impact strength, flowability, and chemical resistance. Applications include lead-acid battery housings.

General Information			
Additive	Impact Modifier		
Features	Good Chemical Resistance		
	Good Flow		
	Hydrolysis Resistant		
	Impact Modified		
	Low Temperature Impact Resistance		
Uses	Battery Cases		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.22	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (270°C/5.0 kg)	22.0	cm ³ /10min	ISO 1133
Molding Shrinkage ¹			ISO 2577
Across Flow	0.60 to 0.80	%	
Flow	0.60 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.16	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2200	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield, 23°C	55.0	MPa	
Break, 23°C	57.0	MPa	
Tensile Strain (Yield, 23°C)	4.9	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	110	%	ISO 527-2/50
Flexural Modulus ² (23°C)	2200	MPa	ISO 178
Flexural Stress ³			ISO 178
23°C	82.0	MPa	
3.5% Strain, 23°C	68.0	MPa	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA

-30°C	35	kJ/m ²	
23°C	65	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			
-30°C ⁴	40	kJ/m ²	ISO 7391
-30°C	No Break		ISO 180/1C
23°C ⁵	60	kJ/m ²	ISO 7391
23°C	No Break		ISO 180/1C
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-30°C	47.0	J	
23°C	45.0	J	
Multi-Axial Instrumented Impact Peak Force			ISO 6603-2
-30°C	5300	N	
23°C	4300	N	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	123	°C	ISO 75-2/B
1.8 MPa, Unannealed	102	°C	ISO 75-2/A
Vicat Softening Temperature	137	°C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 23 to 55°C	7.5E-5	cm/cm/°C	
Transverse : 23 to 55°C	7.5E-5	cm/cm/°C	
Thermal Conductivity ⁶ (23°C)	0.20	W/m/K	ISO 8302
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.750 mm, Bayer Test	HB		
1.50 mm, Bayer Test	HB		
Injection	Nominal Value	Unit	
Drying Temperature	110	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	< 0.010	%	
NOTE			
1.	600 bar		
2.	2.0 mm/min		
3.	2.0 mm/min		
4.	Based on ISO 180-A		
5.	Based on ISO 180-A		
6.	Cross-flow		

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