



Bhalla Chemical Works Pvt Ltd

Typical Product Specifications:

Product: AMMONIUM ZIRCONIUM CARBONATE
(AZC) SOLUTION- (ZIRCOAT- M 20)

CAS NUMBER: 68309-95-5

SYNONYM: Ammonium Zirconyl Carbonate

GENERAL CHARACTERISTICS

AZC is a clear alkaline solution having ammonia Odour and containing the equivalent of approximately 20% ZrO₂. The product contains anionic hydroxylated zirconium polymers. Evaporation causes decomposition with loss of ammonia and carbon dioxide. AZC 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	Solids %	Solution Stability @ 70°C
Clear Pale Liquid	5~6 cps	9~10	1.36-1.38	26±2	>24 hours

PACKAGING, STORAGE AND HANDLING

AZC is typically available in 25 kg plastic containers, and IBC Containers or any other packaging as desired by customer. AZC must be protected from frost and direct heat. Stainless steel, polyethylene, glass-reinforced polypropylene are all suitable for storage, pump construction and lines.

Application Data

ZIRCOAT-M 20 is a highly reactive Formaldehyde Free Zirconium Based inorganic cross linker. It suitable for all types of paper & paperboard applications including coated paper. Zirconium-based cross linkers react with the carboxylate groups in synthetic latex binders, such as carboxylated SBR or styrene-acrylate. Ammonium ions in AZC Solution react with Starch via Hydrogen Bonding. During drying NH₃ and CO₂ are released and new Hydrogen Bonds are formed between the -OH of Starch & and the reactive sites of AZC.

These cross linkers improve the wet surface strength of paper (*by creating additional links between the binder polymer molecules, the cellulosic fibers and the filler or surface pigment particles*) thereby reducing printing defects caused when paper is wetted with fountain water during offset printing. **ZIRCOAT – M20** should be added to the Coating Formulation before final pH adjustment and sufficient time should be given for mixing. Since **ZIRCOAT-M 20** contains Carbonate Ions it is recommended not to subject solution to a ph. below 7.0. **Typical dosage of ZIRCOAT- M20 is 2~5% Solids based on binder solids depending on binder type.**

Daultabad Road Gurgaon 122001 (HR) INDIA

bcw@del3.vsnl.net.in, bhallachem@gmail.com

(The Contents of this sheet are given in good faith but without warranty)