

SABIC Innovative Plastics Cycloy® CE3210 PC+ABS (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

Material Notes:

Flame retardant PC/ABS blend using non-brominated and non-chlorinated flame retardant systems, offering high impact and excellent extrusion and thermoforming characteristics. Halogen free according to DIN VDE 0472/815 for cable channels. 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-Cycloy-CE3210-PCABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in ³	ISO 1183
	1.22 g/cc	0.0441 lb/in ³	ASTM D 792
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.60 %	0.60 %	ISO 62
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	on tensile bar; SABIC Method
Melt Flow	11 g/10 min	11 g/10 min	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	@Load 5.00 kg, Temperature 260 °C	@Load 11.0 lb, Temperature 500 °F	
	11.2 g/10 min	11.2 g/10 min	ASTM D 1238
	@Load 5.00 kg, Temperature 260 °C	@Load 11.0 lb, Temperature 500 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D 638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	63.0 MPa	9140 psi	Type I, 50 mm/min; ASTM D 638
	65.0 MPa	9430 psi	50 mm/min; ISO 527
Elongation at Break	55 %	55 %	Type I, 50 mm/min; ASTM D 638
	75 %	75 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D 638
	4.0 %	4.0 %	50 mm/min; ISO 527

Mechanical Properties	Metric ^{Pa}	English	Comments ^{ISO 527}
	2.78 GPa	403 ksi	50 mm/min; ASTM D 638
Flexural Yield Strength	95.0 MPa	13800 psi	2 mm/min; ISO 178
	97.0 MPa	14100 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.44 GPa	354 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.70 GPa	392 ksi	2 mm/min; ISO 178
Izod Impact, Notched	6.85 J/cm @Temperature 23.0 °C	12.8 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	13.0 kJ/m ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	15.0 kJ/m ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	45.0 kJ/m ² @Temperature 23.0 °C	21.4 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
	50.0 kJ/m ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	1.30 J/cm ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	4.80 J/cm ² @Temperature 23.0 °C	22.8 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	5.00 J/cm ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	75.0 µm/m-°C @Temperature -40.0 - 40.0 °C	41.7 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	75.0 µm/m-°C @Temperature -40.0 - 40.0 °C	41.7 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	97.0 °C	207 °F	unannealed; ASTM D 648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	88.0 °C @Thickness 3.20 mm	190 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	104 °C	219 °F	Rate B/50; ISO 306
	105 °C	221 °F	Rate B/50; ASTM D 1525
	107 °C	225 °F	Rate B/120; ISO 306
UL RTI, Electrical	85.0 °C	185 °F	UL 746B
UL RTI, Mechanical with Impact	70.0 °C	158 °F	UL 746B
UL RTI, Mechanical without Impact	85.0 °C	185 °F	UL 746B
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94
	5VB @Thickness 2.50 mm	5VB @Thickness 0.0984 in	UL 94

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 @Frequency 1.00e+6 Hz	2.7 @Frequency 1.00e+6 Hz	IEC 60250
	2.8 @Frequency 50.0 - 60.0 Hz	2.8 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	17.0 kV/mm @Thickness 3.20 mm	432 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	25.0 kV/mm @Thickness 1.60 mm	635 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	35.0 kV/mm @Thickness 0.800 mm	889 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
	0.0040	0.0040	

Designation Factor Electrical Properties	@Frequency 50.0 - 60.0 Metric Hz	@Frequency 50.0 - 60.0 English Hz	IEC 60250 Comments
	0.0060	0.0060	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250

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

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