

Technical Data Sheet

Glastic 1423

Thermoset Polyester
LyondellBasell Industries
Engineering Plastics

Product Description

Grade 1423 is a wear-resistant electrical grade material used in applications where there are moving parts. Best anti-wear properties are exhibited when used in conjunction with mating parts molded from Glastic® Grade 1412 materials. Has moderately high physical strengths combined with excellent electrical properties.

General

Filler / Reinforcement	• Glass Fiber		
Features	• Electrically Insulating • Flame Retardant	• Good Electrical Properties • Wear Resistant	
Uses	• Electrical/Electronic Applications		
Appearance	• Black	• Colors Available	• White
Forms	• BMC - Bulk Molding Compound		
Processing Method	• Compression Molding	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.85	1.84 g/cm ³	ASTM D792
Water Absorption (24 Hr)	0.18 %	0.18 %	ASTM D570

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus (Compression Molded)	1.80E+6 psi	12400 MPa	ASTM D638
Tensile Strength (Yield, Compression Molded)	6860 psi	47.3 MPa	ASTM D638
Flexural Modulus (Compression Molded)	1.40E+6 psi	9650 MPa	ASTM D790
Flexural Strength (Compression Molded)	16200 psi	112 MPa	ASTM D790
Compressive Strength	19500 psi	135 MPa	ASTM D695
Shear Strength	5910 psi	40.8 MPa	ASTM D732

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (Compression Molded)	4.0 ft·lb/in	210 J/m	ASTM D256

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 Psi (1.8 Mpa), Unannealed, Compression Molded	500 °F	260 °C	ASTM D648
RTI Elec	130 °F	54.4 °C	UL 746B
RTI Str	130 °F	54.4 °C	UL 746B

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	1.8E+15 ohms	1.8E+15 ohms	ASTM D257
Dielectric Strength (Method A (short-time))	420 V/mil	17 kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	• 5.30 • 5.70	• 5.30 • 5.70	
1 Mhz	• 4.40 • 4.70	• 4.40 • 4.70	
Dissipation Factor			ASTM D150
60 Hz	• 0.017 • 0.037	• 0.017 • 0.037	
1 Mhz	• 0.015 • 0.13	• 0.015 • 0.13	
Arc Resistance	189 sec	189 sec	ASTM D495

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating	V-0	V-0	UL 94

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Additional Information

Permittivity, ASTM D150, 60 Hz, Condition A: 5.3
Permittivity, ASTM D150, 60 Hz, Condition D: 5.7
Permittivity, ASTM D150, 1 MHz, Condition A: 4.4
Permittivity, ASTM D150, 1 MHz, Condition D: 4.7
Insulation Resistance, ASTM D257, Condition A: 179 Ohm x 10e13
Insulation Resistance, ASTM D257, Condition C: 1.8 Ohm x 10e13
Track Resistance, ASTM D2303: 1510 minutes
Dissipation Factor, ASTM D150, 60 Hz, Condition A: 0.017
Dissipation Factor, ASTM D150, 60 Hz, Condition D: 0.037
Dissipation Factor, ASTM D150, 1 MHz, Condition A: 0.015
Dissipation Factor, ASTM D150, 1 MHz, Condition D: 0.134

Notes

These are typical property values not to be construed as specification limits.