

Keycote® System

The Key To Long Slurry Life

- Exceptional slurry life, reducing raw material, labor and disposal costs associated with scrapping and rebuilding gelled slurries.
- Cost and time savings resulting from reduced slurry testing, adjustment and maintenance requirements.
- Excellent wax adhesion characteristics, reducing surface defects and costs associated with scrap and rework.
- Excellent wetting ability and microbial defense characteristics.



The KEYCOTE system is stable over a wide pH range. A newly built slurry has a pH of approximately 4.5. Over time, acidic slurry components like zircon and cobalt aluminate may cause a slight decrease in pH. However, the KEYCOTE system's slurry integrity is not compromised with this pH shift. The KEYCOTE system is designed to perform despite pH change. By design, no pH testing is necessary with a KEYCOTE system slurry. Slurry maintenance typically requires only periodic water addition to compensate for evaporation.

Because the first coats of any shell are integral to a successful casting, the adhesion properties of the KEYCOTE system are an improvement over other long-life binders. In fact, tested under adverse conditions, the KEYCOTE system adhered to wax patterns that were still coated with silicone mold release agent.

The KEYCOTE system is a two-part primary binder system comprised of Keycote® concentrate and Keycote® binder; blended together at a 1:4 ratio when building a slurry.

Typical Material Properties*

	KEYCOTE binder	KEYCOTE concentrate	1:4 Blended KEYCOTE system
Base Composition	Colloidal Silica	Vinyl acrylics	
Other Composition	Proprietary	Proprietary	
Total Solids Content (Including SiO ₂)	31.0%	18.5%	28.2%
Particle Size (Approximate)	14 nm		
pH at 77 °F (25 °C)	7.0	4.0	4.5
Specific Gravity	1.203	1.025	1.163
Weight/Volume	9.9 lbs/gal (1.2 kg/l)	8.50 lbs/gal (1.03 kg/l)	
Viscosity at 77 °F (25 °C)	<10 cps	<10 cps	
Na ₂ O Content (Weight)	<0.1%		
Particle Charge	Negative		

*These results are based on the testing methods, frequency and procedures of Ransom & Randolph or its approved suppliers. The levels referenced herein are only for general guidance and do not constitute a firm specification.

PRODUCT DATA SHEET



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