

CYCOLAC™ EX39F resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

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

General Information	
UL YellowCard	E121562-220681
Features	Impact resistance, high
	Compliance of Food Exposure
Uses	Blow molding applications
	Sheet
Agency Ratings	FDA not rated
Processing Method	Extrusion blow molding
	Sheet extrusion molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.03	g/cm ³	ASTM D792
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	4.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.70 - 0.90	%	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	1680	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	35.9	MPa	ASTM D638
Fracture	29.0	MPa	ASTM D638
Tensile Elongation ³			ASTM D638
Yield	3.5	%	ASTM D638
Fracture	110	%	ASTM D638
Flexural Modulus ⁴ (50.0 mm Span)	1900	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	57.9	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	320	J/m	ASTM D256
23°C	460	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	39.5	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648

0.45 MPa, unannealed, 3.20mm	91.7	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	77.8	°C	ASTM D648
Vicat Softening Temperature	106	°C	ASTM D1525 ⁶
Linear thermal expansion coefficient			ASTM E831
Flow: -40 to 40°C	1.0E-4	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	1.2E-4	cm/cm/°C	ASTM E831
RTI Elec	60.0	°C	UL 746
RTI Imp	60.0	°C	UL 746
RTI	60.0	°C	UL 746
Flammability	Nominal Value		Test Method
Flame Rating (1.52 mm)	HB		UL 94
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (240°C, 100 sec ⁻¹)	1520	Pa · s	ASTM D3835
Extrusion instructions			

Extrusion Blow Molding Parameters:

Adapter - Zone 5 Temperature: 193 - 221 C

Barrel - Zone 1 Temperature: 188 - 221 C

Barrel - Zone 2 Temperature: 188 - 221 C

Barrel - Zone 3 Temperature: 188 - 221 C

Barrel - Zone 4 Temperature: 188 - 221 C

Die Temperature: 193 - 221 C

Drying Temperature: 82 - 88 C

Drying Time: 5 - 4 hrs

Drying Time (Cumulative): 24 hrs

Extruder Feed Zone Temperature: 60 - 79 C

Head - Zone 6 - Top Temperature: 193 - 221 C

Head - Zone 7 - Bottom Temperature: 193 - 221 C

Maximum Moisture Content: .02 - .04 %

Melt Temperature (Parison): 210 - 227 C

Minimum Moisture Content: .04 %

Mold Temperature: 38 - 88 C

Screw Speed: 20 - 60 rpm

Sheet Extrusion Parameters:

Adapter Temperature: 199 - 227 C

Barrel - Zone 1 Temperature: 193 - 210 C

Barrel - Zone 2 Temperature: 199 - 221 C

Barrel - Zone 3 Temperature: 204 - 232 C

Barrel - Zone 4 Temperature: 210 - 235 C

Die Temperature: 210 - 241 C

Drying Temperature: 88 - 93 C

Drying Time: 2 - 4 hrs

Maximum Moisture Content: .001 %

Melt Temperature: 210 - 241 C

NOTE	
1.	5.0 mm/min
2.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	1.3 mm/min
5.	1.3 mm/min
6.	标准 B (120°C/h), 载荷2 (50N)

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519
Phone: +86 13424755533
Email: sales@su-jiao.com
No. 215, Lianhe North Road, Fengxian District, Shanghai, China

