

Makroblend® UT6005 (PC+PBT)-I

Covestro Deutschland AG

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

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	18	cm³/10min	ISO 1133
Temperature	260	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2200	MPa	ISO 527
Yield stress	60	MPa	ISO 527
Yield strain	5	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Impact Strength (Charpy), +23°C	no break	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	no break	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	60	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	40	kJ/m²	ISO 179/1eA
Puncture - maximum force, +23°C	3800	N	ISO 6603-2
Puncture - maximum force, -30°C	5000	N	ISO 6603-2
Puncture energy, +23°C	47	J	ISO 6603-2
Puncture energy, -30°C	58	J	ISO 6603-2

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	85	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	110	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	90	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	90	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.6	mm	-
Oxygen index	21	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.2	-	IEC 62631-2-1
Relative permittivity, 1MHz	3	-	IEC 62631-2-1
Dissipation Factor, 100Hz	7	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	45	E-4	IEC 62631-2-1
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	>1E15	Ohm	IEC 62631-3-2
Electric Strength	30	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.5	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1200	kg/m³	ISO 1183

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	260	°C	ISO 294
Injection Molding, mold temperature	70	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	100 - 105	°C	-
Pre-drying - Time	2 - 4	h	-
Processing humidity	≤0.01	%	-

Melt temperature	250 - 270	°C	-
Mold temperature	60 - 80	°C	-

Characteristics

Processing

Injection Molding

Delivery form

Pellets

Additives

Release agent

Special Characteristics

Impact modified

Chemical Resistance

General Chemical Resistance

Injection Molding

PREPROCESSING

Max. Water content: 0.01 %

Drying temperature: 100 - 105 °C

Drying time:

Circulating air drying oven (50 % fresh air) 4-12 h

Fresh air dryer (high speed dryer) 2-4 h

Dry air dryer 2-4 h

PROCESSING

Melt temperature: 250-270 °C

Mold temperature: 60-80 °C

Use open nozzle.

Disclaimer

Liability Exclusion

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