

Technical Data Sheet

42020-D PARTIALLY STABILIZED ZIRCONIA TAPE High Temperature PSZ Tape for Use in Sensors Material # 1432322



Product Description

42020-D Partially Stabilized Zirconia tape is a flexible cast film of partially stabilized zirconia (PSZ) powder dispersed in an organic matrix. This material is designed to be sintered in the temperature range of 1450°C-1550°C to yield a dense white-colored ceramic.

42020-D is provided on a silicone-coated polyester film to protect the tape from mechanical damage and aid in handling.

Generally, 42020-D green tape is co-fired with 5570 series Platinum conductor inks.

42020-D 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.

Typical Formulation Properties

TAPE THICKNESS: 125µm ± 10µm

STABILIZING AGENT: Y₂O₃, 5.0 mol %

STANDARD WIDTH: 7 inches sold on a roll.

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

Typical Processing Recommendations

PROCESSING: Parts are formed by blanking sheets of the tape to the required green size prior to sintering. The burnout cycle depends on the part configuration and size.

TYPICAL PEAK SINTERING TEMPERATURE: 1450°C-1550°C/1.5 hours

FIRED DENSITY: ≥ 95% of theoretical (1450°C for 1.5 hours)

COMPATIBLE MATERIALS: 5570 Series Pt, 4530-A (Material #1148191) Insulating Dielectric, 4569 Porous Dielectric (Material #1148193).

Limitation of Warranty and Liability

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