

CYCOLOY™ RESIN XCY620HF

REGION EUROPE

DESCRIPTION

CYCOLOY™ RESIN XCY620HF resin is a polycarbonate/acrylonitrile butadiene styrene (PC/ABS). High flow and high heat resistance.

TYPICAL PROPERTY VALUES

Revision 20260330

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yield, 50 mm/min	47	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.5	%	ISO 527
Tensile Strain, break, 50 mm/min	50	%	ISO 527
Tensile Modulus, 1 mm/min	2300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Stress, break, 2 mm/min	73	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
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	7	%	ASTM D638
Tensile Modulus, 50 mm/min	2200	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	80	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	71	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D790
IMPACT			
Izod Impact, notched 80°10°4 +23°C	50	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°4 -10°C	35	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°4 -30°C	25	kJ/m²	ISO 180/1A
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
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm	50	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm	20	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	120	°C	ISO 306
Vicat Softening Temp, Rate B/120	121	°C	ISO 306
HDT			
HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm	100	°C	ISO 75/Af
HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm, annealed 2h 100°C	110	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm	120	°C	ISO 75/Bf
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2

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CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Ball Pressure Test, 75°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	120	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	122	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E831
PHYSICAL			
Density	1.13	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Water Absorption, (23°C/24hrs)	0.14	%	ISO 62-1
Water Absorption, (23°C/saturated)	0.45	%	ISO 62-1
Mold Shrinkage, flow	0.6 – 0.7	%	SABIC method
Mold Shrinkage, xflow	0.6 – 0.7	%	SABIC method
Melt Volume Rate			
260°C/5.0 kg	27	cm³/10 min	ISO 1133
250°C/10.0 kg	52	cm³/10 min	ISO 1133
Melt Viscosity			
Melt Viscosity, 260°C, 5000 sec-1	70	Pa-s	ISO 11443
Specific Gravity	1.13	-	ASTM D792
INJECTION MOLDING			
Drying Temperature	95 – 105	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 290	°C	
Nozzle Temperature	240 – 280	°C	
Front - Zone 3 Temperature	250 – 290	°C	
Middle - Zone 2 Temperature	250 – 290	°C	
Rear - Zone 1 Temperature	230 – 260	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 90	°C	

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