

# CYCOLAC™ RESIN EX39

REGION ASIA

## DESCRIPTION

Highest impact extrusion ABS for sheet and blow molding applications.

## TYPICAL PROPERTY VALUES

Revision 20180326

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	35	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	28	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	108	%	ASTM D 638
Tensile Modulus, 5 mm/min	1680	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	57	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	1900	MPa	ASTM D 790
<b>IMPACT</b>			
Izod Impact, notched, 23°C	464	J/m	ASTM D 256
Izod Impact, notched, -30°C	320	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	39	J	ASTM D 3763
<b>THERMAL</b>			
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	77	°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	1.17E-04	1/°C	ASTM E 831
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
<b>PHYSICAL</b>			
Specific Gravity	1.03	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.7 – 0.9	%	SABIC method
Melt Viscosity, 240°C, 100 sec-1	15200	Poise	ASTM D 3825
Melt Volume Rate, MVR at 220°C/10.0 kg	4	cm <sup>3</sup> /10 min	ISO 1133
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94HB Flame Class Rating (3)	1.52	mm	UL 94

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>EXTRUSION BLOW MOLDING</b>			
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	
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	
<b>SHEET EXTRUSION</b>			
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	

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