3M™ CeQUINBORD CGA Inorganic Insulating Board

Data Sheet **August 2011**

Description	CeQUINBORD CGA is a high inorganic content board composed primarily of glass fibers and microfibers, inorganic fillers, and less than 10% organic binders. It is capable of long-term performance at temperatures exceeding 250℃. CeQUINBORD CGA is available as trimmed 48" x 48" (1220 mm x 1220 mm) boards in thicknesses ranging from 1/32" (.79 mm) to 3/8" (9.5 mm).
Agency Approvals & Self Certifications	3M™ CeQUIN and CeQUINBORD Inorganic Insulating Papers are designed to provide high-temperature performance in electrical insulation systems. CeQUIN products have undergone extensive thermal aging evaluation per UL 1446, "Standard for Systems of Insulating Materials – General," and as a result are UL Recognized as suitable for use as major ground insulation in systems rated through Class 220(R). Several UL Recognized Insulation systems are listed under IPT File No. E65007 in the OBJS2 category for Class 130(B), Class 155(F), Class 180(H), and 220(R) applications. This open file is free for use by any electrical apparatus manufacturer by contacting the nearest UL office. This file is also recognized by UL as being in compliance with International Electrotechnical Commission (IEC) Publication 85, "Thermal Evaluation and Classification of Electrical Insulation." RoHS 2002/95/EC RoHS Compliant 2002/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2002/618/EC, unless the substance is in an application that is exempt under RoHS. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M.
Applications	Dry-Type Transformers (ground, barrier, spacer sticks, core tubes, pads, end fill) o Spiral and Convolute wound Tubing o Traction Motors, Generators o Switchgear o Flame Barrier Applications for home appliances and electronic devices o Heat Sinks o Specialty Gaskets
Physical Characteristics	The high inorganic content of CGA boards provides exceptional thermal and dielectric stability for high temperature electrical insulation applications, along with good thermal conductivity to help dissipate heat build-up in electrical equipment. CGA boards are easily impregnated and fully compatible with standard varnishes and resins, and since they do not readily absorb moisture, they do not require extended drying time prior to saturation. CeQUINBORD CGA is UL Recognized as suitable for use in electrical insulation systems rated from Class 130(B) through Class 220(R). CeQUINBORD CGA is a UL Recognized Component with both 94V-0 and 94-5VA Flame Class Ratings (1.6 mm minimum thickness). It can be used in applications requiring flame retardant materials or where maximum resistance to flame burn-through is required.

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Typical Properties Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73℉ (~23℃) unless otherwise stated.

Property (Test Method)	Typical Value					
Nominal Thickness (ASTM D-645)	**0.8 mm (1/32 inch)**	**1.6 mm (1/16 inch)**	**2.4 mm (3/32 inch)**	**3.2 mm (1/8 inch)**	**4.8 mm (3/16 inch)**	**6.4 mm (1/4 inch)**
Basis Weight (ASTM D-202)	**.88 kg/m^2 1.6 lb/yd^2**	**1.81 kg/m^2 3.3 lb/yd^2**	**2.6 kg/m^2 4.8 lb/yd^2**	**3.52 kg/m^2 6.5 lb/yd^2**	**5.18 kg/m^2 9.5 lb/yd^2**	**6.64 kg/m^2 12.2 lb/yd^2**
Tensile Strength, MD (ASTM D-828)	**55 lb/inch 96 N/cm**	**80 lb/inch 140 N/cm**	**130 lb/inch 228 N/cm**	**190 lb/inch 333 N/cm**	**215 lb/inch 376 N/cm**	**240 lb/inch 420 N/cm**
Elongation, MD (ASTM D-828)	**<2 %**	**<2 %**	**<2 %**	**<2 %**	**<2 %**	**<2 %**
Dielectric Strength (ASTM D-149)	**4.5 kV**	**12 kV**	**14 kV**	**20 kV**	**24 kV**	**28 kV**
Moisture Absorption (ASTM D-644)	**<1 %**	**<1 %**	**<1 %**	**<1 %**	**<1 %**	**<1 %**

Shelf Life & Storage This product has a 5-year shelf life from date of manufacture when stored in a humidity controlled storage (10℃/50℉ to 27℃/80℉ and <75% relative humidity).

Availability Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1-866-357-2737 or call 1-800-245-3573.

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