CYCOLOY™ RESIN CP8320

REGION ASIA

DESCRIPTION

CYCOLOY Medium Heat Plating Grade for Automotive

TYPICAL PROPERTY VALUES

Revision 20190925

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/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	30	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	60	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	30	kJ/m²	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

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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/cm³	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	cm³/10 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	

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