CYCOLAC™ RESIN EX39F

REGION AMERICAS

DESCRIPTION

Highest impact extrusion ABS for sheet and blow molding applications. FDA food contact compliant.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	35	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	28	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	108	%	ASTM D638
Tensile Modulus, 5 mm/min	1680	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	57	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1900	MPa	ASTM D790
IMPACT			
Izod Impact, notched, 23°C	464	J/m	ASTM D256
Izod Impact, notched, -30°C	320	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	39	J	ASTM D3763
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	77	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.01E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.17E-04	1/°C	ASTM E831
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	1.03	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.7 – 0.9	%	SABIC method
Melt Viscosity, 240°C, 100 sec-1	15200	Poise	ASTM D3825
Melt Volume Rate, MVR at 220°C/10.0 kg	4	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-220681	-	-
UL Recognized, 94HB Flame Class Rating	1.52	mm	UL 94
EXTRUSION BLOW MOLDING			
Drying Temperature	80 – 90	°C	
Drying Time	5 – 4	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02 – 0.04	%	
Minimum Moisture Content	0.04	%	
Melt Temperature (Parison)	210 – 225	°C	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Barrel - Zone 1 Temperature	190 – 220	°C	
Barrel - Zone 2 Temperature	190 – 220	°C	
Barrel - Zone 3 Temperature	190 – 220	°C	
Barrel - Zone 4 Temperature	190 – 220	°C	
Adapter - Zone 5 Temperature	195 – 220	°C	
Head - Zone 6 - Top Temperature	195 – 220	°C	
Head - Zone 7 - Bottom Temperature	195 – 220	°C	
Screw Speed	20 – 60	rpm	
Extruder Feed Zone Temperature	60 – 80	°C	
Mold Temperature	40 – 90	°C	
Die Temperature	195 – 220	°C	
SHEET EXTRUSION			
Drying Temperature	90 – 95	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0	%	
Melt Temperature	210 – 240	°C	
Barrel - Zone 1 Temperature	195 – 210	°C	
Barrel - Zone 2 Temperature	200 – 220	°C	
Barrel - Zone 3 Temperature	205 – 230	°C	
Barrel - Zone 4 Temperature	210 – 235	°C	
Adapter Temperature	200 – 225	°C	
Die Temperature	210 – 240	°C	