

# Technical Data Sheet

## Low Temperature Co-Fired Ceramic Systems A6M-E LTCC Au Conductor System

### Application

Ferro's co-fireable Au conductor are engineered to provide high reliability performance with A6M-E LTCC packaging applications.

Ferro's LTCC Au conductors are formulated and processed to be RoHS and REACH compliant.

### Typical Formulation Properties

**Line Resolution:** 5 mil (125µm) lines and spaces

**Storage and Shelf-life:** These products should be stored in tightly sealed containers at 10 - 25°C, in a dry place away from direct sunlight. Shelf life of a factory seal container is minimum 6 months from date of shipment when properly stored.

### Typical Process Parameters

**Thinning:** These pastes are formulated at the appropriate viscosity for the intended application. Contact Technical Service for recommended thinner to replace solvent loss.

**Printing:** A 280-325 mesh stainless steel screen with 12 to 25 µm emulsion thickness.

**Leveling:** 5 minutes at room temperature.

**Drying:** 10 minutes at 70°C with forced air flow and exhaust.

**Firing:** 850C for 15 minutes at Peak Temperature.

Refer to Ferro's LTCC Design Guide for specific ramp rates, air exchange information, cooling rates provided and other processing parameters.

### Typical Performance Characteristics

Product		FX30-025JH	CN30-078PF	CN30-080M	CN36-020
Composition Family		Au	Au	Au	AuPtPd
Application		Internal Conductor, Adhesion Layer for Brazing	Via	Wire Bond Surface Conductor	Solderable Surface Conductor
Viscosity <sup>1</sup>	Pa.s	95 ± 15	2800 ± 500	130 ± 20	190 ± 40
Metal Content	%	75	75	70	72
Fired Thickness	µm	14-18	14-18	14-18	14-18
Resistivity <sup>2</sup>	mΩ/sq	< 3.0	-	< 2.2	< 50
Wirebond Strength <sup>3</sup>	grams	> 10	-	> 35	-
Solderability <sup>4</sup>	%	-	-	-	> 95
Leach <sup>4</sup>	%	-	-	-	< 10
Initial Adhesion <sup>5</sup>	N	-	-	-	> 13

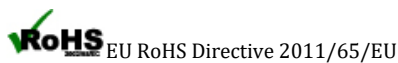
<sup>1</sup> Brookfield HBT viscometer typically with an SC4-14 spindle

<sup>2</sup> Per sq. @25 µm

<sup>3</sup> FX30-025JH tested w/ 1 mil wire CN30-080M tested w/2 mil wire

<sup>4</sup> 230 ± 5°C; 60Sn-40Pb-2Ag; 185 flux;

<sup>5</sup> Peel on 80 x 80 mil pads



#### 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.