

Cyclocoly* Resin CE3210

Europe-Africa-Middle East: COMMERCIAL

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

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	63	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	55	%	ASTM D 638
Tensile Modulus, 50 mm/min	2780	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	97	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2440	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	65	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	75	%	ISO 527
Tensile Modulus, 1 mm/min	2650	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	2700	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	685	J/m	ASTM D 256
Izod Impact, notched 80*10*3 +23°C	50	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	13	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	50	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	13	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	105	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	97	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	88	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	75	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	104	°C	ISO 306
Vicat Softening Temp, Rate B/120	107	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	90	°C	ISO 75/Af
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B
PHYSICAL	Value	Unit	Standard
Density	1.22	g/cm ³	ASTM D 792
Mold Shrinkage on Tensile Bar, flow (2)	0.4 - 0.6	%	SABIC Method
Melt Flow Rate, 260°C/5.0 kgf	11.2	g/10 min	ASTM D 1238
Density	1.18	g/cm ³	ISO 1183

Water Absorption, (23°C/sat)	0.6	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	11	cm ³ /10 min	ISO 1133
ELECTRICAL	Value	Unit	Standard
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	2.8	-	IEC 60250
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.004	-	IEC 60250
Dissipation Factor, 1 MHz	0.006	-	IEC 60250
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	mm	UL 94
UL Recognized, 94-5VB Rating (3)	2.5	mm	UL 94

Source GMD, last updated:03/27/2007

Processing

Parameter	Value	Unit
Profile Extrusion		
Drying Temperature	80 - 85	°C
Drying Time	2 - 4	hrs
Melt Temperature	230 - 270	°C
Barrel - Zone 1 Temperature	235 - 260	°C
Barrel - Zone 2 Temperature	240 - 265	°C
Barrel - Zone 3 Temperature	245 - 270	°C
Barrel - Zone 4 Temperature	245 - 270	°C
Hopper Temperature	60 - 80	°C
Adapter Temperature	245 - 270	°C
Die Temperature	235 - 260	°C
Calibrator Temperature	60 - 80	°C

Source GMD, last updated:03/27/2007

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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