Scotch® Linerless Rubber Splicing Tape 2242

Data Sheet July 2017

Product Description

Scotch® Linerless Rubber Splicing Tape 2242 is an economical, general purpose, rubber tape. The tape is a highly conformable, linerless EPR (Ethylene Propylene Rubber) based electrical insulating tape. The tape is designed for use in splicing and terminating wires and cables rated up to 90°C.

The tape will meet industry specifications for flame retardance and has the necessary physical and electrical properties to provide immediate moisture seals and void−free buildup.

Features

- Linerless, self−bonding, insulating tape
- Ethylene propylene base
- Flame retardant
- Physical and electrical properties unaffected by degree of stretch
- Uniform tape unwind from roll
- Small roll size (OD)
- Stable over wide application temperature range
- Weather resistant

Agency Approvals & Self Certifications

For RoHS information, please visit www.3M.com/ROHS

Applications

- Primary insulation for cable splices and terminations
- Moisture sealing and insulating electrical connections
- Bus bar insulation
- Moisture sealing of cable ends
- Motor leads
- Wire and cable jacket repair

Specifications

The electrical insulating corona-resistant tape must be supplied without a liner and based on ethylene propylene rubber and be capable of emergency operating cable temperature of 130°C. The tape must be capable of being applied in ether stretched or unstretched conditions without resulting in loss in ether physical or electrical properties. The tape must not split, crack, slip or flag when exposed to various environments (indoor or outdoor). The tape must be compatible with all synthetic cable insulations and have a shelf life of five years. The tape must be flame retardant.

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Typical Physical and Electrical 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)	Typical Value US units (metric)
Color	Black
Thickness (ASTM D–4325)	30 mils (0.762 mm)
Tensile Strength (ASTM D 4325)	250 psi (1.72 MPa)
Ultimate Elongation (ASTM D 4325)	1000%
Operating Temperature (ASTM D 4388)	194°F (90°C)
Emergency Overload (ASTM D 4388)	266°F (130°C)
Thermal Resistivity (3M Transient)	300°C (cm/watt)
Ozone Resistance (ASTM D 4388)	Passed
Heat Resistance (ASTM D 4388)	Passed
UV Resistance (ASTM D 4388)	Passed
Flame Resistance (IEEE Std 27-1974 ANSI C37.20C 74)	Passed
Electrical Properties (Test Method)	**Typical Value US units (metric)**
Dielectric Strength ASTM D 4325 Original ASTM D 4325 24 hrs in H_2O ASTM D 4325 96 hrs @ 23°C 96% RH	 750 V/mil (29.5 Kv/mm) 750 V/mil (29.5 Kv/mm) 750 V/mil (28.7 Kv/mm)
Volume Resistivity ASTM D 4325 Original Aged 96 hrs @ 23°C 96% RH	 $>10^{15}$ ohm-cm $>10^{14}$ ohm-cm
Dielectric Constant ASTM D 4325 1200 V@ 60 Hz 23°C	3.5
Dissipation Factor ASTM D 4325 1200 V@ 60 Hz 23°C	0.70%

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Engineering /Architectural	Splicing and terminating solid dielectric cables shall be done in accordance with drawings engineered by the splice material manufacture such as the 3M™ Inline Tape Splice 2047 A41 available from the 3M company.
Installation Techniques	Scotch® Linerless Rubber Splicing Tape 2242 should be applied in successive half-lapped level wound layers until desired buildup is reached. This tape should be applied like any rubber tape: that is, the side of the tape wrapped inside the roll should be applied outside on splice, tacky side up. This will help prevent the roll from getting progressively further away from the work area. To eliminate voids in critical areas, highly elongate Scotch® Splicing Tape 2242. Stretch tape in these critical areas just short of the breaking point; doing so will not alter its physical or electrical properties. In less critical areas, less elongation may be used. Normally Scotch® Splicing Tape 2242 is stretched ¾ of its original width in these critical areas. Always attempt to half-lap to produce a uniform buildup.
Shelf Life & Storage	Scotch® Linerless Rubber Splicing Tape 2242 have a 5-year shelf life from date of manufacture when stored in a humidity controlled storage 70°F/21°C and 40 to 50% relative humidity.
Availability	Scotch® Linerless Rubber Splicing Tape 2242 is available in 3/4 in. by 15 ft and 1 1/2 in. by 15 ft rolls. Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1.800.245.3573.

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