

# 3M<sup>TM</sup> Electrical Tape 44

Data Sheet

January 2011

**Description** 3M<sup>TM</sup> Electrical Tape 44 is a low-halogen, combination polyester film/polyester web film coated with a rubber thermosetting pressure-sensitive adhesive. This UL recognized conformable tape is puncture resistant with excellent electrical properties.

**Agency Approvals & Self Certifications** Meets requirements of:  
UL File No. E17385, Guide OANZ2  
For temperatures not exceeding 130°C

**Applications** Used for stick-wound coils/transformers and in bobbin-wound coils for banding, anchoring, and insulating, and for protecting start wires, leads, terminal strips, insulation paper, end turns and connections in motors and transformers.

**Typical Properties** Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73°F (23°C) unless otherwise stated.

| Physical Properties (Test Method)<br>(ASTM D1000 unless noted) | Typical Value<br>US units (metric) |
|----------------------------------------------------------------|------------------------------------|
| Color                                                          | Caramel Translucent                |
| Adhesive                                                       | Rubber Thermosetting               |
| Backing Thickness                                              | 5.5 mils (0,139 mm)                |
| Breaking Strength                                              | 40 lbs/in (70 N/10 mm)             |
| Elongation (% at break)                                        | 50%                                |
| Puncture Resistance<br>(per Federal Spec L-T-001512)           | 12 lbs (5.4 kg)                    |
| Adhesion to Steel                                              | 65 oz/in (7.1 N/10 mm)             |
| Halogen Content                                                | Chlorine <0.09%<br>Bromine <0.004% |

| Electrical Property (Test Method)<br>(ASTM D1000 unless noted) | Typical Value<br>US units (metric) |
|----------------------------------------------------------------|------------------------------------|
| Dielectric Breakdown                                           | 5500 V                             |
| Insulation Resistance                                          | >1 x 10 <sup>6</sup> megohms       |
| CTI Material Group                                             | I = (> 600 volts)                  |
| Electrolytic Corrosion Factor (3M TM)                          | 1.0                                |

# 3M™ Electrical Tape 44

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## Specifications

3M™ Electrical Tape 44 is a low-halogen, polyester web-reinforced film with thermosetting rubber, pressure-sensitive adhesive.

The tape shall be coated on one side with pressure-sensitive adhesive, which shall not require heat, moisture or other preparation prior to or subsequent to application. 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 262°F (130°C) without loss of physical or electrical properties

For maximum solvent resistance and holding properties, the tape should be thermoset at one of the following cycles:

1 hour @ 300° F (150° C)  
2 hours @ 275° F (135° C)  
3 hours @ 250° F (120° C)

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## Shelf Life & Storage

This product has a 5-year shelf life from date of manufacture when stored in a humidity controlled storage (10°C/50°F to 27°C/80°F and <75% relative humidity).

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## Availability

Please contact your local distributor; available from [3M.com/electrical](http://3M.com/electrical) [Where to Buy] or call 1.800.676.8381.

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## Electrical Markets Division

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