

SABIC Innovative Plastics Cyclac® S701S ABS (Europe-Africa-Middle East)

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

Material Notes:

CYCOLAC S701S is a new developed ABS providing a superior balance of properties. Its wide processing window, excellent flow and good mechanical properties give this material an excellent fit in applications in telecommunications, domestic appliances and office equipment. 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-S701S-ABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	1.0 % @Temperature 23.0 °C	1.0 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
Melt Flow	16 g/10 min @Load 5.00 kg, Temperature 220 °C	16 g/10 min @Load 11.0 lb, Temperature 428 °F	ISO 1133
	48 g/10 min @Load 10.0 kg, Temperature 220 °C	48 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133
	48 g/10 min @Load 10.0 kg, Temperature 220 °C	48 g/10 min @Load 22.0 lb, Temperature 428 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	113	113	ISO 2039-2
Hardness, H358/30	97.0 MPa	14100 psi	ISO 2039-1
Tensile Strength at Break	35.0 MPa	5080 psi	5 mm/min; ISO 527
	35.0 MPa	5080 psi	50 mm/min; ISO 527
Tensile Strength, Yield	45.0 MPa	6530 psi	5 mm/min; ISO 527
	45.0 MPa	6530 psi	50 mm/min; ISO 527
Elongation at Break	10 %	10 %	5 mm/min; ISO 527

Mechanical Properties	10 % Metric	10 % English	50 mm/min; ISO 527 Comments
Elongation at Yield	2.0 %	2.0 %	5 mm/min; ISO 527
	2.0 %	2.0 %	50 mm/min; ISO 527
Tensile Modulus	2.50 GPa	363 ksi	1 mm/min; ISO 527
Flexural Yield Strength	70.0 MPa	10200 psi	2 mm/min; ISO 178
Flexural Modulus	2.40 GPa	348 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	7.00 kJ/m ² @Temperature -30.0 °C	3.33 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	14.0 kJ/m ² @Temperature 23.0 °C	6.66 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.700 J/cm ² @Temperature -30.0 °C	3.33 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.800 J/cm ² @Temperature -30.0 °C	3.81 ft-lb/in ² @Temperature -22.0 °F	ISO 179/2C
	1.40 J/cm ² @Temperature 23.0 °C	6.66 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	115 @Load 1.00 kg	115 @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 ² -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	90.0 °C	194 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	79.0 °C	174 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	96.0 °C	205 °F	Rate B/50; ISO 306
	98.0 °C	208 °F	Rate B/120; ISO 306

Thermal Properties	Metric	English	Comments
UL RTI, Mechanical with Impact	60.0 °C	140 °F	UL 746B
UL RTI, Mechanical without Impact	60.0 °C	140 °F	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	2nd value; UL 94
	@Thickness 2.50 mm	@Thickness 0.0984 in	
Glow Wire Test	650 °C	1200 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 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	
	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.0040	0.0040	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0070	0.0070	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112
	>= 600 V	>= 600 V	

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

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