

## Makroblend® M5005 FR

Covestro - Polycarbonates - *Polycarbonate + PBT*

### General Information

#### Product Description

(PC+PBT) blend; unreinforced; flame-retardant; UV-stabilized; impact modified; injection molding grade. Good impact strength, dimensional stability and excellent chemical resistance. Manufactured according to GMP, Tested only according to ISO 10993-5 and ISO 10993-10 for contact with uncompromised skin only; for questions regarding biocompatibility we ask for an email inquiry under [plastics@covestro.com](mailto:plastics@covestro.com).

#### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Flame Retardant	• Impact Modifier	• UV Stabilizer
Features	• Chemical Resistant • Flame Retardant	• Good Dimensional Stability • Good Impact Resistance	• Impact Modified • UV Stabilized
Uses	• Medical/Healthcare Applications		
Agency Ratings	• ISO 10993-10	• ISO 10993-5	
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		
ISO Designation	• PC+PBT-I FR(40)		

### Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.25	g/cm <sup>3</sup>	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	35	cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage <sup>2</sup>			ISO 2577
Across Flow	0.70 to 0.90	%	
Flow	0.70 to 0.90	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	334000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	7980	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	6530	psi	ISO 527-2/5
Tensile Strain (Yield, 73°F)	4.0	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	> 50	%	ISO 527-2/5
Nominal Tensile Strain at Break (73°F)	> 50	%	ISO 527-2/5
Flexural Modulus <sup>3</sup> (73°F)	341000	psi	ISO 178
Flexural Stress <sup>3</sup> (73°F)	12300	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	24	ft·lb/in <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	No Break		ISO 179/1eU
Notched Izod Impact Strength			ISO 180/A
-22°F	6.2	ft·lb/in <sup>2</sup>	
73°F	21	ft·lb/in <sup>2</sup>	
Unnotched Izod Impact Strength (73°F)	No Break		ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	192	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	171	°F	ISO 75-2/A
Vicat Softening Temperature	210	°F	ISO 306/B120
CLTE - Flow (73 to 131°F)	5.0E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	5.0E-5	in/in/°F	ISO 11359-2



<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (0.09 in)	V-0		UL 94
<b>Fill Analysis</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Melt Viscosity (500°F, 1000 sec <sup>-1</sup> )	260	Pa·s	ISO 11443-A

### Processing Information

<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>
Drying Temperature - Dry Air Dryer	176	°F
Drying Time - Dry Air Dryer	> 4.0	hr
Suggested Max Moisture	< 0.010	%
Processing (Melt) Temp	500	°F
Mold Temperature	158	°F

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 600 bar

<sup>3</sup> 0.079 in/min

