

# Makroblend® EL700

Polycarbonate + PET

Covestro - Polycarbonates

## Message:

(PC+PET) blend; unreinforced; flame-retardant; impact modified; injection molding grade. Good impact strength, dimensional stability and chemical resistance. Uses include indoor electrical enclosures.

General Information			
UL YellowCard	E41613-101010259		
Additive	Flame Retardant		
	Impact Modifier		
Features	Flame Retardant		
	Good Chemical Resistance		
	Good Dimensional Stability		
	Good Impact Resistance		
	Impact Modified		
Uses	Electrical/Electronic Applications		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.28	g/cm <sup>3</sup>	ISO 1183
Melt Volume-Flow Rate (MVR) (270°C/5.0 kg)	15.0	cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage <sup>1</sup>			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	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2350	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield, 23°C	58.0	MPa	
Break, 23°C	57.0	MPa	
Tensile Strain (Yield, 23°C)	4.5	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	100	%	ISO 527-2/50
Flexural Modulus <sup>2</sup> (23°C)	2300	MPa	ISO 178
Flexural Stress <sup>3</sup>			ISO 178
23°C	86.0	MPa	

3.5% Strain,23°C	72.0	MPa	
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	30	kJ/m <sup>2</sup>	
23°C	65	kJ/m <sup>2</sup>	
Notched Izod Impact Strength			ISO 180/A
-30°C	30	kJ/m <sup>2</sup>	
23°C	60	kJ/m <sup>2</sup>	
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-30°C	50.0	J	
23°C	45.0	J	
Multi-Axial Instrumented Impact Peak Force			ISO 6603-2
-30°C	5200	N	
23°C	4100	N	
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Heat Deflection Temperature			
0.45 MPa, Unannealed	123	°C	ISO 75-2/B
1.8 MPa, Unannealed	100	°C	ISO 75-2/A
Vicat Softening Temperature	136	°C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 23 to 55°C	8.0E-5	cm/cm/°C	
Transverse : 23 to 55°C	9.0E-5	cm/cm/°C	
Thermal Conductivity <sup>4</sup> (23°C)	0.20	W/m/K	ISO 8302
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+16	ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	34	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.10		
23°C, 1 MHz	3.00		
Dissipation Factor			IEC 60250
23°C, 100 Hz	2.0E-3		
23°C, 1 MHz	0.013		
Comparative Tracking Index (Solution A)	225	V	IEC 60112
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating			UL 94
1.50 mm	V-0		
	V-0		
3.00 mm	5VA		

NOTE

- |    |            |
|----|------------|
| 1. | 600 bar    |
| 2. | 2.0 mm/min |
| 3. | 2.0 mm/min |
| 4. | Cross-flow |

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## 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

