

Technical Data Sheet

42022-CWM Ceramic Tape Material # 1430874



Product Description

42022-CWM Ceramic Tape is a flexible cast film of partially stabilized zirconia (PSZ) powder dispersed in an organic matrix. This material is designed to be sintered at high temperatures and to yield a dense white-colored ceramic. 42022-CWM tape is provided on a polyester film to protect the tape from mechanical damage and aid in handling.

42022-CWM 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

Stabilizer Properties

Additive: Y₂O₃

Additive Content: 5.0 mol%

Typical Properties and Processing Recommendations

Green Ceramic Tape Thickness: 125 ± 12.5µm

Green Ceramic Width: 5.5 inches

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

Firing: Optimum results are obtained by firing at a peak temperature range of 1350°C to 1450°C for 1 to 2 hours. Actual firing profile depends on the design of the laminated ceramic.

Typical Fired Properties

Fired Shrinkage X: 18% to 19.5%, based on 12-layer bar fired at 1350°C for 1.5 hours.

Fired Shrinkage Y: 18% to 19.5%, based on 12-layer bar fired at 1350°C for 1.5 hours.

Fired Density: (single layer fired at 1350°C with a soak time of 1.5 hours) ≥ 95% of theoretical

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