

SABIC Innovative Plastics Cycolac® S702S ABS (Europe-Africa-Middle East)

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

Material Notes:

CYCOLAC S702S is a high impact ABS combined with a good flow. This material is developed for enclosures and housings found in appliances and automotive industries. Cycolac S702S is anti-dust equipped. 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-Cycolac-S702S-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 10.0 kg, Temperature 220 °C	16 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133
	16 g/10 min @Load 10.0 kg, Temperature 220 °C	16 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	110	110	ISO 2039-2
Hardness, H358/30	85.0 MPa	12300 psi	ISO 2039-1
Tensile Strength at Break	30.0 MPa	4350 psi	5 mm/min; ISO 527
	35.0 MPa	5080 psi	50 mm/min; ISO 527
Tensile Strength, Yield	40.0 MPa	5800 psi	5 mm/min; ISO 527
	40.0 MPa	5800 psi	50 mm/min; ISO 527
Elongation at Break	10 %	10 %	5 mm/min; ISO 527
	10 %	10 %	50 mm/min; ISO 527
Elongation at Yield	2.0 %	2.0 %	5 mm/min; ISO 527
	2.0 %	2.0 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.20 GPa	315 ksi	1 mm/min; ISO 527
Flexural Yield Strength	62.0 MPa	8990 psi	2 mm/min; ISO 178
Flexural Modulus	2.10 GPa	305 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	11.0 kJ/m ²	5.23 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	22.0 kJ/m ²	10.5 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	2.20 J/cm ²	10.5 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	68	68	CS-17; SABIC Method
	@Load 1.00 kg	@Load 2.20 lb	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
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)	92.0 °C	198 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	81.0 °C	178 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	98.0 °C	208 °F	Rate B/50; ISO 306
	100 °C	212 °F	
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
Flammability, UL94	HB	HB	UL 94

Thermal Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
	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 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	
	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.0050	0.0050	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.010	0.010	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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