

# Technical Data Sheet

## Ceramic Powders and Formulations for Passive Components BME COG Dielectric Powders

### Application

Ferro's BME COG dielectric powders are designed for use in the manufacture of Class I MLCC and related electronic ceramic devices where COG TCC characteristics are required. This product is compatible with Ni (nickel) inner electrodes,

Cu (copper) terminations and fires according to the conditions indicated in the table below. This product category is formulated and processed to be RoHS compliant. See individual Product Data Sheet for details.

### BME COG Products

Product Code		COG410N
Dielectric Type		COG
Dielectric Constant	@ 1 MHz	41
RoHS Compliant?		Yes
PbO Content	%	0
Dissipation Factor	% @ 1 MHz	< 0.005
Insulation Resistance (IR) at 25°C	GΩ	> 20,000
Insulation Resistance (IR) at 125°C	GΩ	> 10,000
Breakdown Strength	V/μm	> 100
Particle Size D50	μm	0.80
Surface Area	m <sup>2</sup> /g	6.1
Powder Density <sup>1</sup>	g/cc	5.6
Peak Firing Temperature	°C	1225
pO <sub>2</sub> During Sintering	ppm	10 <sup>-10</sup>
Time at Peak Temperature	Hours	2
Electrode Metal Composition	%	100 Ni
Ferro Termination Ink Product <sup>2</sup>		TM50-083

1 Helium Pycnometer.

2 Product shown is for platable applications.



EU RoHS Directive 2011/65/EU

#### Limitation of Warranty and Liability

Ferro believes that the information contained in this document is accurate at the time of its publication. Ferro makes no warranty with respect to the information contained in this document. The information in this document is not a product specification, either in whole or in part. Your use of the information contained in this document and your purchase and use of this Ferro product are at your sole discretion. Downstream users are responsible for determination of the suitability of this product and for testing in specific applications. Nothing in this document shall be construed as a license for use that infringes upon any property rights of any third party. Please refer to the Safety Data Sheet (SDS) for safe use, handling and disposal information. All sales by Ferro to you are subject to Ferro's Terms and Conditions of Sale, as amended from time to time and available at [www.ferro.com](http://www.ferro.com). In the event this document conflicts with Ferro's Terms and Conditions of Sale, Ferro's Terms and Conditions of Sale shall control.