

CYCOLOY™ FR RESINS CM6210

REGION EUROPE

DESCRIPTION

CYCOLOY CM6210 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is a high impact, non chlorinated/brominated mineral filled flame retardant grade that can be injection molded or extruded. It has an MVR (300°C/1.2kg) of 8 and a UL94 V0@1.5mm flame rating.

TYPICAL PROPERTY VALUES

Revision 20260509

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	64	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	50	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4.9	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	80	%	ASTM D638
Tensile Modulus, 5 mm/min	3570	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	110	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3500	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	59	MPa	ISO 527
Tensile Stress, break, 5 mm/min	65	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.6	%	ISO 527
Tensile Strain, break, 5 mm/min	101	%	ISO 527
Tensile Strain, yield, 50 mm/min	3.5	%	ISO 527
Tensile Strain, break, 50 mm/min	97	%	ISO 527
Tensile Modulus, 1 mm/min	3660	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	106	MPa	ISO 178
Flexural Modulus, 2 mm/min	3560	MPa	ISO 178
Hardness, Rockwell R	98	-	ISO 2039-2
IMPACT			
Izod Impact, notched, 23°C	500	J/m	ASTM D256
Izod Impact, notched, -30°C	90	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	45	J	ASTM D3763
Izod Impact, notched 80*10*3 +23°C	45	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	45	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	106	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D648
CTE, -40°C to 40°C, flow	5.7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E831
Thermal Conductivity	0.3	W/m.°C	ISO 8302
CTE, -40°C to 40°C, flow	5.2E-05	1/°C	ISO 11359-2

© 2026 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, flow	5.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	6.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	pass	-	IEC 60695-10-2
Ball Pressure Test, approximate maximum	95	°C	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	112	°C	ISO 306
Vicat Softening Temp, Rate B/120	114	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	99	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	89	°C	ISO 75/Ae
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			
Specific Gravity	1.28	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.6	%	SABIC method
Melt Flow Rate, 260°C/5.0 kgf	11.5	g/10 min	ASTM D1238
Density	1.27	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.3	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	9	cm³/10 min	ISO 1133
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Dielectric Strength, in oil, 0.8 mm	38	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	26	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.8	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.003	-	IEC 60250
Dissipation Factor, 1 MHz	0.004	-	IEC 60250
Comparative Tracking Index	250	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.9	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	1.5	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	PASSES875	°C	IEC 60695-2-13
Oxygen Index (LOI)	35	%	ISO 4589
SHEET EXTRUSION			
Drying Temperature	80 – 90	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Minimum Moisture Content	0.04	%	
Melt Temperature	220 – 245	°C	
Barrel - Zone 1 Temperature	180 – 225	°C	
Barrel - Zone 2 Temperature	190 – 230	°C	
Barrel - Zone 3 Temperature	205 – 240	°C	

© 2026 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Barrel - Zone 4 Temperature	210 – 245	°C	
Adapter Temperature	210 – 245	°C	
Die Temperature	210 – 245	°C	
Roll Stack Temp - Top	70 – 100	°C	
Roll Stack Temp - Middle	70 – 95	°C	
Roll Stack Temp - Bottom	65 – 90	°C	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

