

**3M** Science.  
Applied to Life.™



# Take charge of your transformer design challenges

**3M™ Flexible Insulation Solutions**



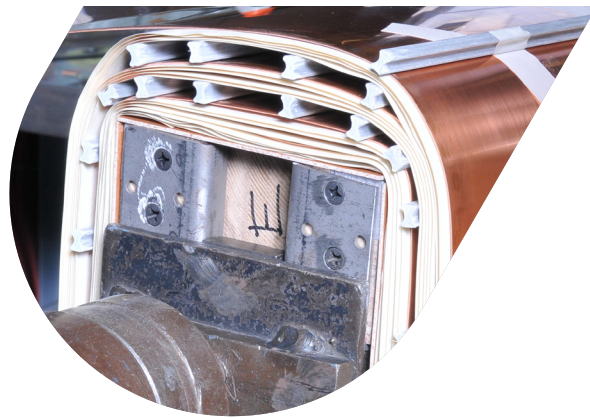


# Help improve your transformer performance

Help improve your dry-type transformers and take charge of your design challenges by adding 3M™ Flexible Insulation Solutions.



ThermaVolt, CeQUIN, and TufQUIN inorganic insulating products can help you increase efficiency without increasing size. The results can be longer-lasting, more reliable transformers that may also lower your costs.



## ThermaVolt

3M™ ThermaVolt Calendered Inorganic Insulating Papers and Laminates offer good dielectric characteristics and thermal conductivity, and can be used in applications requiring enhanced heat dissipation performance.

- Highest thermal conductivity of 3M flexible insulation products
- Good dielectric characteristics and thermal conductivity make it the better choice for use as turn insulation in strip-wound coils when maximum heat dissipation is desired
- UL systems recognized under 3M Innovative Paper Technologies File No. E65007 through Class 220(R)

## Why choose 3M?

### Inorganic-based insulation

Inorganic content helps improve electrical, thermal, and dimensional stability of the insulation, which can enhance the insulation reliability and processing performance.

### High thermal conductivity



3M™ Flexible Insulation helps promote better heat dissipation, which may enable cooler running and more efficient transformers.

### High voltage endurance

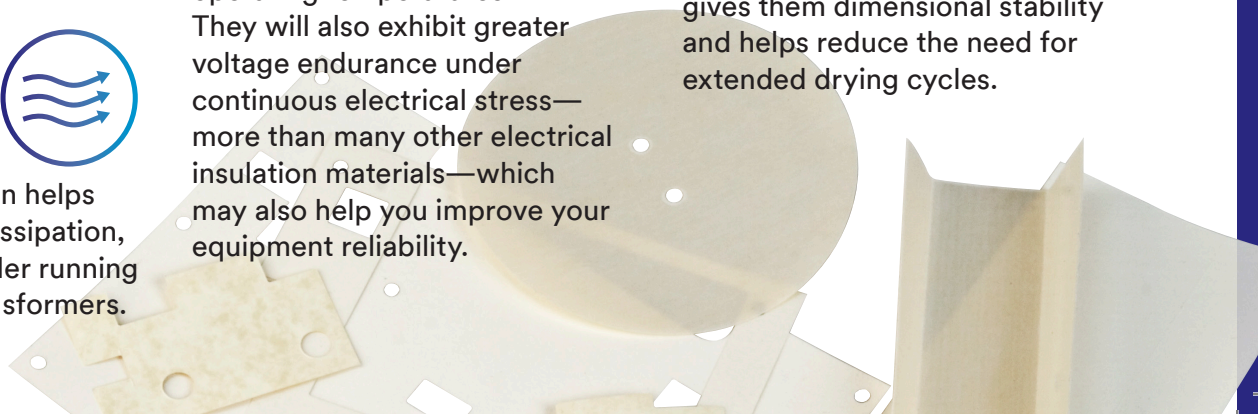


3M inorganic insulating materials retain a high percentage of dielectric strength, even after extended exposure to high operating temperatures. They will also exhibit greater voltage endurance under continuous electrical stress—more than many other electrical insulation materials—which may also help you improve your equipment reliability.

### Improved varnish absorption



Inorganic-based papers exhibit low moisture absorption even in humid environments. This gives them dimensional stability and helps reduce the need for extended drying cycles.





## CeQUIN

3M™ CeQUIN Inorganic Insulating Paper is 3M's highest inorganic content electrical insulation paper, promoting improved thermal, dimensional, and electrical stability.

- High thermal conductivity
- Applications include layer, turn, interwinding, and end-fill insulation
- High voltage endurance
- High varnish absorption
- UL systems recognized under 3M Innovative Paper Technologies File No. E65007 through Class 220(R)



## TufQUIN

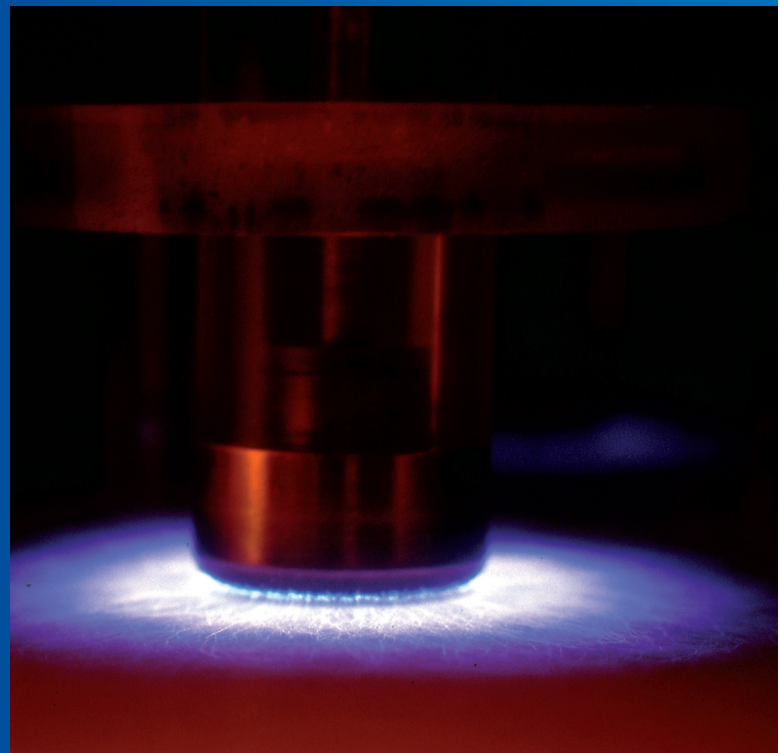
3M™ TufQUIN Hybrid Insulating Papers and Laminates are tough, flexible, and offer the high-temperature capabilities of inorganic materials combined with the high mechanical strength of organic fiber. They can be combined with polyester film to form a flexible laminate, which is used for high-temperature electrical insulation applications.

- High thermal conductivity
- Applications include layer, turn, interwinding, and end-fill insulation
- Excellent mechanical strength and toughness
- Available in thicknesses ranging from 5 mils to 30 mils
- UL systems recognized under 3M Innovative Paper Technologies File No. E65007 through Class 200(N)



### UL recognized

3M™ Flexible Insulation Solutions are UL recognized for use as major insulation in electrical insulation systems as listed under 3M Innovative Paper Technologies File No. E65007 and may be found on UL's electrical insulation systems database.





## 3M is here to help

When you're looking for design innovation and inspiration, look to 3M. With our broad variety of solutions, we'll work with you to help you find the right product combination to help you solve your challenges, not only now, but long into the future. And with more than 30 years of experience working in the electrical manufacturing industry, you can trust 3M as your go-to supply source for flexible insulation.

Talk to your 3M representative today about how 3M™ Flexible Insulation Solutions can help you take charge of your transformer designs.



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Electrical Markets Division  
13011 McCallen Pass, Bldg. C  
Austin, TX 78753-5380

Phone 800.676.8381  
Fax 800.828.9329  
[www.3M.com/oem](http://www.3M.com/oem)

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