

726 977

Number	Backing Description	Adhesive	Operating Temperature (°C)*	Total Thickness (mils)/(mm)	Dielectric Breakdown (Volts)	Insulation Resistance (megohms)	Breaking Strength (lb/in)/(N/10 mm)	Elongation (% at Break)	Electrolytic Corrosion Factor	Adhesion to Steel (oz/in)/(N/10 mm)	UL 510 Flame Retardant	CTI Material Group
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Polyester Film

	RI	1-mil film; solvent-resistant; for use in coil and capacitor holding applications.											
	5	Film	A	130	2.5/0,06	5,500	> 1 x 10 ⁶	25/44	100	1.0	50/5,5	—	I
	RI Q	1-mil film; for use in fine wire coils where magnet wire serves to color code.											
	54	Film	RT	130	2.5/0,06	5,500	> 1 x 10 ⁶	25/44	100	1.0	45/4,9	—	I
	RI Q	1-mil film; for use as layer insulation and coil cover in 130°C applications.											
	MR96	Film	RT	130	2.5/0,06	5,500	> 1 x 10 ⁶	25/44	100	1.0	40/4,4	—	I
	RI Q	1-mil film; for use as layer insulation and coil cover in 130°C applications.											
	56	Film	RT	130	2.3/0,06	5,500	> 1 x 10 ⁶	25/44	100	1.0	50/5,5	—	I
	RI	2-mil film; for use as a coil cover, layer insulation and capacitor wrap where higher electrical strength is desirable.											
	57	Film	RT	130	3.3/0,08	7,000	> 1 x 10 ⁶	50/88	110	1.0	60/6,5	—	I
	RI	2-mil film; for use as a coil cover, layer insulation and capacitor wrap where higher electrical strength is desirable.											
	58	Film	RT	130	3.3/0,08	7,000	> 1 x 10 ⁶	50/88	110	1.0	60/6,5	—	I
	RI	0.5-mil film; conformable; provides good electrical strength for coil applications where space is at a premium.											
	74	Film	RT	130	0.8/0,02	3,500	> 1 x 10 ⁶	12/21	80	1.0	20/2,2	—	I
	RI	1-mil film; coated on both sides; for use in bonding applications requiring a positive insulation barrier.											
	75	Double-Coated Film	RT	130	3.8/0,10	6,500	> 1 x 10 ⁶	25/44	70	1.0	45/4,9	—	I
	RI Q	1-mil film; with black adhesive; for use as an outer wrap on capacitors and coils.											
	1169	Film	RT	130	2.3/0,06	5,500	> 1 x 10 ⁶	25/44	100	1.0	45/4,9	—	IIIa
	RI	2-mil film; solvent-resistant; yellow color provides good hiding power; for use as coil cover and capacitor wrap; PRINTABLE.											
	1291	Film	A	130	3.3/0,08	7,000	> 1 x 10 ⁶	50/88	110	1.0	50/5,5	—	I
	RI Q	1-mil film with flame-retardant adhesive; excellent flagging and solvent resistance; for use as an outer wrap on capacitors and coils; PRINTABLE.											
	1298	Film	A	130	2.5/0,06	5,500	> 1 x 10 ⁶	25/44	100	1.0	40/4,4	Yes	II
	RI	1-mil film; excellent flagging and solvent resistance; for use as an outer wrap on capacitors and coils; PRINTABLE.											
	1318	Film	A	130	2.5/0,06	5,500	> 1 x 10 ⁶	25/44	100	1.0	35/3,8	—	I
	RI Q	1-mil film with yellow flame-retardant adhesive; excellent flagging and solvent resistance; for use as an outer wrap on capacitors and coils; PRINTABLE.											
	1350Y	Film	A	130	2.5/0,06	5,000	> 1 x 10 ⁶	20/35	75	1.0	30/3,3	Yes	II
	RI Q	1-mil film with white flame-retardant adhesive; excellent flagging and solvent resistance; for use as an outer wrap on capacitors and coils; PRINTABLE.											
	1350W	Film	A	130	2.5/0,06	5,000	> 1 x 10 ⁶	20/35	75	1.0	30/3,3	Yes	IIIa

Filament Reinforced

	RI	Good tensile strength and edge-tear resistance; for use in end-turn taping.											
	MR98	Polyester Film/ Glass Filament	RT	130	7.0/0,18	7,000	3 x 10 ³	225/394	5	1.0	60/6,5	—	II
	RI	Good tensile strength and edge-tear resistance; for use in end-turn taping.											
	46	Polyester Film/ Glass Filament	RT	130	7.0/0,18	7,000	3 x 10 ³	225/394	5	1.0	60/6,5	—	II
	RI	Edge-tear resistant, good tensile strength; NOT to be used above 105°C. Temperatures higher than 105°C cause shrinkage of synthetic filaments.											
	1312	Polyester Film/ Synthetic Filament	RN	105	7.5/0,19	5,500	2 x 10 ⁴	225/394	5	1.0	55/6,0	—	I
	RI	Solvent-resistant, high shear strength adhesive; good tensile strength and edge-tear resistance; for holding applications.											
	1339	Polyester Film/ Glass Filament	A	130	6.5/0,17	5,500	1 x 10 ³	275/481	5	1.0	35/3,8	—	I



Standards and Testing for Electrical Grade Tapes

Electrical Grade Tape

A very important consideration in the choice of materials in an insulation system is the reaction between components in the system, particularly when exposed to the environmental hazards, e.g., high humidity. In equipment containing copper wires, electrolytic corrosion of the wires can lead to failure of the transformer, motor or coil, etc. To minimize the possibility of such corrosion being caused on copper wires by the pressure-sensitive tape, it is necessary to ensure that electrical impurities in all parts of the tape are controlled. (A detailed explanation of the effects of electrolytic corrosion can be obtained from 3M Technical Service.)

An electrical grade tape should always be used in the manufacture of electrical components. Correct choice of an electrical tape which has the required balance of electrical and mechanical properties with good handling characteristics for application and processing will contribute to overall productivity by reducing waste of time and materials. The total applied cost is the consideration in such a choice.

ISO 9000 Registration

ISO 9000 standards are the result of the increasing globalization of manufacturing and international trade. Adopted throughout Europe, ISO certification is now well under way among many manufacturers in the U.S. under the direction of Underwriters Laboratories (UL) and British Standards Institute (BSI). 3M is moving ahead to bring all of its tape manufacturing sites and ancillary functions into ISO compliance.

ISO standards are designed to ensure the quality of supplier's systems. For the customer, registration provides proof of that quality. For companies with numerous manufacturing sites, such as 3M, ISO registration provides a consistent and efficient method of standardization.

Underwriters Laboratories (UL)

A UL Recognized Component is a part or subassembly covered under UL's Recognition Service and is intended for use in UL Listed, Classified or Recognized products.

The UL Recognition Service is a system whereby UL determines that a manufacturer has demonstrated the ability to produce a component for use in an end product that complies with UL's requirements.

A UL Listed Product is a product that has been produced under UL's Listing and Follow-Up Service and that bears the authorized Listing Mark of UL as the manufacturer's declaration that the product complies with UL's requirements in accordance with the terms of the Follow-Up Service Agreement. The Follow-Up Service conducted by UL is a check on the means a manufacturer exercises to determine compliance with UL's requirements for UL Recognized Components or Listed Products.

European Standards

Many products have NATO Stock Numbers assigned to a variety of sizes—contact your 3M Technical Representative for information about those and other European Standard requirements (eg. B.S.I.). See page 13 for further details.

Reduced solvent tapes

3M is moving aggressively to reduce the use of environmentally harmful solvents in the manufacturing of OEM electrical tapes. 3M's goal is to reduce solvent purchases and use by 80 percent worldwide.

Another objective is to protect 3M customers as well as the environment. Responding to increasingly tighter environmental restrictions will ensure that 3M customers have a reliable source of OEM tapes well into the 21st century.

3M is committed to reducing solvent use in as many OEM electrical grade tapes as possible in the coming years.

