

Technical Data Sheet

4530-B Dielectric Composition



Product Description

4530-B Dielectric Composition is a dielectric paste for HTCC applications. The 4530-B is an Alumina-based material that can be co-fired with Yttria-stabilized Zirconia tapes. It is designed to be used as an insulation layer in Yttria-stabilized zirconia-based sensor applications.

4530-B is formulated to be Lead free, Cadmium free and Phthalate* free. The term “free” means that Lead, Cadmium and Phthalate* have not been intentionally added to the product. However, trace amounts may be present.

*Phthalates listed in Annex XIV of REACH

The 4530-B is a developmental material, typical properties reported are based on a limited data set and are subject to change.

Intended Applications:

The intended applications for the 4530-B Dielectric are sensor applications and all other applications that require the properties that are present with the 4530-B.

Typical Properties and Processing Recommendations

Rheology: Pseudoplastic, screen/stencil printable paste

Viscosity: 250 ± 100 Pa*s at $25.5^\circ\text{C} \pm 0.5^\circ\text{C}$ when measured using a Brookfield RVT viscometer and an ABZ spindle at 10 RPM.

Color: Off-White

Storage and Shelf Life: This product should be stored in tightly sealed containers at 20°C to 25°C , in a dry place away from direct sunlight. The shelf life of a factory sealed container is a minimum 6 months from date of shipment when properly stored.

Printing: 325 to 200 mesh stainless steel screen or stencil

Leveling Time: 5 to 10 minutes

Drying at 70°C to 80°C : 5 to 15 minutes

Firing: Optimum results are obtained by firing at a peak temperature of 1350°C to 1500°C for 1 to 2 hours. Actual firing profile depends on the design of the green tape laminate.

Thinner: 480 (Material # 1148622)

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. In the event this document conflicts with Ferro's Terms and Conditions of Sale, Ferro's Terms and Conditions of Sale shall control.

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. In the event this document conflicts with Ferro's Terms and Conditions of Sale, Ferro's Terms and Conditions of Sale shall control.