

CYCOLOY™ FR RESINS CY6414

REGION AMERICAS

DESCRIPTION

CYCOLOY CY6414 is an impact modified PC blend, medium flow and high heat resistant, injection moldable, non chlorinated/brominated flame retardant grade. It has a UL94 V0@1.2mm and 5VB@2.5mm flame rating.

TYPICAL PROPERTY VALUES

Revision 20260509

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	64	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	85	%	ASTM D638
Tensile Modulus, 5 mm/min	2330	MPa	ASTM D638
Tensile Strain, yield, 50 mm/min	5.7	%	ISO 527
Tensile Strain, break, 50 mm/min	>100	%	ISO 527
IMPACT			
Izod impact, notched			
23°C	795	J/m	ASTM D256
0°C	525	J/m	ASTM D256
-30°C	215	J/m	ASTM D256
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	28	kJ/m²	ISO 179/1eA
Charpy 0°C, V-notch Edgew 80*10*3 sp=62mm	17	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	12	kJ/m²	ISO 179/1eA
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	118	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test			
125°C +/- 2°C	Pass	-	IEC 60695-10-2
125°C +/- 2°C, by VDE	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	133	°C	ISO 306
Vicat Softening Temp, Rate B/120	134	°C	ISO 306
PHYSICAL			
Melt Flow Rate			
260°C/5.0 kgf	14	g/10 min	ASTM D1238
Density	1.18	g/cm³	ISO 1183
ELECTRICAL			
Relative Permittivity, 1 kHz	3.01	-	ASTM D150
Relative Permittivity, 1 MHz	2.95	-	ASTM D150
Dissipation Factor			
1 kHz	0.0017	-	ASTM D150
1 MHz	0.0088	-	ASTM D150

© 2026 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
1 MHz	0.0088	-	IEC 60250
Hot Wire Ignition (PLC)	2	PLC Code	UL 746A
High Ampere Arc Ign. surface (PLC)	1	PLC Code	UL 746A
Comparative Tracking Index (UL) (PLC)	3	PLC Code	UL 746A
Surface Resistivity, ROA	4.E+16	Ω	IEC 60093
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating	1.2	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	2.5	mm	UL 94
Glow Wire Flammability Index 960°C, passes at, by VDE	0.75	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 0.75 mm, by VDE	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm, by VDE	775	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm, by VDE	775	°C	IEC 60695-2-13
Oxygen Index (LOI)	32	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	90 – 100	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 300	°C	
Nozzle Temperature	230 – 290	°C	
Front - Zone 3 Temperature	240 – 300	°C	
Middle - Zone 2 Temperature	230 – 290	°C	
Rear - Zone 1 Temperature	210 – 260	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	60 – 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 NON-INFRINGEMENT 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.

