

GRADE DATA SHEET

CM2
Industrial

<u>GENERAL DESCRIPTION AND SPHERE OF USE</u>	<u>CLASSIFICATION</u>
A Copper graphite grade well suited for slipping applications, also used on D.C. machines up to 6v and on automobile accessory motors and 12v starters.	Copper - Graphite

PHYSICAL DATA

RESISTIVITY	0.1	μ ohm cm	0.0	10-4 ohm in
TRANSVERSE BEND STRENGTH	31.0	MPa	4500.0	lb/in ²
BULK DENSITY	4.9	g/cm ³		lb/ft ³
SHORE HARDNESS	15.0			

Physical properties may vary from time to time as modifications are made to manufacturing techniques to maintain consistent operational behaviour; as such the values stated here are intended as a guide only.

OPERATIONAL DATA

NORMAL CURRENT DENSITY RATING	Commutators	15.5	A/cm ²	100.0	A/in ²
	Rings	22	A/cm ²	141.9	A/in ²
NORMAL MAXIMUM OPERATING SPEED		30	m/s	5910	ft/min
NORMAL RECOMMENDED PRESSURE		180 - 210	g/cm ²	2.6 - 3.0	lb/in ²

TEST DATA

This data has been obtained in the test laboratory on a 230 mm diameter slotted copper ring (VPN 84-90) at the following test conditions:

BRUSH SECTION T * A	12.5 * 25	mm
NUMBER OF BRUSHES	4	RADIAL
BRUSH PRESSURE	140	g/cm ²
PERIPHERAL SPEED	25	m/s
CURRENT DENSITY	8.5	A/cm ²

AV. VOLT DROP PER BRUSH	0.20	v
AV. COEF. OF FRICTION	0.11	

These characteristics may vary with different machines and conditions of utilisation, and figures quoted are for guidance only.

DATE 03/12/2013

ISSUE **2**

