

LEXAN™ 503RS resin

Monday, October 05, 2015

General Information

Product Description

LEXAN 503RS is a medium viscosity, glass reinforced, flame retardant grade UV stabilized grade.

General

Material Status	• Commercial: Active
Availability	• Europe
Filler / Reinforcement	• Glass Fiber
Additive	• UV Stabilizer
Features	• Flame Retardant • Medium Viscosity
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.26	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	0.488	in ³ /10min	ISO 1133
Molding Shrinkage - Flow ²	2.0E-3 to 6.0E-3	in/in	Internal Method
Water Absorption (Saturation, 73°F)	0.31	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.13	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	566000	psi	ISO 527-2/1
Tensile Stress (Yield)	10200	psi	ISO 527-2/5
Tensile Stress (Break)	9430	psi	ISO 527-2/5
Tensile Strain (Yield)	3.0	%	ISO 527-2/5
Tensile Strain (Break)	4.0	%	ISO 527-2/5
Flexural Modulus ³	580000	psi	ISO 178
Flexural Stress ^{3,4}	17400	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵			ISO 179/1eA
-22°F	3.8	ft·lb/in ²	
73°F	4.3	ft·lb/in ²	
Charpy Unnotched Impact Strength ⁵			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength ⁶			ISO 180/1A
-22°F	3.8	ft·lb/in ²	
73°F	4.3	ft·lb/in ²	

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SABIC Innovative Plastics Europe - Polycarbonate

Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact Strength ⁶			ISO 180/1U
-22°F		48 ft·lb/in ²	
73°F		No Break	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	16700	psi	ISO 2039-1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁷			ISO 75-2/Be
66 psi, Unannealed, 3.94 in Span	288	°F	
Heat Deflection Temperature ⁷			ISO 75-2/Ae
264 psi, Unannealed, 3.94 in Span	279	°F	
Vicat Softening Temperature			
--	291	°F	ISO 306/B50
--	297	°F	ISO 306/B120
Ball Pressure Test (257°F)	Pass		IEC 60695-10-2
CLTE - Flow (73 to 176°F)	2.2E-5	in/in/°F	ISO 11359-2
Thermal Conductivity	1.5	Btu·in/hr/ft ² /°F	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength (0.126 in, in Oil)	410	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.90		
60 Hz	2.90		
1 MHz	2.80		
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		
60 Hz	1.0E-3		
1 MHz	0.010		
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.0591 in, Testing by SABIC)	V-0		UL 94
Glow Wire Flammability Index (0.0394 in)	1760	°F	IEC 60695-2-12
Oxygen Index	36	%	ISO 4589-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	140 to 176	°F
Rear Temperature	518 to 572	°F
Middle Temperature	536 to 590	°F
Front Temperature	554 to 608	°F
Nozzle Temperature	536 to 590	°F

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Injection	Nominal Value	Unit
Processing (Melt) Temp	554 to 608	°F
Mold Temperature	176 to 248	°F

Notes

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

² Tensile Bar

³ 0.079 in/min

⁴ Yield

⁵ 80*10*3 sp=62mm

⁶ 80*10*3

⁷ 120*10*4 mm

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