

CYCOLOY™ RESIN C1200HF

REGION EUROPE

DESCRIPTION

PC+ABS, excellent flow/impact/high heat resistance. Low temperature ductility.

TYPICAL PROPERTY VALUES

Revision 20190814

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	63	mg/1000cy	SABIC method
Tensile Stress, yield, 5 mm/min	55	MPa	ISO 527
Tensile Stress, break, 5 mm/min	45	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	100	%	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	>50	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Ball Indentation Hardness, H358/30	96	MPa	ISO 2039-1
Hardness, Rockwell R	115	-	ISO 2039-2
IMPACT			
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	50	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	30	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	40	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	20	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	30	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	45	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	18	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
Thermal Conductivity	0.2	W/m·°C	ISO 8302
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	130	°C	ISO 306
Vicat Softening Temp, Rate B/120	134	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	128	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	108	°C	ISO 75/Ae
Relative Temp Index, Elec	105	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	105	°C	UL 746B
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow	0.5 – 0.7	%	SABIC method
Density	1.15	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.6	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	8	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	22	cm³/10 min	ISO 1133
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	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, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.002	-	IEC 60250
Dissipation Factor, 1 MHz	0.007	-	IEC 60250
Comparative Tracking Index	250	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.8	-	IEC 60250
FLAME CHARACTERISTICS			
UL Yellow Card Link	E45329-236710	-	-
UL Recognized, 94HB Flame Class Rating	1.2	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value	3	mm	UL 94
Glow Wire Flammability Index 650°C, passes at	1	mm	IEC 60695-2-12
Oxygen Index (LOI)	23	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	100 – 110	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	275 – 300	°C	
Nozzle Temperature	275 – 300	°C	
Front - Zone 3 Temperature	260 – 300	°C	
Middle - Zone 2 Temperature	255 – 295	°C	
Rear - Zone 1 Temperature	250 – 290	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 90	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	30 – 80	%	
Vent Depth	0.038 – 0.076	mm	

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