

## SABIC Innovative Plastics Cyclac® X37 ABS (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Heat Resistant, Molded

### Material Notes:

CYCOLAC X37 is the highest heat material available in the CYCOLAC range of materials and is widely recognized within the automotive industry as being the industry standard for high heat ABS. It combines heat, stiffness and ease of processing. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Cyclac-X37-ABS-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cyclac-X37-ABS-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	1.0 %	1.0 %	ISO 62
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
Melt Flow	3.0 g/10 min	3.0 g/10 min	ISO 1133
	@Load 10.0 kg, Temperature 220 °C	@Load 22.0 lb, Temperature 428 °F	
	3.0 g/10 min	3.0 g/10 min	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133
	@Load 10.0 kg, Temperature 220 °C	@Load 22.0 lb, Temperature 428 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	113	113	ISO 2039-2
Hardness, H358/30	96.0 MPa	13900 psi	ISO 2039-1
Tensile Strength at Break	40.0 MPa	5800 psi	5 mm/min; ISO 527
	40.0 MPa	5800 psi	50 mm/min; ISO 527
Tensile Strength, Yield	45.0 MPa	6530 psi	5 mm/min; ISO 527
	50.0 MPa	7250 psi	50 mm/min; ISO 527
Elongation at Break	25 %	25 %	5 mm/min; ISO 527
	25 %	25 %	50 mm/min; ISO 527
Elongation at Yield	2.0 %	2.0 %	5 mm/min; ISO 527
	3.0 %	3.0 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.50 GPa	360 ksi	1 mm/min; ISO 527
Flexural Yield Strength	76.0 MPa	11000 psi	2 mm/min; ISO 178
Flexural Modulus	2.60 GPa	377 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	4.00 kJ/m <sup>2</sup> @Temperature -30.0 °C	1.90 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
	10.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	4.76 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.300 J/cm <sup>2</sup> @Temperature -30.0 °C	1.43 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cm <sup>2</sup> @Temperature 23.0 °C	4.76 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	116 @Load 1.00 kg	116 @Load 2.20 lb	CS-17; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C @Temperature 23.0 - 60.0 °C	44.4 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature 23.0 - 60.0 °C	44.4 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft <sup>2</sup> -°F	ISO 8302
Hot Ball Pressure Test	<= 105 °C	<= 221 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	103 °C	217 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	88.0 °C	190 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	110 °C	230 °F	Rate B/50; ISO 306
	112 °C	234 °F	Rate B/120; ISO 306
UL RTI, Electrical	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical with Impact	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical without Impact	60.0 °C	140 °F	UL 746B

Thermal Properties Flammability, UL 94	HB Metric	HB English	Comments UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	<b>HB</b>	<b>HB</b>	2nd value; UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	650 °C	1200 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	
	750 °C	1380 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	2.7	2.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.8	2.8	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	18.0 kV/mm	457 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	26.0 kV/mm	660 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	27.0 kV/mm	686 kV/in	short time; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.0080	0.0080	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.013	0.013	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	PASSES	IEC 60695-10-2

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