GELOY™ RESIN CR8510

REGION ASIA

DESCRIPTION

ASA, excellent weatherability, injection molding.

TYPICAL PROPERTY VALUES

Revision 20190925

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	19	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3.3	%	ISO 527
Tensile Strain, break, 50 mm/min	35	%	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/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m²	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
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

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	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/cm³	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	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	10	cm³/10 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
Comparative Tracking Index	600	V	IEC 60112
FLAME CHARACTERISTICS			
UL Yellow Card Link	E207780-100054232	-	-
UL Recognized, 94HB Flame Class Rating	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	
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	

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