

Cyclocoly* Resin XCY480

Europe-Africa-Middle East: COMMERCIAL

High flow

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	49	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	42	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	40	%	ASTM D 638
Tensile Modulus, 50 mm/min	2270	MPa	ASTM D 638
Tensile Modulus, 5 mm/min	2270	MPa	ASTM D 638
Flexural Stress	73	MPa	ASTM D 790
Flexural Modulus	2140	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	51	MPa	ISO 527
Tensile Stress, break, 50 mm/min	43	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	50	%	ISO 527
Tensile Modulus, 1 mm/min	2150	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	47	MPa	ISO 178
Flexural Modulus, 2 mm/min	2100	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	560	J/m	ASTM D 256
Izod Impact, notched, 0°C	450	J/m	ASTM D 256
Izod Impact, notched, -30°C	260	J/m	ASTM D 256
Multiaxial Impact	130	J	ISO 6603
Izod Impact, notched 80*10*3 +23°C	55	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 0°C	46	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	19	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	55	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	20	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	117	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	95	°C	ASTM D 648
CTE, -30°C to 80°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	8.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate A/50	129	°C	ISO 306
Vicat Softening Temp, Rate B/50	118	°C	ISO 306
Vicat Softening Temp, Rate B/120	118	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	118	°C	ISO 75/Be
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	94	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	95	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Mold Shrinkage, flow	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 260°C/5.0 kgf	35	g/10 min	ASTM D 1238

Density	1.13	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.47	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.14	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	12	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	31	cm ³ /10 min	ISO 1133

Source GMD, last updated:04/02/2008

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	90 - 100	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	240 - 270	°C
Nozzle Temperature	220 - 260	°C
Front - Zone 3 Temperature	230 - 270	°C
Middle - Zone 2 Temperature	230 - 270	°C
Rear - Zone 1 Temperature	210 - 240	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	60 - 90	°C

Source GMD, last updated:04/02/2008

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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