

Makroblend® UT6005

Polycarbonate + PBT

Covestro - Polycarbonates

Message:

(PC+PBT)-blend, impact modified, easy release, injection molding grade. Makroblend DP UT6005* offers an exceptional low-temperature impact strength, good flowability and excellent chemical resistance.

General Information			
Additive	Impact Modifier		
Features	Good Chemical Resistance		
	Good Flow		
	Good Mold Release		
	Impact Modified		
	Low Temperature Impact Resistance		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.20	g/cm ³	ISO 1183
Apparent Density	0.65	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	18.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 2577
Across Flow ¹	0.70 to 0.90	%	
Across Flow : 90°C, 1 hr	0.10 to 0.20	%	
Flow ²	0.70 to 0.90	%	
Flow : 90°C, 1 hr	0.10 to 0.20	%	
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	108	MPa	ISO 2039-1
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	60.0	MPa	
Break, 23°C	50.0	MPa	
Tensile Strain (Yield, 23°C)	5.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2/50
Flexural Modulus ³ (23°C)	2150	MPa	ISO 178
Flexural Stress ⁴			ISO 178

23°C	80.0	MPa	
3.5% Strain, 23°C	70.0	MPa	
Flexural Strain at Flexural Strength ⁵ (23°C)	6.0	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	40	kJ/m ²	
23°C	60	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180/A
-40°C	20	kJ/m ²	
-30°C	35	kJ/m ²	
-20°C	45	kJ/m ²	
23°C	50	kJ/m ²	
Unnotched Izod Impact Strength			ISO 180
-30°C	No Break		
23°C	No Break		
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-30°C	58.0	J	
23°C	47.0	J	
Multi-Axial Instrumented Impact Peak Force			ISO 6603-2
-30°C	5000	N	
23°C	3800	N	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	110	°C	ISO 75-2/B
1.8 MPa, Unannealed	85.0	°C	ISO 75-2/A
Vicat Softening Temperature	126	°C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 23 to 55°C	9.0E-5	cm/cm/°C	
Transverse : 23 to 55°C	9.0E-5	cm/cm/°C	
Thermal Conductivity ⁶ (23°C)	0.20	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+17	ohms	IEC 60093
Volume Resistivity (23°C)	> 1.0E+17	ohms · cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	30	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.20		
23°C, 1 MHz	3.00		
Dissipation Factor			IEC 60250

23°C, 100 Hz	7.0E-4		
23°C, 1 MHz	4.5E-3		
Comparative Tracking Index			IEC 60112
Solution A	600	V	
Solution B	125	V	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm, Bayer Test)	HB		UL 94
Glow Wire Flammability Index (2.00 mm)	750	°C	IEC 60695-2-12
Oxygen Index ⁷	21	%	ISO 4589-2
NOTE			
1.	600 bar		
2.	600 bar		
3.	2.0 mm/min		
4.	2.0 mm/min		
5.	2 mm/min		
6.	Cross-flow		
7.	Procedure A		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

