

3M™ CeQUIN™ 3000 Inorganic Insulating Paper

Data Sheet

August 2008

Product Description 3M™ CeQUIN™ 3000 Inorganic Insulating Paper is a modified version of CeQUIN I paper developed by 3M's research and development team to provide high-strength thin papers. By introducing a small percentage of organic fiber reinforcement along with a higher strength binder system, CeQUIN 3000 papers may be produced in 3-mil and 5-mil thicknesses. CeQUIN 3000 paper is composed of approximately 74% inorganic content as compared to the 90% inorganic content of CeQUIN I paper. CeQUIN 3000 paper may be laminated with polyester film, or glass fabric to enhance initial dielectric strength or improve mechanical manageability. CeQUIN 3000 paper is available in continuous roll stock up to 36 inches wide, as slit tape, or sheets.

Regulatory Agencies



UL and CSA Certification

UL systems recognition through Class 220(R), CSA Component Acceptance: Temperature Class 220°C.

Features

Dielectric Performance

CeQUIN 3000 papers retain a high percentage of dielectric strength even after extended exposure to high operating temperatures. CeQUIN 3000 papers also will exhibit greater voltage endurance under continuous electrical stress than many other electrical insulation materials.

Thermal Conductivity

The high thermal conductivity of CeQUIN 3000 papers help achieve the heat dissipation required in today's high efficiency electrical apparatus, allowing the design of smaller, more cost effective equipment.

The 3M logo, consisting of the letters '3M' in a bold, sans-serif font.

Features

Varnish Absorption

The good varnish absorption characteristics of CeQUIN 3000 papers can enhance already high thermal conductivity allowing equipment to run cooler, quieter, and last longer.

Low Moisture Absorption

Manufactured with less than 1% moisture content, CeQUIN 3000 papers exhibit low moisture absorption even in humid environments, thereby reducing the need for extended drying cycles.

Applications

High Temperature Electrical Insulation for:

Dry-Type Transformers, Coils, Reactors (ground, barrier, layer, end-turn and inter-winding insulation)

Traction Motors, Generators (inter-winding insulation for form-wound coils, slot insulation and phase insulation)

Wire and Cable Wrap

Battery Separators

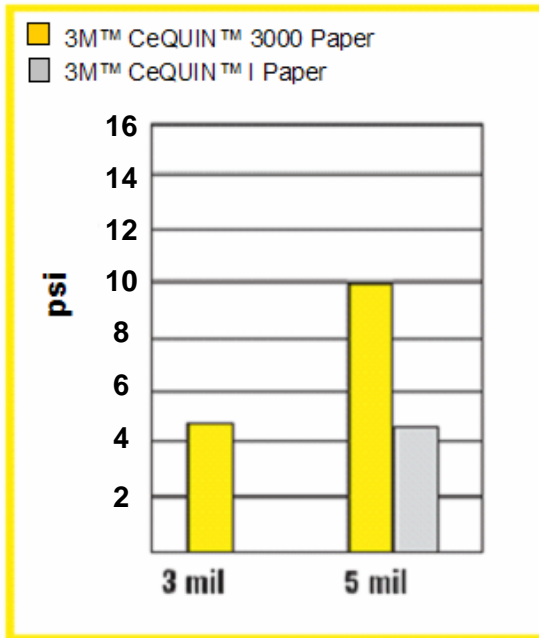
Capacitor and Electromagnet Layer Insulation

Switchgear Insulation

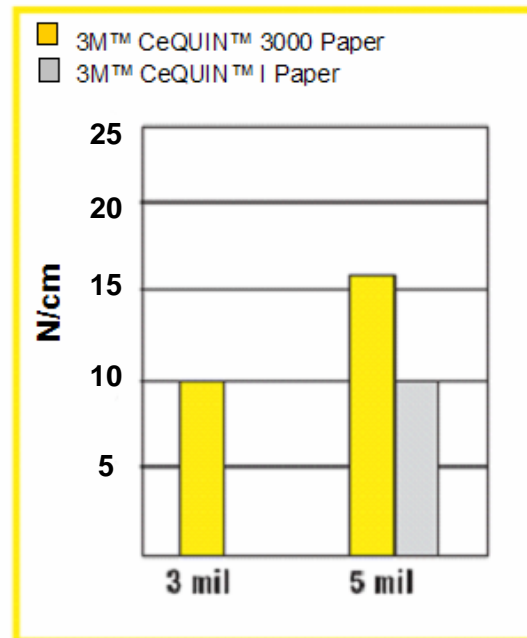
Spiral and Convolute Tubing

Typical Product Properties			
	3M™ CeQUIN™ Inorganic Insulating Paper		ASTM Test Method
Thickness	0.08 mm 3 mil	0.13 mm 5 mil	D-645
Basis Weight	65 g/m ² 0.12 lb/yd ²	100 g/m ² 0.20 lb/yd ²	D-202
Density	0.85 g/cc	0.85 g/cc	
Tensile Strength, MD	5.5 lb/in 10 N/cm	9 lb/in 16 N/cm	D-828
Elongation to Break, MD	1.4%	1.4%	D-828
Dielectric Breakdown	1.0 kV	1.0 kV	D-149
Moisture	<1%	<1%	D-644

MULLEN BURST



TENSILE STRENGTH



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