



TORELINA™ A310MB7

Technical DataSheet

TORELINA™ A310MB7 by Toray is a polyphenylene sulfide (PPS) grade reinforced with 70% mineral filler and glass fiber. It is suitable for processing by injection molding. Possesses low warpage, excellent heat resistance, flame retardancy, excellent chemical resistance, good physical strength, superb fluidity and outstanding dimensional stability. TORELINA™ A310MB7 is recommended for switches, connectors and other electronic and electric components, alternators and other automobile components and in office equipment components including chassis parts and housings.

Product Type	PPS (Polyphenylene Sulfide) > PPS
Appearance	Natural, Black
Product Status	COMMERCIAL
Applications/ Recommended for	Automotive > Lighting - Housings Automotive > Structural - Chassis component Electrical markets > Connectors Electrical markets > Switches Electronics / Computers Injection molding - thermoplastics
Key Features	Chemical resistance, Good Dimensional stability, Good Filled, Glass Fiber Filled, Mineral Flame resistance, Good Flow, High Heat Resistance, High Strength, Good Warpage, Low

TORELINA™ A310MB7 Properties

Mechanical	Value & Unit	Test Condition	Test Method
Coefficient of Friction (COF)	0.3		
Taber Abrasion resistance	70 mg/1000times		ISO 9352
Elongation at Break	0.8 %	At 23°C	ISO 527-2
Tensile Strength	115 MPa	At 23°C	ISO 527-2



Flexural Strength	200 MPa	At 23°C	ISO 178
Flexural Modulus	22 GPa	At 23°C	ISO 178
Shear Strength	60 MPa	At 23°C	JIS K7214
Impact Strength, Unnotched Charpy	16 kJ/m ²	At 23°C	ISO 179
Impact Strength, Notched Charpy	7 kJ/m ²	At 23°C	ISO 179
Hardness, Rockwell R	123		ISO 2039-2

Thermal	Value & Unit	Test Condition	Test Method
Melting Point	278 °C		ISO 11357-3
CTE, Linear, Parallel to Flow	1.9 ×10 ⁻⁵ /K		ISO 11359-2
CTE, Linear, Transverse to Flow	2 ×10 ⁻⁵ /K		ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	260 °C		ISO 75-2

Flammability	Value & Unit	Test Condition	Test Method
Flame Rating, UL 94	V-0	0.36 mm	UL 94

Electrical	Value & Unit	Test Condition	Test Method
Dielectric Strength	22 MV/m		IEC 60243-1



Dielectric Constant	5	At 23°C, 60% RH, 1 MHz	IEC 60250
Dissipation Factor	0.002	At 23°C, 60% RH, 1 MHz	IEC 60250
Volume Resistivity	10^{14} ohm-m		IEC 60093

Physical	Value & Unit	Test Condition	Test Method
Water Absorption	0.02 %	At 23°C, 24 hr	ISO 62
Density	2060 kg/m ³	At 23°C	ISO 1183
Linear Mold Shrinkage, Flow	0.2 %	80×80×3mm	Toray Method
Linear Mold Shrinkage, Transverse	0.5 %	80×80×3mm	Toray Method
Bar Flow	90×10^{-3} m	At 320°C, 98 MPa, 1 mm	Toray Method

TORELINA™ A310MB7 Processing Guidelines

Injection Molding	Value & Unit	Test Condition	Test Method
Drying Temperature, Dehumidified Air Dryer	130 °C		
Drying Time	3 - 4 hr		
Cylinder Temperature	310 - 330 °C		
Mold Temperature	130 - 150 °C		
Injection Pressure	40 - 100 MPa		