



Bhalla Chemical Works Pvt Ltd

Typical Product Specifications:

Product: POTASSIUM ZIRCONIUM CARBONATE
(KZC) SOLUTION- (ZIRCOAT- M20 K)

SYNONYM: Potassium Zirconyl Carbonate

GENERAL CHARACTERISTICS

KZC is a pale coloured formaldehyde free alkaline solution having no Odour and containing the equivalent of approximately 20% ZrO₂. The product contains anionic hydroxylated zirconium polymers. Evaporation causes decomposition with loss of carbon dioxide. KZC is stable at ambient temperatures for at least 6~8 months in a sealed container. At high temperatures the solution may become unstable and gelation may occur.

CHEMICAL ANALYSIS (%w/w)

ZrO₂ + HfO₂: 20-22 %

TYPICAL PHYSICAL PROPERTIES

Appearance	Viscosity @ 25°C	ph	Specific Gravity	Solution Stability @ 70°C
Clear Pale Liquid	5~6 cps	11.0-11.5	1.60~1.62	>24 hours

PACKAGING

AZC is typically available in 25 kg plastic containers, and IBC Containers or any other packaging as desired by customer.

Application Data

When added to Coating or Size Press formulation, **ZIRCOAT- M20K** interacts mainly with Carboxyl and Hydroxyl Groups on the binder molecules. Removal of water and carbon di-oxide during Drying Stage drives the reaction to completion due to formation of reactive Zirconium Cations. Covalent bonds are formed and the reaction is irreversible under normal coating conditions. The reaction is not heat dependent. The dried coating with exhibit good water resistance and the microporous structure of the coating will remain un-blocked "open".

ZIRCOAT M20 (K) should always be used on an "As Received Basis" as it is 100% active. It reacts directly with the binders present in the Coating or Size Press Formulation. The recommended dosage level for ZIRCOAT M20 (K) is 5~7% on total dry binder content. Since **ZIRCOAT M20K** contains a carbonate ion it should never be subjected to a pH below 7. Ideally it should be added as the last ingredient of the mix. Once all the ingredients have been added and final pH adjusted to above 7.5 then **ZIRCOAT M20K** may be added. **ZIRCOAT M20K** should not be mixed with any other material prior to use neither should it be diluted prematurely to prevent deactivation or decomposition

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