Makroblend® UT250 HR

PC+PET Blends, elastomer modified / Non reinforced

(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.

ISO Shortname

	Property	Test Condition	Unit	Standard	typical Value
Rheological properties					
C	Melt volume-flow rate	270 °C	cm³/10 min	ISO 1133	22
	Molding shrinkage, parallel/normal	Value range based on general practical experience (600bar)	%	b.o. ISO 2577	0.6-0.8
Mechanical properties (23 °C/50 % r. h.)					
C	Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2200
C	Yield stress	50 mm/min	MPa	ISO 527-1,-2	55
C	Yield strain	50 mm/min	%	ISO 527-1,-2	4.9
C	Nominal strain at break	50 mm/min	%	ISO 527-1,-2	110
	Stress at break	50 mm/min	MPa	ISO 527-1,-2	57
	Flexural modulus	2 mm/min	MPa	ISO 178	2200
	Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178	68
	Flexural strength	2 mm/min	MPa	ISO 178	82
C	Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	N
C	Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	N
C	Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	65
C	Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	35
C	Puncture maximum force	23 °C	N	ISO 6603-2	4300
C	Puncture maximum force	-30 °C	N	ISO 6603-2	5300
C	Puncture energy	23 °C	J	ISO 6603-2	45
C	Puncture energy	-30 °C	J	ISO 6603-2	47
	Izod impact strength	23 °C	kJ/m²	ISO 180-1C	N
	Izod impact strength	-30 °C	kJ/m²	ISO 180-1C	N
	Izod notched impact strength	23 °C	kJ/m²	ISO 7391/b.o. ISO 180-A	60
	Izod notched impact strength	-30 °C	kJ/m²	ISO 7391/b.o. ISO 180-A	40
Thermal properties					
C	Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	102
C	Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	123
	Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	137
C	Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.75
C	Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.75
C	Burning behavior UL 94 (1.5 mm)		Class	UL 94	HB (Bayer Test)
C	Burning behavior UL 94	0.75 mm	Class	UL 94	HB (Bayer Test)
	Thermal conductivity, cross-flow	23 °C; 50 % r. h.	W/(m·K)	ISO 8302	0.2
Other properties (23 °C)					
C	Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.5
C	Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.16
C	Density		kg/m³	ISO 1183-1	1215

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	Property	Test Condition	Unit	Standard	typical Value
Processing conditions for test specimens					
	Drying temperature		°C	ISO 294	110
	Drying time		h	ISO 294	4
	Residual humidity		%	ISO 294	<0.01
C	Injection molding-Melt temperature		°C	ISO 294	270
C	Injection molding-Mold temperature		°C	ISO 294	70

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

Impact properties: N = non-break, P = partial break, C = complete break

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Disclaimer

Information Impact properties

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Typical value

These values are typical values only. Unless explicitly agreed in written form, the do not constitute a binding material specification or warranted values. Values may be affected by the design of the mold/die, the processing conditions and coloring/pigmentation of the product. Unless specified to the contrary, the property values given have been established on standardized test specimens at room temperature.

General

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Disclaimer Non Medical Grade

This product is not designated for the manufacture of a medical device or of intermediate products for medical devices (1). [This product is also not designated for Food Contact (2), including drinking water, or cosmetic applications. If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, for Food Contact products or cosmetic applications Covestro must be contacted in advance to provide its agreement to sell such product for such purpose.] Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for Food Contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by Covestro. 1) Please see the "Guidance on Use of Covestro Products in a Medical Application" document. 2) As defined in Commission Regulation (EU) 1935/2004.