CYCOLAC™ RESIN EX58

REGION ASIA

DESCRIPTION

High impact ABS for sheet extrusion and blow molding applications.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	39	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	30	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	32	%	ASTM D 638
Tensile Modulus, 5 mm/min	2080	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	66	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2160	MPa	ASTM D 790
Hardness, Rockwell R	102	-	ASTM D 785
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 D 256
Izod Impact, notched, -30°C	299	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	37	J	ASTM D 3763
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 D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	91	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	76	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.01E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.04E-04	1/°C	ASTM E 831
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

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL			
Specific Gravity	1.03	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.8	%	SABIC method
Melt Viscosity, 240°C, 100 sec-1	15500	Poise	ASTM D 3825
Density	1.03	g/cm³	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 D 495
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 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	

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