

INORGANIC CERAMIC ADHESIVE CEMENTS

Sr. No.	Characteristics	Alucem HT-2	Jyalucem-20	Zircocem-1	Zircocem-5	Zircocem-5F	Zircocem-C9
1	Colour	Off white to white	White	Cream	Cream	Cream	Off white
2	Form	Dry powder and Liquid	Powder	Powder and liquid	Dry powder	Dry powder	Powder and Liquid
3	Type	Cold curing (fast setting)	Hot curing	Cold curing (fast setting)	Room temperature Curing	Room temperature Curing	Room Temperature Curing. Post curing at elevated temperature
4	Composition	Alumina ceramic	High Alumina ceramic	Zircon ceramic	Zircon ceramic	Zircon ceramic	Zircon ceramic
5	Consistency of the application	Viscous paste	Consistency as per the need	Thick viscous paste	Flowable consistency	Flowable consistency	Viscous paste
6	Thinning pot life	With liquid & water if require around 5%	Water	With liquid and the qty of water if required around 5%	Flowable consistency with water	Flowable consistency with water	Highly viscous paste
7	Pot life	20 - 30 minutes @ 25°C	Indefinite	20 minutes @ 25°C	45 – 60 minutes @ 25°C	20 – 25 minutes @ 25°C	20 – 30 minutes @ 25°C
8	Curing time @ 25°C	24 Hrs for 1 mm thick coat	Heat curing	24 Hrs for 1 mm thick coat	24 Hrs for 1 mm thick coat	24 Hrs for 1 mm thick coat	24 Hrs for 1 mm thick coat
9	Maximum service temperature	>1500°C	1575°C	1275°C	1450°C	1450°C	1500°C
10	Properties of the cement						
	Co-efficient of thermal expansion	5×10^{-6}	$7-8 \times 10^{-6}$	$4.5-5 \times 10^{-6}$	$2.5 - 3 \times 10^{-6}$	3×10^{-6}	5×10^{-6}

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	•Dielectric strength Volts/mm at 21°C	700-1000	450	980-2000	2165	2170	1200-1250
	•Volume resistivity Ohm-cm	$>10^7$	3×10^{11}	10^7-10^9	1.45×10^{11}	1.3×10^{11}	1.4×10^{11}
	•Thermal conductivity W/M/°K	3	10 – 12	7 – 8	7 – 8	7 – 8	8 – 9
11	Moisture resistance	Good	Good	Fair (moisture resistant lacquer is suggested)	Fair (moisture resistant lacquer is suggested)	Fair (moisture resistant lacquer is suggested)	Excellent Not necessary
12	Application	Pyrometry tube with metal sleeves and other high temp.bonding application.	Thermocouple tube Cartridge and tubular type of electrical heaters resistor coatings.	Electrical encapsulation casting and potting application	Coating potting encapsulation high temperature bonding application	High temperature air filters assembly bonding/sealing application	Infrared heater wire wound resistors
13	Bonding substrate	Glass to glass ceramic to ceramic glass to metal ceramic to metal etc	Glass to glass ceramic to ceramic glass to metal ceramic to metal etc	Glass to glass ceramic to ceramic glass to metal ceramic to metal etc	Glass to glass ceramic to ceramic glass to metal ceramic to metal etc	Glass to glass ceramic to ceramic glass to metal ceramic to metal etc	Glass to glass ceramic to ceramic glass to metal ceramic to metal etc