

GELOY™ CR8510 resin

Acrylonitrile Styrene Acrylate
SABIC Innovative Plastics

Message:

ASA with outstanding UV exposure performance for both exterior and interior applications. F1 Rated.

General Information			
UL YellowCard	E121562-100054229		
Features	Good UV Resistance		
Uses	Outdoor Applications		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.08	g/cm ³	ASTM D792
--	1.07	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	6.3	g/10 min	
260°C/5.0 kg	11	g/10 min	
280°C/3.8 kg	7.8	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
220°C/10.0 kg	6.00	cm ³ /10min	
260°C/5.0 kg	10.0	cm ³ /10min	
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Outdoor Suitability	f1		UL 746C
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	93		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1970	MPa	ASTM D638
-- ²	2080	MPa	ASTM D638
--	2040	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	40.0	MPa	ASTM D638
Yield	43.0	MPa	ISO 527-2/50
Break ⁴	33.0	MPa	ASTM D638
Break	35.0	MPa	ISO 527-2/50
Tensile Elongation			

Yield ⁵	3.6	%	ASTM D638
Yield	3.3	%	ISO 527-2/50
Break ⁶	60	%	ASTM D638
Break	19	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁷	2170	MPa	ASTM D790
-- ⁸	2060	MPa	ISO 178
Flexural Stress			
--	64.0	MPa	ISO 178
Yield, 50.0 mm Span ⁹	68.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰ (23°C)	14	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	60	J/m	ASTM D256
23°C	400	J/m	ASTM D256
-30°C ¹¹	6.0	kJ/m ²	ISO 180/1A
23°C ¹²	15	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	4.00	J	
23°C, Total Energy	30.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	103	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹³	103	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	90.0	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁴	88.0	°C	ISO 75-2/Ae
1.8 MPa, Unannealed, 64.0 mm Span ¹⁵	89.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	98.0	°C	ASTM D1525 ¹⁶
--	102	°C	ISO 306/B50
--	105	°C	ISO 306/B120
Ball Pressure Test ¹⁷ (98°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	8.4E-5	cm/cm/°C	
Transverse : -40 to 40°C	9.5E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Electric Strength (1.50 mm, in Oil)	26	kV/mm	IEC 60243-1
Dissipation Factor			ASTM D150
100 kHz	0.018		
1 MHz	0.026		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method

Flame Rating (1.50 mm)	HB	UL 94
Optical	Nominal Value	Test Method
Gardner Gloss (60°, Untextured)	94	ASTM D523
Injection	Nominal Value	Unit
Drying Temperature	85.0 to 90.0	°C
Drying Time	4.0	hr
Drying Time, Maximum	8.0	hr
Suggested Max Moisture	0.040	%
Suggested Shot Size	40 to 80	%
Rear Temperature	215 to 250	°C
Middle Temperature	220 to 255	°C
Front Temperature	230 to 260	°C
Nozzle Temperature	220 to 255	°C
Processing (Melt) Temp	240 to 270	°C
Mold Temperature	60.0 to 85.0	°C
Back Pressure	0.300 to 1.00	MPa
Screw Speed	30 to 80	rpm
Vent Depth	0.038 to 0.076	mm
NOTE		
1.	5.0 mm/min	
2.	50 mm/min	
3.	Type I, 50 mm/min	
4.	Type I, 50 mm/min	
5.	Type I, 50 mm/min	
6.	Type I, 50 mm/min	
7.	1.3 mm/min	
8.	2.0 mm/min	
9.	1.3 mm/min	
10.	80*10*4 sp=62mm	
11.	80*10*4	
12.	80*10*4	
13.	80*10*4 mm	
14.	120*10*4 mm	
15.	80*10*4 mm	
16.	Rate B (120°C/h), Loading 2 (50 N)	
17.	Approximate maximum	

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