

## **Zircocem - 1**

### **Zircon based Cold Curing cement**

Zircocem-1 is an inorganic, water-based, room temperature curing, high temperature resistant ceramic adhesive cement. It is designed for potting of sensors and heating elements, adhesion of various components (ceramics / metals / glass) as well as maintenance of low temperature furnace linings. It undergoes slight expansion during heating around 75 – 100°C, which make it ideal for fixing of high temperature components.

After proper curing, this cement imparts high bond strength, thermal shock resistance and high dielectric strength. Zircocem-1 is free from toxic chemicals / VOCs.

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

<b>Zircocem-1 Powder</b>	<b>Liquid (Part II)</b>
2 parts by wt.	1 parts by wt.

#### **Application procedure:**

Mixing the components in the above-mentioned ratio results in a soft, pliable and smooth dough like consistency which can be shaped/used as desired. The mixture can be diluted with water, however excess water can lead to a loss in mechanical strength. The paste may be applied on clean and abraded parts. Since Zircocem-1 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 a short circuit between conductive components potted within the cement.

## **Technical Properties**

### **Zircocem - 1**

Composition [Part I]	:	> 75% Zirconium Silicate < 10% Quartz < 20% Others
[Part II]	:	> 40% Potassium Silicate
Color	:	Buff
Bulk Density (Powder)	:	1.1 g/cc
Bulk Density (Cured)	:	2.5 g/cc
Specific Gravity (Part II)	:	1.4
Coverage (1mm thick)	:	1.8 kg / m <sup>2</sup>
pH	:	8 – 9
Porosity (1000 °C)	:	8 %
Shrinkage (1000 °C)	:	< 1.5 %
Thermal Expansion (1000 °C)	:	7.3 x 10 <sup>-6</sup> K <sup>-1</sup>
Max. Temperature use	:	1000 °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.

PLOT NO. C-21, N.I.C.E, SATPUR, NASHIK-422007, MAHARASHTRA (INDIA)

Tel : +91(0) 253-2350120 / 338 / 729, 2351251 ● Fax : +91 (0) 253-2350023 ● Email : [info@jyoticeramic.com](mailto:info@jyoticeramic.com)

Website : [www.jyoticeramic.com](http://www.jyoticeramic.com)