



147-904

**TECHNICAL
INFORMATION
GRADE CEM-30**

MICA & MICANITE (IRELAND) LTD.

ADVANCED COMPOSITE TECHNOLOGY

DESCRIPTION

Mica & Micanite CEM-30 is constructed from a combination of woven and non-woven glass, all layers being impregnated with epoxide resin.

COLOUR

Blue.

**LAMINATE
THICKNESS**

1.5/1.6mm standard. Other thicknesses in range 0.8mm to 3.2mm available on request.

**COPPER
THICKNESS**

35 micron standard. Other thicknesses on request.

SHEET SIZE

*1220 x 914 mm standard.
1220 x 1060 mm on request.
Cut to size panels on request.*

SPECIFICATIONS

*BS 4584 Type EP-GC-CU-16.
NEMA LI-1-83 Type CEM-3.
UL 94 V-O.*

APPROVALS

*BS415 Clause 20.1
British Telecom M476.
UL File No. E53727 (M).*

TEST RESULTS

See overleaf.

PROPERTIES AND SPECIFICATIONS

DESCRIPTION

Non Electrical Tests on Metal Clad Laminates

B.S. 4584 Part 16

NEMA CEM-3

TEST	Units	Spec.	CEM-30	Units	Spec.	CEM-30
Solder Float at 260°C	-	-	-	sec	20	30
Peel Strength	-	-	-	lb/in	8	11
Peel Strength at 125°C	kN/m	1.4	2.0	lb/in	6	11
Peel Strength after thermal shock	kN/m	1.4	2.0	-	-	-
Peel Strength after plating solution	kN/m	1.2	1.5	-	-	-
Pull Off Strength	N	90	160	-	-	-

Electrical Tests on Metal Clad Laminates

B.S. 4584 Part 16

NEMA CEM-3

TEST	Units	Spec.	CEM-30	Units	Spec.	CEM-30
Volume Resistivity after damp heat	MΩ m	2 × 10 ⁴	10 ⁶	MΩ cm	10 ⁶	2 × 10 ⁶
Surface Resistance after damp heat	MΩ	5 × 10 ⁴	2 × 10 ⁶	MΩ	10 ⁴	2 × 10 ⁶
Dissipation Factor at 1MHz	-	0.040	0.022	-	0.040	0.022
Permittivity at 1MHz	-	5.5	4.2	-	5.4	4.2
Dielectric Breakdown	-	-	-	kV	45	50

Non Electrical Tests on Base Material (Substrate)

B.S. 4584 Part 16

NEMA CEM-3

TEST	Units	Spec.	CEM-30	Units	Spec.	CEM-30
Flexural Strength	MN/m ²	250	300	psi	40000/ 32000	50,000/ 40,000
Water Absorption	-	-	-	%	0.25	0.15
Flammability	UL94	V-O	V-O	-	Class O	Class O

Comparative Tracking Index

IEC 112/DIN 53480 Kc

DIN 53480 Kb

TEST	Units	Spec.	CEM-30	Units	Spec.	CEM-30
CTI	V	-	200	V	-	-

Typical test results for 1.6mm 36 micron Epoxy Copperclad Laminate.

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