LEXAN™ 915AU resin

Friday, 06 March 2015

General Information

Product Description

LEXAN resin grade 915AU is a flame retardant polycarbonate featuring non brominated and non chlorinated FR systems, with good flow, and good UV stability. It is available in transparent colors, intended to meet WEEE/RoHS requirements for various applications

General

Material Status	• Commercial: Active		
Availability	• Europe		
Additive	• Flame Retardant		
Features	• Bromine Free • Chlorine Free	• Flame Retardant • Good Flow	• Good UV Resistance
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Processing Method	• Injection Molding		

ASTM and ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792
Density	1.20	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	23	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	21.0	cm³/10min	ISO 1133
Molding Shrinkage - Flow			Internal Method
-- [2]	0.50 to 0.70	%	
3.20 mm	0.50 to 0.70	%	
Water Absorption (Saturation, 23°C)	0.35	%	ISO 62
Water Absorption (Equilibrium, 23°C, 50% RH)	0.15	%	ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus [3]	2400	MPa	ASTM D638
Tensile Modulus	2400	MPa	ISO 527-2/1
Tensile Strength [4] (Yield)	66.0	MPa	ASTM D638
Tensile Stress (Yield)	66.0	MPa	ISO 527-2/50
Tensile Strength [4] (Break)	66.0	MPa	ASTM D638
Tensile Stress (Break)	66.0	MPa	ISO 527-2/50
Tensile Elongation [4] (Yield)	6.0	%	ASTM D638
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Elongation [4] (Break)	100	%	ASTM D638
Tensile Strain (Break)	100	%	ISO 527-2/50
Flexural Modulus [5] (50.0 mm Span)	2400	MPa	ASTM D790
Flexural Modulus [6]	2400	MPa	ISO 178

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SABIC Innovative Plastics Europe - Polycarbonate

Mechanical	Nominal Value	Unit	Test Method
Flexural Stress [6, 7]	98.0	MPa	ISO 178
Flexural Strength [5] (Yield, 50.0 mm Span)	95.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			
-30°C [8]	12	kJ/m²	ISO 179/1eA
23°C [8]	65	kJ/m²	ISO 179/1eA
23°C	11	kJ/m²	ISO 179/2C
Charpy Unnotched Impact Strength [8]			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			ASTM D256
-30°C	110	J/m	
23°C	650	J/m	
Notched Izod Impact Strength [9]			ISO 180/1A
-30°C	11	kJ/m²	
23°C	65	kJ/m²	
Unnotched Izod Impact Strength [9]			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	60.0	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature [10]			ISO 75-2/Be
0.45 MPa, Unannealed, 100 mm Span	134	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 3.20 mm	125	°C	
Heat Deflection Temperature [10]			ISO 75-2/Ae
1.8 MPa, Unannealed, 100 mm Span	123	°C	
Vicat Softening Temperature	140	°C	ASTM D1525 [11]
Vicat Softening Temperature			
--	140	°C	ISO 306/B50
--	141	°C	ISO 306/B120
CLTE - Flow (-40 to 40°C)	7.0E-5	cm/cm/°C	ASTM E831
CLTE - Transverse (-40 to 40°C)	7.0E-5	cm/cm/°C	ASTM E831
CLTE - Transverse (-40 to 40°C)	7.0E-5	cm/cm/°C	ISO 11359-2
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
1.50 mm	V-2		
3.00 mm	V-0		
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.586		ISO 489
Transmittance (2540 µm)	88.0	%	ASTM D1003

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	60.0 to 80.0	°C
Rear Temperature	260 to 280	°C
Middle Temperature	270 to 290	°C
Front Temperature	280 to 310	°C
Nozzle Temperature	270 to 290	°C
Processing (Melt) Temp	280 to 310	°C
Mold Temperature	80.0 to 110	°C

Notes

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

[2] Tensile Bar

[3] 5.0 mm/min

[4] Type I, 50 mm/min

[5] 1.3 mm/min

[6] 2.0 mm/min

[7] Yield

[8] 80*10*3 sp=62mm

[9] 80*10*3

[10] 120*10*4 mm

[11] Rate B (120°C/h), Loading 2 (50 N)

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