

CYCOLOY™ RESIN CP8320

REGION EUROPE

DESCRIPTION

CYCOLOY Medium Heat Plating Grade for Automotive

TYPICAL PROPERTY VALUES

Revision 20200212

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	45	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	40	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D638
Tensile Modulus, 5 mm/min	2100	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	70	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2000	MPa	ASTM D790
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 D256
Izod Impact, notched, -30°C	400	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	55	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	60	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	30	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	60	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	30	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	106	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D648
CTE, -40°C to 40°C, flow	9.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.E-05	1/°C	ASTM E831
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

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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
PHYSICAL			
Specific Gravity	1.1	-	ASTM D792
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 D1238
Density	1.1	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.3	%	ISO 62-1
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	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	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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