

## INNOVATION STORY : IMPROVING PRODUCT PERFORMANCE

## INCREASING PERFORMANCE, DECREASING EMISSIONS

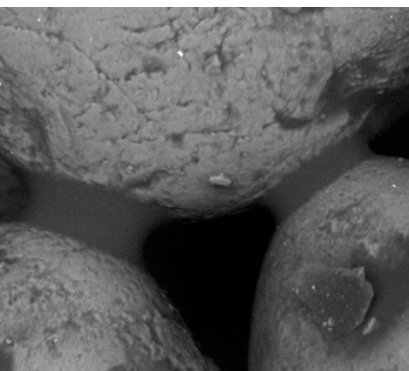


**THE INNOVATION:** Superior Metalcasting Performance with low VOC/HAP Emissions

**BACKGROUND:** American Colloid Company's Metalcasting Products Group has for decades been the industry leader in bentonite-based green sand binders for the foundry industry. With its mining, processing, custom blending, and technical capabilities, ACC has developed an excellent reputation in the green sand bond market.

Given its success in the green sand foundry business, ACC began looking at ways to expand into the chemical binder market. With the background ACC had in the use of lignite as a hazardous emissions reduction agent in green sand applications, the company began developing a urethane binder system which incorporated this material with a low Volatile Organic Compound (VOC), low Hazardous Air Pollutants (HAP) solvent blend. After several months of research, they discovered that by eliminating the phenol formaldehyde and aromatic solvent component, there was a significant reduction in the amount of emitted VOC's and HAP's.

**RESULT:** American Colloid Company officially unveiled their new Lovox binder system in 2010 at the American Foundry Society Casting Congress. Under the trade name Lovox®, this binder system has been shown to significantly improve the working environment in molding and coremaking production areas over conventional systems. Equally important, it has proven to provide an excellent combination of casting properties resulting in reduced casting scrap and finishing costs.



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