Scotchfil™ Electrical Insulation Putty

Data Sheet

1. Product Description

Scotchfil™ Electrical Insulation Putty is an electrical grade putty in a tape form. Scotchfil putty is UL Recognized as a splice insulation for electrical conductors at temperatures up to 176°F (80°C) when over-wrapped with either Scotch™ Super 33+ or Super 88 vinyl Electrical Tape.

- UL "Recognized" Category OCOT2, File No. E59951
- Noncorrosive, synthetic rubber
- Excellent electrical properties
- Excellent aging properties
- Will not dry out
- Applies cleanly without waste

2. Applications

- To insulate low voltage (600 volts and less) connections
- To build up cable splices and fill out major irregularities and voids in low voltage splices (2300 volts and less) in order to obtain a uniform base for further taping
- To round out high voltage connections
- To smooth bus bar irregularities
- To create a resin dam in resin pressure splices
- To create a moisture seal at ground wire exit in high voltage splices
- To moisture seal multiconductor cable connections

Typical Properties

Physical Properties	
Color	Black
Thickness ASTM D-1000	125 mils (3, 17 mm)
Elongation ASTM D-1000	1000%
Copper Corrosion	None

Electrical Properties	
Dielectric Strength ASTM D-1000	575 V/mil (22,6 kV/mm)
Insulation Resistance ASTM D-1000	$>10^6$ Megohms

3. Specification

The insulating putty must be in tape form, the thickness of which must be a minimum of 100 mils (2,54 mm). The tape must be a rubber based tape capable of being formed and molded with moderate finger tension at temperatures as low as 32°F (0°C). Neither the tape nor any of its components shall cause the corrosion of copper. The tape must be compatible with most synthetic cable insulation as well as other splicing tapes.

4. Engineering/Architectural Specification

All 2300 volt or less feeder connections, taps and splices, on wires larger than 6 AWG with irregular shaped connectors, shall be first built up with electrical insulating putty to eliminate both sharp corners and voids. Enough insulating putty shall be used until good overall padding is provided. Compress putty to fill all voids and generally smooth up before applying electrical splice protection.

All 600 volt or less splices and terminations on wires larger than 6 AWG with irregular shaped connectors shall be insulated with a minimum of 1/4 inch (6,3 mm) of electrical insulating putty. The entire connection must be covered with the insulating putty. The insulating putty must then be over-wrapped with a vinyl tape applied with the same tension as it has when it comes from the roll. This vinyl tape shall provide an uniform covering of at least four layers, half lapped in two directions.

5. Installation Techniques

To round out irregular connections, mold and pack Scotchfil Electrical Insulation Putty with moderate finger pressure, eliminating voids and air spaces. The layers of Scotchfil will fuse into a homogeneous mass. Over-wrap with two half lapped layers of Scotch Super 33+ or Super 88 Vinyl Electrical Tape.

To create a resin dam in resin pressure splices, wrap a layer of moderately stretched Scotchfil insulation putty around the cleaned cable jacket at a distance of 3.0 inches (7,6 cm) from the jacket cutback. Lay the ground wire along the cable jacket and through the Scotchfil putty. Wrap several layers of highly elongated Scotchfil putty around the cable and ground wire. Bind Scotchfil putty tightly with several wraps of Scotch Super 33+ or Super 88 Vinyl Electrical Tape. The putty and vinyl tape will make a seal through which resin cannot flow.

6. Shelf Life

Scotchfil Electrical Insulation Putty has a 5 year shelf-life (from date of manufacture) when stored under the following recommended storage conditions. Store behind present stock in a clean dry place at a temperature of 70°F and 40-50% relative humidity. Good stock rotation is recommended.

7. Availability

Scotchfil Electrical Insulation Putty is available in 1 1/2 in x 60 in (3,8 cm x 152,4 cm) rolls from your local 3M authorized electrical distributor.

Important Notice

All statements, technical information, and recommendations related to Seller's products are based on information believed to be reliable, but the accuracy or completeness thereof is not guaranteed. Before utilizing the product, the user should determine the suitability of the product for its intended use. The user assumes all risks and liability whatsoever in connection with such use.

Any statements or recommendations of the Seller which are not contained in the Seller's current publications shall have no force or effect unless contained in an agreement signed by an authorized officer of Seller. The statements contained herein are made in lieu of all warranties, expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose which warranties are hereby expressly disclaimed.

SELLER SHALL NOT BE LIABLE TO THE USER OR ANY OTHER PERSON UNDER ANY LEGAL THEORY, INCLUDING BUT NOT LIMITED TO NEGLIGENCE OR STRICT LIABILITY, FOR ANY INJURY OR FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES SUSTAINED OR INCURRED BY REASON OF THE USE OF ANY OF THE SELLER'S PRODUCTS THAT WERE DEFECTIVE.

3M

Electrical Products Division

6801 River Place Blvd.
Austin, TX 78726-9000
800/245 3573
FAX 800/245 0329

40% Pre-consumer waste paper
10% Post-consumer waste paper

Litho in USA.