

3M INNOVATIVE PAPER TECHNOLOGIES

1 PAPER TRL TILTON NH 03276-5250

System Component
CeQuin I, CeQuin X, TufQuin 110,
TufQuin 120, DMD180

System Designation
QT-180 PLUS

System Temp(Class)
180(H)

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Complies with IEC Publication 85

Construction Details (Table I)

The use of this insulation system is limited to the combination of materials specified below. Where more than one item is designated under Insulation Function, they may be used together, unless otherwise indicated, or they may be used as alternates to one another. Functions designated "optional" are not necessarily required for every design. Insulation thicknesses and/or layers indicated below are minimum.

Winding Wire

- Recognized Component - Magnet wire (OBMW2), single build or greater, round or rectangular listed below or
- Recognized Component - Single and Multi-Layer Insulated Winding Wire (OBJT2) listed below or
- Recognized Component - Appliance Wiring Material (AVLV2) listed below

(unless otherwise noted, winding wire types listed below may be used in combination within a single product)

MW 35 or 200C Polyester-amide-imide (Polyamide-imide)
 MW 76 or 180C Polyester-amide-imide (Polyamide)
 Bare Conductor - insulated with DMD180 3-3-3 mils min. or, TufQuin 110, 120 1mil min., or CeQuin I, X or any Nomex Ground insulation in this table, 2 mils min., 50% overlap.

Ground & Interwinding Insulations

Designation (no.)	mils(mm)	comments
3M Innovative Paper Technologies		
CeQuin I	10 (0.25)	unfired ceramic based rubber bonded paper
CeQuin X	10 (0.25)	
DMD180	3-3-3	
TufQuin 110	5 (0.13)	
TufQuin 120	5 (0.13)	
E. I. Dupont de Nemours & Co.		
Nomex 410	10 (0.25)	aramid insulating paper
Nomex 411	23 (0.58)	aramid insulating paper
Nomex 414	10 (0.25)	aramid insulating paper
Nomex 416	10 (0.25)	aramid insulating paper
Nomex 418	10 (0.25)	aramid insulating paper
Nomex 424	10 (0.25)	aramid insulating paper
Nomex 425	10 (0.25)	aramid insulating paper

Nomex 992	20 (0.51)	aramid insulating paper
Nomex 993	16.5 (0.42)	aramid insulating paper
Nomex 994	16.5 (0.42)	aramid insulating paper
Nomex E56A	15 (0.38)	aramid insulating paper
Rynite 935	15 (0.38)	polyethylene terephthalate (PET)
Rynite FR530	15 (0.38)	polyethylene terephthalate (PET)
Eastman Chemical Products		
Ektar FBEG003	15 (0.38)	

Minor Sheet Insulations

layer, outer, wrap etc.

Any sheet insulation or tape described in this table with no minimum thickness requirement.

Tapes (optional)

Designation (no.)	comments
3M (Minnesota Mining & Mfg Co) 27	thermosetting rubber adhesive, glass cloth

Spacers and Wedges

Any material described in this table with no thickness requirement.

Varnishes (optional) Recognized Component - Varnishes (OBOR2)

Designation (no.)	comments
Dow Corning Corp DC-997	