

Amber Polyimide Tape With Silicone Adhesive For Lithium Battery Cell Insulation Protection 2 To 500Mm Width

Item Number: FZ48



Introduction

Engineered for lithium cell manufacturing this amber polyimide tape with silicone adhesive delivers superior thermal endurance high dielectric breakdown voltage and residue free adhesion across slit widths from 2 to 500mm for tab insulation and core wrapping

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Application	Description	Key Benefit
Pouch Cell Tab Insulation	Applied directly around cathode and anode terminal tabs and lead welding zones to isolate metal tabs from the aluminum laminated film casing.	Prevents edge short-circuiting and puncture failures caused by burrs during sealing.
Cylindrical Cell Core Wrapping	Serves as the terminating tape around the outer circumference of wound jelly-roll electrode assemblies (e.g., 18650, 21700, 46800 formats).	Maintains constant winding tension and tight diameter tolerance without edge lifting.
Prismatic Cell Electrode Bundling	Secures stacked or wound electrode groups prior to insertion into deep-drawn aluminum or steel battery cans.	Ensures high dielectric isolation between internal active groups and outer metal shell walls.
Battery Circuit Lead Protection	Insulates internal wiring, sensor leads, and embedded thermocouple connections across modular battery packs.	Delivers reliable thermal and electrical insulation under extreme vibrational stress.
High-Temperature Baking Masking	Protects sensitive contact points and terminals during vacuum drying, electrode baking, and hot-press curing stages.	Leaves zero adhesive residue after prolonged high-temperature vacuum oven exposure.
Electronic Component Wrapping	Provides primary phase and layer insulation for micro-transformers, high-frequency inductors, and specialized power electronics.	Offers class-leading dielectric breakdown resistance in a space-saving ultra-thin footprint.

Parameter	FZ48-0035	FZ48-0042	FZ48-0055	FZ48-0060
Base Film Material	Special Polyimide (PI) Film	Special Polyimide (PI) Film	Special Polyimide (PI) Film	Special Polyimide (PI) Film
Adhesive Type	High-Temp Silicone PSA	High-Temp Silicone PSA	High-Temp Silicone PSA	High-Temp Silicone PSA
Total Thickness (mm)	0.035	0.042	0.055	0.060
Color	Amber / Tea-Brown	Amber / Tea-Brown	Amber / Tea-Brown	Amber / Tea-Brown
Adhesion to Steel (N/25mm)	5	5	6	6
Tensile Strength (N/25mm)	50	50	75	75
Temperature Resistance Range (°C)	-40 to +150	-40 to +150	-40 to +150	-40 to +150
Breakdown Voltage (kV)	5	5	6	6
Unwinding Force	Moderate / Smooth	Moderate / Smooth	Moderate / Smooth	Moderate / Smooth
Standard Width Range (mm)	2 to 500	2 to 500	2 to 500	2 to 500
Standard Length Options (m)	33, 50, 66, 100	33, 50, 66, 100	33, 50, 66, 100	33, 50, 66, 100
Environmental Compliance	RoHS, Halogen-Free	RoHS, Halogen-Free	RoHS, Halogen-Free	Halogen-Free