

CYCOLACT™ RESIN EX58

REGION AMERICAS

DESCRIPTION

High impact ABS for sheet extrusion and blow molding applications.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	39	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	30	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.1	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	32	%	ASTM D638
Tensile Modulus, 5 mm/min	2080	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	66	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2160	MPa	ASTM D790
Hardness, Rockwell R	102	-	ASTM D785
Tensile Stress, yield, 50 mm/min	41	MPa	ISO 527
Tensile Stress, break, 50 mm/min	30	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	2.6	%	ISO 527
Tensile Strain, break, 50 mm/min	21	%	ISO 527
Tensile Modulus, 1 mm/min	1970	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	60	MPa	ISO 178
Flexural Modulus, 2 mm/min	2000	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	432	J/m	ASTM D256
Izod Impact, notched, -30°C	299	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	37	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	35	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	23	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	37	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	106	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	91	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	76	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.01E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.04E-04	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50	95	°C	ISO 306
Vicat Softening Temp, Rate B/120	97	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	78	°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			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.03	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.8	%	SABIC method
Melt Viscosity, 240°C, 100 sec-1	15500	Poise	ASTM D3825
Density	1.03	g/cm ³	ISO 1183
Melt Flow Rate, 220°C/ 10.0 kg	4	g/10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	4	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-220684	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
EXTRUSION BLOW MOLDING			
Drying Temperature	80 – 90	°C	
Drying Time	4 – 5	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature (Parison)	215 – 230	°C	
Barrel - Zone 1 Temperature	205 – 225	°C	
Barrel - Zone 2 Temperature	205 – 225	°C	
Barrel - Zone 3 Temperature	205 – 225	°C	
Barrel - Zone 4 Temperature	205 – 225	°C	
Adapter - Zone 5 Temperature	210 – 230	°C	
Head - Zone 6 - Top Temperature	215 – 230	°C	
Head - Zone 7 - Bottom Temperature	215 – 230	°C	
Screw Speed	20 – 60	rpm	
Extruder Feed Zone Temperature	60 – 75	°C	
Mold Temperature	40 – 80	°C	
Die Temperature	215 – 235	°C	
SHEET EXTRUSION			
Drying Temperature	80 – 95	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	215 – 260	°C	
Barrel - Zone 1 Temperature	170 – 200	°C	
Barrel - Zone 2 Temperature	180 – 220	°C	
Barrel - Zone 3 Temperature	190 – 225	°C	
Barrel - Zone 4 Temperature	200 – 240	°C	
Adapter Temperature	205 – 250	°C	
Die Temperature	205 – 250	°C	
Roll Stack Temp - Top	90 – 95	°C	
Roll Stack Temp - Middle	95 – 105	°C	
Roll Stack Temp - Bottom	100 – 105	°C	