

CYCOLACT™ RESIN FR15

REGION AMERICAS

DESCRIPTION

Flame retardant ABS (non-PBBE additive). Good property/toughness. Excellent moldability. UL94 V-0/5VA rated.

TYPICAL PROPERTY VALUES

Revision 20260509

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	41	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	35	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	9	%	ASTM D638
Tensile Modulus, 5 mm/min	2340	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	71	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2720	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	41	MPa	ISO 527
Tensile Stress, break, 50 mm/min	31	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	2.1	%	ISO 527
Tensile Strain, break, 50 mm/min	33.5	%	ISO 527
IMPACT			
Izod Impact, notched, 23°C	213	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	33	J	ASTM D3763
Izod Impact, notched 80°10°4 +23°C	18	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°4 -30°C	6	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm	19	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	86	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	82	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	70	°C	ASTM D648
CTE, -40°C to 40°C, flow	8.46E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	8.64E-05	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50	81	°C	ISO 306
Vicat Softening Temp, Rate B/120	84	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm	73	°C	ISO 75/Af
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B
PHYSICAL			
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 230°C/3.8 kg	4	g/10 min	ASTM D1238
Melt Viscosity, 200°C, 1000 sec-1	2900	Poise	ASTM D3825
Density	1.19	g/cm³	ISO 1183

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CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Flow Rate, 220°C/5.0 kg	10	g/10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-220686	-	-
UL Recognized, 94V-0 Flame Class Rating	1.49	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	2.48	mm	UL 94
INJECTION MOLDING			
Drying Temperature	80 – 90	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	6	Hrs	
Maximum Moisture Content	0.1	%	
Melt Temperature	200 – 220	°C	
Nozzle Temperature	200 – 220	°C	
Front - Zone 3 Temperature	200 – 215	°C	
Middle - Zone 2 Temperature	195 – 205	°C	
Rear - Zone 1 Temperature	170 – 180	°C	
Mold Temperature	50 – 70	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	30 – 60	rpm	
Shot to Cylinder Size	50 – 70	%	
Vent Depth	0.038 – 0.051	mm	

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