Makroblend® AR205 RE

Covestro - Polycarbonates - *Polycarbonate + PET*

General Information

Product Description			
(PC+PET) blend, easy flow, impact modified; application: automotive body panels Partially bio-circular grade / Attributed via mass balance (according to ISCC PLUS Standard).			
General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Impact Modifier		
Features	• Good Flow	• Impact Modified	
Uses	• Automotive Applications		
Agency Ratings	• ISCC PLUS		
RoHS Compliance	• RoHS Compliant		
ISO Designation	• PC+PBT-I		

Properties [1]

Physical	**Nominal Value**	**Unit**	**Test Method**
Density (73°F)	1.21	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (270°C/5.0 kg)	38	cm³/10min	ISO 1133
Molding Shrinkage [2]			ISO 2577
Across Flow : 518°F, 0.118 in	0.70 to 0.90	%	
Flow : 518°F, 0.118 in	0.70 to 0.90	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	319000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	7830	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	6960	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	4.8	%	ISO 527-2/50
Nominal Tensile Strain at Break (73°F)	> 50	%	ISO 527-2/50
Flexural Modulus [3] (73°F)	319000	psi	ISO 178
Flexural Stress [3]			ISO 178
3.5% Strain, 73°F	9860	psi	
73°F	11600	psi	
Flexural Strain at Flexural Strength [4] (73°F)	5.8	%	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	9.5	ft·lb/in²	
73°F	21	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength			
-22°F	9.5	ft·lb/in²	ISO 180/A
-22°F	No Break		ISO 180/1C
73°F	21	ft·lb/in²	ISO 180/A
73°F	No Break		ISO 180/1C
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-22°F	35.4	ft·lb	

73°F	31.0	ft·lb	
Multi-Axial Instrumented Impact Peak Force			ISO 6603-2
-22°F	1120	lbf	
73°F	877	lbf	

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	259	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	208	°F	ISO 75-2/A
Vicat Softening Temperature	280	°F	ISO 306/B120
CLTE - Flow (73 to 131°F)	4.5E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	4.6E-5	in/in/°F	ISO 11359-2

Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (518°F, 1000 sec^-1)	200	Pa·s	ISO 11443-A

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Dry Air Dryer	230	°F
Drying Time - Dry Air Dryer	2.0 to 4.0	hr
Suggested Max Moisture	< 0.010	%
Suggested Shot Size	30 to 70	%
Rear Temperature	428 to 446	°F
Middle Temperature	464 to 482	°F
Front Temperature	482 to 500	°F
Nozzle Temperature	518 to 536	°F
Processing (Melt) Temp	500 to 536	°F
Mold Temperature	140 to 176	°F
Back Pressure	725 to 1450	psi
Vent Depth	9.8E-4 to 3.0E-3	in

Injection Notes

Peripheral Screw Speed: 0.1-0.2 m/s
Hold Pressure (% of Injection Pressure): 50-75%
Standard Melt Temperature: 270°C

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 150x105x3mm, MT 70°C, 600 bar

[3] 0.079 in/min

[4] 2.0 mm/min