

CEM-1 COBRISOL 714 (Code 718)

IEC Specification	IEC 61249-2-5		
IPC Specification	IPC-4101/10	UL/ANSI Grade	CEM-1 UL-VO
DESCRIPTION			
Glass - paper epoxy composite. It can be processed by both punching and drilling and especially suitable for STH (Silver Through Hole). Its excellent thermal resistance, makes it especially suitable for Lead-free processes, carbon ink printing, hot air levelling and Ni/Au finishes.			
ROHS compliance directive 2002/95/EC			
Test method IEC-61189/IPC TM-650			
CERTIFICATIONS AND HOMOLOGATIONS	UL	E-47820	
	VDE	HA002596	
	BSI	6916	

PROPERTIES	UNIT	GUARANTEED VALUE	ACCEPTANCE LIMIT
			CEI 61249-2-5 IPC 4101/10
Other specifications of reference			
THERMAL SHOCK with COPPER	sec	>20 (Immersion, Tin bath at 288° C)	20 (Floating, Tin bath at 260 °C)
PEEL STRENGTH After thermal shock (20 sec 260 °C) Cu 35 µm	N/mm	≥ 1,8	1,4
PULL-OFF STRENGTH	N	≥ 180	≥ 30
DIMENSIONAL STABILITY 30 min. 150°C	ppm	Nominal value: -250 ± 400	Tolerance Class B: ± 400
SURFACE RESISTIVITY, damp heat, steady state	MΩ	≥ 3 x 10 ⁴	≥ 3 x 10 ⁴
VOLUME RESISTIVITY, damp heat, steady state	MΩm	≥ 10 ⁴	≥ 5 x 10 ³
DIELECTRIC DISSIPATION at 1 MHz, damp heat, steady state	-----	≤ 0,045	≤ 0,045
PERMITTIVITY at 1 MHz, damp heat, steady state	-----	≤ 4,5	≤ 5,4
SURFACE RESISTIVITY at 125 °C.	MΩ	≥ 10 ³	≥ 10 ³
VOLUME RESISTIVITY at 125°C.	MΩm	≥ 10 ³	≥ 10 ²
FLEXURAL STRENGTH, LW /CW	Mpa	≥ 300 / ≥ 230	≥ 200 / ≥ 175
FLAMMABILITY	-----	FV-0	FV-0
WATER ABSORPTION	%	≤ 0,25	≤ 0,5
MEASLING	-----	COMPLIES	COMPLIES
GLASS TRANSITION TEMPERATURE	° C	≥ 95	≥ 95

ENGINEERING INFORMATION: Properties values that IEC specification presume for the covered materials but are not asked as a requirement

PROPERTIES	UNIT	TYPICAL VALUE	TYPICAL VALUE acc. IEC
COMPARATIVE TRACKING INDEX (Testing according IEC-61112)	V	≥ 300	Class UL: 2
ADDITIONAL PROPERTIES	UNIT	GUARANTEED VALUE	SPECIFICATION
IPC T-260° by TMA (unclad) (Testing according IPC-TM-650 2.4.24.1)	minutes	≥ 2	
Number of Lead-free reflow cycles, max. circ. temp. 252°C convective oven (Internal test methods)	cycles	≥ 4	
Number of Lead-free reflow cycles, max. circ. temp. 262°C convective oven (Internal test methods)	cycles	2	
Distortion Temperature (TGA) (Testing according ASTM D3850 (10°C/min))	°C	≥ 300	

AVAILABILITY	
STANDARD SHEET SIZES mm.	1070 x 1160, 1070x1220, 920 x 1270, 920x1220 (Other sizes consult)
Tolerance	+5/-0 mm.
Squareness	3 mm max., as differential between diagonal measurements.
Standard size tolerance in panels	+ - 0,3 mm. (Also available and edge milled panels)
Material marked by red logo	VR
Copper thickness	18, 35, 70, 105 µm

The data is based on guaranteed values of standard production and should be considered as general information. Our company reserves the right to future changes. It is the responsibility of the user to ensure that the product complies with his requirements.