

CYCOLOYTM RESIN CP8320

REGION AMERICAS

DESCRIPTION

CYCOLOY Medium Heat Plating Grade for Automotive

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	45	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	40	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D 638
Tensile Modulus, 5 mm/min	2100	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	70	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2000	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	45	MPa	ISO 527
Tensile Stress, break, 50 mm/min	40	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	100	%	ISO 527
Tensile Modulus, 1 mm/min	2100	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	65	MPa	ISO 178
Flexural Modulus, 2 mm/min	2000	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	600	J/m	ASTM D 256
Izod Impact, notched, -30°C	400	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	55	J	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	60	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	30	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	60	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	30	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	106	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.E-05	1/°C	ASTM E 831
Thermal Conductivity	0.2	W/m·°C	ISO 8302
CTE, -40°C to 40°C, flow	9.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	106	°C	ISO 306
Vicat Softening Temp, Rate B/120	107	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	92	°C	ISO 75/Af

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	14	g/10 min	ASTM D 1238
Density	1.1	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.3	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	13	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
INJECTION MOLDING			
Drying Temperature	95 – 105	°C	
Drying Time	2 – 4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 280	°C	
Nozzle Temperature	230 – 270	°C	
Front - Zone 3 Temperature	240 – 280	°C	
Middle - Zone 2 Temperature	240 – 280	°C	
Rear - Zone 1 Temperature	220 – 250	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 90	°C	