

147-904



**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

TEST	B.S. 4584 Part 16			NEMA CEM-3		
	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

TEST	B.S. 4584 Part 16			NEMA CEM-3		
	Units	Spec.	CEM-30	Units	Spec.	CEM-30
Volume Resistivity after damp heat	MΩ m	2 × 10 <sup>4</sup>	10 <sup>6</sup>	MΩ cm	10 <sup>6</sup>	2 × 10 <sup>6</sup>
Surface Resistance after damp heat	MΩ	5 × 10 <sup>4</sup>	2 × 10 <sup>6</sup>	MΩ	10 <sup>4</sup>	2 × 10 <sup>6</sup>
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)

TEST	B.S. 4584 Part 16			NEMA CEM-3		
	Units	Spec.	CEM-30	Units	Spec.	CEM-30
Flexural Strength	MN/m <sup>2</sup>	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

TEST	IEC 112/DIN 53480 Kc			DIN 53480 Kb		
	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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## MICA & MICANITE (IRELAND) LTD.

For further information contact:

Sales & Works:  
Mica & Micanite (Irl) Ltd.  
Mallow,  
Co. Cork,  
Ireland.  
Telex: 76146 MICA EI.  
Tel. Mallow (022) 21345, 21667.  
Fax: (022) 21891.

U.K. Sales,  
Mica & Micanite (Irl) Ltd.  
Unit 118/119,  
Bradley Hall Ind. Estate,  
Standish, Lancs, WN6 0XQ.  
(0257)  
Tel. 425664 Fax: 424466.  
Telex: 67264 MICAEI

