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# 3M Data Sheet

## Scotch™ 2220

### Electrical Stress Control Tape

#### 1. Product Description

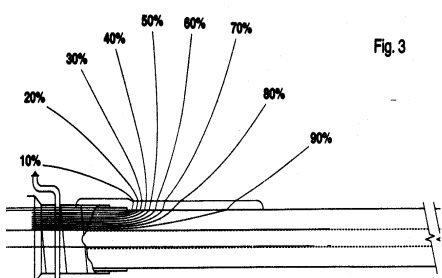
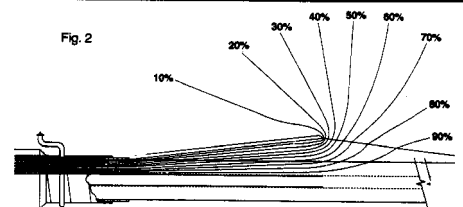
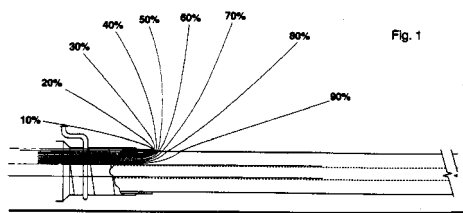
Scotch™ 2220 Stress Control Tape changes the voltage distribution in electrical field surrounding medium voltage joints or terminations.

#### 2. Applications

Lines of flux are regulated to equalize the electrical stresses in a controlled manner along the entire taped joint or termination area where the shielding has been re-moved.

By changing the electrical field surrounding the joint or termination, the stress concentration is reduced from several thousand volts to values found in continuous cable.

The figures below show the stress concentrations around three energized cables. Figures Nos. 1, 2 and 3 show, respectively, the stress concentrations near a cable shield end, a standard tape stress cone, and a joint or termination utilizing Scotch 2220 'Stress Control Tape'. The stress concentrations on the insulation surface are directly proportional to the closeness of the equipotential lines.



#### 3. Typical Properties\*

<b>Colour</b>	Grey
<b>Thickness<sup>1</sup></b>	0.76 mm
<b>Tensile Strength<sup>1</sup></b>	>4.3 MPa
<b>Elongation<sup>1</sup></b>	>225%
<b>Dielectric Constant<sup>2</sup></b>	25 – 30
<b>Electric Strength<sup>3</sup></b>	>13.8 kV/mm
<b>Range of Temperature<sup>4</sup></b>	
Continuous operating temp.	90°C
Emergency operating temp.	130°C

\*These are typical values and should not be used for specification purposes.

<sup>1</sup> IEC 60454-2

<sup>2</sup> VDE 0303-4

<sup>3</sup> IEC 60243

<sup>4</sup> IEC 60085, IEC 60216

#### 4. Installation Technique

The tape shall be applied in half-lapped layers with very little tension and the silver color side looking outside.

Follow the appropriate instruction drawings for joints and terminations.

#### 5. Maintenance

Scotch™ 2220 Tape shall have 5 years shelf life under normal storage conditions (21° C).

#### 6. Availability

Scotch™ 2220 Tape is available from 3M and your local 3M authorized electrical distributor.

## Scotch 2220 – Data Sheet

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