JYOTI CERAMIC INDUSTRIES PVT. LTD.



Zircocem - 5

Zircon based Cold Curing cement

Zircocem-5 is an inorganic, water-based, room temperature curing, high temperature resistant ceramic adhesive cement. It is designed for bonding of glass, ceramic and metals for <u>thin</u> film bonding and coating. It provides good bond strength where inorganic bonding of components is required and only small clearances are available.

After proper curing, this cement imparts high strength, thermal shock resistance and high dielectric strength. Zircocem-5 is free from toxic chemicals/VOCs.

It is available in a micro-fine dry powder, to be mixed with water, in the ratio as specified below:

Zircocem-5 Powder	Water
80 parts by wt.	20 parts by wt.

Application procedure:

Mix the cement powder (part I) with water in the above-mentioned ratio to form a paste. The mixture may be diluted with additional water, however, excess water can lead to a loss in mechanical strength and increase shrinkage. The paste may be applied on clean and abraded parts. Since Zircocem-5 is quick to dry, consume mixed quantity within 15 minutes of mixing.

Leave the cemented parts to dry at ambient temperature for 24 hours before use. Heating at 65 °C in an oven may be implemented to accelerate the setting process. Avoid steam formation during drying. Inadequate drying can lead to short circuit between conductive components potted within the cement.

JYOTI® CERAMIC

JYOTI CERAMIC INDUSTRIES PVT. LTD.

Technical Properties

Zircocem - 5

Composition : > 75% Zirconium Silicate

< 10 % Quartz

< 15 % Others

Color : Buff

Bulk Density (Powder) : 1.1 g/cc

Bulk Density (Cured) : 2.2 g/cc

Coverage $_{(0.5 \text{ mm thick})}$: 2.0 kg/m²

pH : 8-9

Porosity (1000°C) : 40 %

Shrinkage $_{(1000^{\circ}C)}$: < 0.5 %

Thermal Expansion $_{(1000^{\circ}C)}$: 5.25 x10⁻⁶ K⁻¹

Max. Temperature use : 1350°C

Suitable Substrates : Ferrous and Non Ferrous Metals,

Glass and ceramics

Shelf life : 12 months when stored in

unopened, tightly sealed

containers in a dry location at

ambient temperature

Kindly note that all values mentioned are based on test pieces and may vary depending on field conditions. The values are not guaranteed by Jyoti Ceramic Ind. in anyway whatsoever and should be treated as indicative only. All values refer to a testing temperature of 20°C, unless otherwise specified.