

## IMPROVE FOUNDRY PRODUCTIVITY AND OPERATING EFFICIENCY

The key to success for any business is high efficiency. This is especially true for today's foundries competing in a tight global market, where overseas labor and input costs are much less expensive. The GMBOND™ Process offers improved productivity and operating efficiency by minimizing the shakeout process, reducing scrap castings, and lowering overall sand costs in the long term.

### SHAKEOUT MINIMIZED

The unique chemistry of GMBOND® Sand Binder increases thermal degradation. Consequently, the strength of GMBOND® Sand Binder decreases more quickly than PUCB does with heat over time, eliminating the need for hammering and bakeout steps and saving you time and energy.

### SCRAP REDUCED

With the GMBOND™ Process, material is quickly and easily removed from the casting — without affecting surface finish. If a flawed core occurs, it can be reground and used again. The likelihood of unwanted core sand in your casting is also greatly reduced.

### SAND COSTS DECREASED

Ongoing foundry trials have used a GMBOND® Sand Binder addition of 0.8 percent, while PUCB is on the order of 1.2 percent. The need for less binder can save thousands of dollars over time.

The EPA estimates that up to 80 percent of the sand generated each year by U.S. foundries ends up in landfills. Foundries spend thousands — even millions — of dollars each year on disposal fees. Since the GMBOND® Sand Binder is protein based, nontoxic and water soluble, sand can be reused with minimal treatment. In comparison, sand coated with petroleum based binders are expensive and energy intensive to reclaim. Recent tests have shown that while all sand used in the PUCB process has to be treated, only a fraction of the sand used with the GMBOND™ Process must be treated for reuse.

**Variation In Core Strength With Recycled Scrap Cores — After 24 hrs.**

	Tensile Strength (PSI)	% of New Sand Strength
100% New Sand	230	100%
1 <sup>st</sup> Cycle	227	99%
4 <sup>th</sup> Cycle	178	77%

