

3MTM Epoxy Film Electrical Tape Super 10

Flame-Retardant Epoxy Film with Thermosetting, Rubber Resin Pressure-Sensitive Adhesive

Data Sheet

September 2008

Description

3MTM Epoxy Film Electrical Tape Super 10 is a 5 mil total thickness, high dielectric, flame-retardant tape. This tape has a thermosetting rubber resin pressure-sensitive adhesive that is resistant to heat, oxidation, solvent and oils. The tape is puncture resistant and has excellent electrical and handling properties. It is UL 510 flame-retardant, temperature rated to 311° F (155° C).

The tape offers flexibility, high dielectric strength, and conformability for easy handling and application. In application, the tape maintains good electrical properties after elongation. Tape Super 10 is tough, conformable, and resistant to solder damage. Its thermosetting rubber resin pressure-sensitive adhesive has good initial adhesion and electrical purity.

Agency Approvals, Self Certifications, MIL Specs

- UL Recognized for flame retardancy per UL 510, Guide OANZ2, File E17385
- Temperatures not exceeding 155° C

RoHS Compliant 2002/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2002/618/EC, unless the substance is in an application that is exempt under RoHS. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.

Applications

The tape is suggested for use in wrapping relays, coils, transformers, bobbin-wound sub-fractional horsepower shaded-pole motors and stick-wound coils. It can also be used for holding in fractional horsepower motors, arbor-wound coils and wire harnesses. Use as coil cover, anchor, harnessing, banding and as core, layer, and crossover insulation.

To achieve maximum solvent resistance and holding performance, thermoset the tape at one of the following cycles:

- 1 hour @ 150° C
- 2 hours @ 135° C
- 3 hours @ 120° C



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Typical Properties

Data is not for specifications. Values are typical and should not be considered minimum or maximum. Properties measured at room temperature 73° F (~23° C) unless otherwise stated.

Physical

| Property (Test Method) (ASTM D1000 unless noted) | Typical Value US units (metric) |
|---|------------------------------------|
| Color | cream |
| Adhesive | thermosetting rubber |
| Backing Thickness | 3.5 mils (0,088 mm) |
| Total Thickness | 5.0 mils (0,127 mm) |
| Elongation (% at break) | 120% |
| Operating Temperature | 155° C |
| Adhesion to Steel | 45 oz/in (4,9 N/10 mm) |
| Flammability (UL 510) | Yes |

Electrical

| Property (Test Method) (ASTM D1000 unless noted) | Typical Value US units (metric) |
|--|------------------------------------|
| Dielectric Breakdown | 8000 V |
| Tensile Strength | 45 lbs/in (79 N/10 mm) |
| Insulation Resistance (megohms) | >1 x 10 ⁶ |
| Electrolytic Corrosion Factor 3M Test Method | 1.0 |
| CIT Material Group | 1 |

Specifications

3M™ Epoxy Film Electrical Tape Super 10 is a 5 mil, high dielectric, flame-retardant tape. This tape has a thermosetting rubber adhesive that is resistant to heat, oxidation, solvents and oils. It is UL 510 flame-retardant, temperature rated to 311° F (155° C).

The adhesive coating shall be smooth and uniform, and be free of lumps and bare spots. There shall be no separator between adjacent layers of the roll. The tape shall perform at a temperature of 311° F (155° C) without loss of physical or electrical properties.

Shelf Life & Storage

The tape has a 5-year shelf life from date of manufacture when stored in a clean, dry place at a temperature of 70° F (21° C) and 40-50% relative humidity.

3M™ Epoxy Film Electrical Tape Super 10

Availability

3M™ Epoxy Film Electrical Tape Super 10 is available in standard and custom widths and lengths. Standard length is 72 yards.

For availability, please contact your local distributor. Names and addresses are available from 3M.com/electrical [Where to Buy] or call 1-800-676-8381.

Important Notice

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