

Makroblend® UT215 M

Covestro - Polycarbonates - *Polycarbonate + PET*

General Information

Product Description

(PC+PET) Blend, 5% mineral filled, easy flow, easy release, good impact strength, for automotive applications

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Mineral, 5.0% Filler by Weight
Features	• Good Flow • Good Impact Resistance • Good Mold Release
Uses	• Automotive Applications

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.27	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (270°C/5.0 kg)	49	cm ³ /10min	ISO 1133
Molding Shrinkage ²			ISO 2577
Across Flow : 518°F, 0.118 in	0.60 to 0.75	%	
Flow : 518°F, 0.118 in	0.60 to 0.75	%	
Water Absorption (Saturation, 73°F)	0.45	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	442000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	9430	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	7250	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	5.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (73°F)	70	%	ISO 527-2/50
Flexural Modulus ³ (73°F)	450000	psi	ISO 178
Flexural Stress ³			ISO 178
3.5% Strain, 73°F	13100	psi	
73°F	15200	psi	
Flexural Strain at Flexural Strength ⁴ (73°F)	5.8	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	2.9	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	95	ft·lb/in ²	
73°F	No Break		
Notched Izod Impact Strength			
-22°F	83	ft·lb/in ²	ISO 180/1C
73°F	2.9	ft·lb/in ²	ISO 180/A
73°F	No Break		ISO 180/1C
Multi-Axial Instrumented Impact Energy (73°F)	33.2	ft·lb	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force (73°F)	1060	lbf	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	266	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	234	°F	ISO 75-2/A
Vicat Softening Temperature	284	°F	ISO 306/B120
CLTE - Flow (73 to 131°F)	3.3E-6	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.3E-6	in/in/°F	ISO 11359-2



Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity ⁵ (518°F)	205	Pa·s	

Additional Information	Nominal Value	Unit	Test Method
Drying Time	4.0 to 6.0	hr	ISO 294

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	500 to 518	°F
Nozzle Temperature	518 to 536	°F
Processing (Melt) Temp	518 to 536	°F
Mold Temperature	158 to 176	°F
Back Pressure	725 to 1450	psi
Vent Depth	7.9E-4 to 1.2E-3	in

Injection Notes

Hold Pressure (% of Injection Pressure): 50-75%
 Peripheral Screw Speed: 0.1-0.2 m/s
 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

⁵ 1000s-1

