



CYCOLAC™ Resin EX39
Americas: COMMERCIAL

Highest impact extrusion ABS for sheet and blow molding applications.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	360	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	290	kgf/cm ²	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	17100	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	590	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	19400	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	47	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	32	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	403	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	95	°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
PHYSICAL			
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





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PHYSICAL Melt Volume Rate, MVR at 220°C/10.0 kg	4	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS UL Recognized, 94HB Flame Class Rating (3)	1.52	mm	UL 94



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
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
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

- Purge with HDPE prior to changing screw, head, or die tooling and/or machine shutdown.
- For extended downtime, lower barrel, head and die temperatures to 95°C (200°F).

