

GELOY™ RESIN CR8510

REGION AMERICAS

DESCRIPTION

ASA, excellent weatherability, injection molding.

TYPICAL PROPERTY VALUES

Revision 20170816

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	40	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	33	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	3.6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	60	%	ASTM D 638
Tensile Modulus, 50 mm/min	2070	MPa	ASTM D 638
Tensile Modulus, 5 mm/min	1970	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	68	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2170	MPa	ASTM D 790
Hardness, Rockwell R	93	-	ASTM D 785
Tensile Stress, yield, 50 mm/min	43	MPa	ISO 527
Tensile Stress, break, 50 mm/min	35	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.3	%	ISO 527
Tensile Strain, break, 50 mm/min	19	%	ISO 527
Tensile Modulus, 1 mm/min	2040	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	64	MPa	ISO 178
Flexural Modulus, 2 mm/min	2060	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	400	J/m	ASTM D 256
Izod Impact, notched, -30°C	60	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	30	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	4	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	15	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	98	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	103	°C	ASTM D 648



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HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.4E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	8.4E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, approximate maximum	98	°C	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	102	°C	ISO 306
Vicat Softening Temp, Rate B/120	105	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	88	°C	ISO 75/Ae
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	103	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	89	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.08	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 – 0.8	%	SABIC method
Melt Flow Rate, 220°C/10.0 kgf	6.3	g/10 min	ASTM D 1238
Melt Flow Rate, 260°C/5.0 kgf	11	g/10 min	ASTM D 1238
Melt Flow Rate, 280°C/3.8 kgf	7.8	g/10 min	ASTM D 1238
Density	1.07	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.5	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 220°C/10.0 kg	6	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	10	cm ³ /10 min	ISO 1133
OPTICAL			
Gloss, untextured, 60 degrees	94	-	ASTM D 523
ELECTRICAL			
Dissipation Factor, 100 kHz	0.018	-	ASTM D 150
Dissipation Factor, 1 MHz	0.026	-	ASTM D 150
Dielectric Strength in oil, 1.5mm	26.1	kV/mm	IEC 60243-1
Comparative Tracking Index	600	V	IEC 60112
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING			
Drying Temperature	85 – 90	°C	
Drying Time	4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	240 – 270	°C	



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Nozzle Temperature	220 – 255	°C	
Front - Zone 3 Temperature	230 – 260	°C	
Middle - Zone 2 Temperature	220 – 255	°C	
Rear - Zone 1 Temperature	215 – 250	°C	
Mold Temperature	60 – 85	°C	
Back Pressure	0.3 – 1	MPa	
Screw Speed	30 – 80	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.038 – 0.076	mm	

DISCLAIMER

The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

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