

 **Science.
Applied to Life.™**

NEW! 3M™ Fused Silica Rapid Cast System

The shape of things to come.

**Increase production throughput –
without expanding your footprint.**


- Shell build with fewer dips!
- More throughput per square foot.
- Fast, clean shell knockout.
- Reduced caustic cleaning time and cost.

Shell build, streamlined.

In the investment casting process, shell production takes up the most time – and the most space. Now, a revolutionary slurry system from 3M can help manufacturers expand capacity without expanding their footprint.

The new 3M™ Fused Silica Rapid Cast System can reduce the number of slurry dips by **35-50%**, as compared to other advanced silica systems – helping foundries make more parts in less time within an existing footprint. Because of its unique thixotropic properties, the 3M fused silica shell system provides precise flow into tight areas. It also requires fewer liquid level adjustments to produce a consistent shell thickness compared to traditional fused silica systems.

With the 3M Fused Silica Rapid Cast System, castings can be deshelled more quickly and cleanly, helping to save time and labor while increasing output. In addition, better shell knockout reduces the amount of cleaning required – helping save the time, expense and hassle of using caustic materials.



With fewer slurry dips, you can cast more parts in less time!

Sample scenario

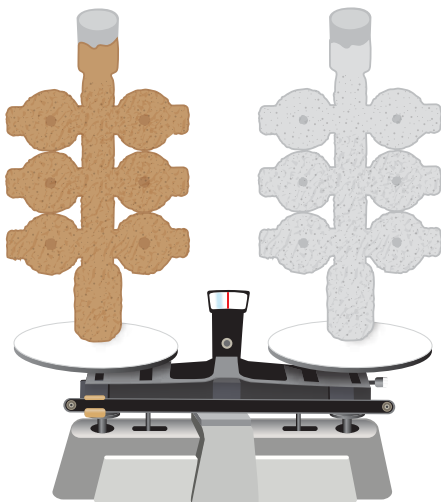
How many dips does it take to build your shell to the right weight?

Standard Shell
4-6 dips

3M™ Fused Silica Rapid Cast System Shell
2-4 dips

The more slurry dips required, the longer it takes to send parts through the shell room.

Get the same shell weight in 35–50% fewer dips!



During development, 3M worked with several investment casting foundries to put the new rapid cast system to the test – with promising results. Since implementing the new system, both Texas Precision Metalcraft (TPM) and Tech Cast experienced:

- Reduction of backup dips
- Improvement to shell throughput across all parts
- Longer intervals between liquid level adjustments

On their hand-dip line, TPM saw additional benefits:

- Reduced knockout time
- Reduced rough clean blast time
- Fewer parts requiring caustic cleaning

“We already had a great shell system in place, but the 3M fused silica rapid cast cut the number of our dips from three down to two. I am confident if we had four, I would have been able to still get to two.”

Brad DeSplinter
Vice President and General Manager, TPM

“When I lost power overnight, I lost all my slurries except for my 3M fused silica rapid cast. It saved me time, labor and lost production.”

Jeffrey Crape
Plant Manager, TPM

“With 3M’s rapid cast system, on average, we were able to cut coats in half. This allowed us to reduce lead time by roughly 30%.”

Andy Bomberger
Engineer Manager, Tech Cast

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98-0050-0372-2