

# MATRIXCOTE® SYSTEM



## Highly Adaptable, User-friendly Slurries

These highly adaptable, user-friendly slurries are tailored to the unique objectives of the individual foundry.

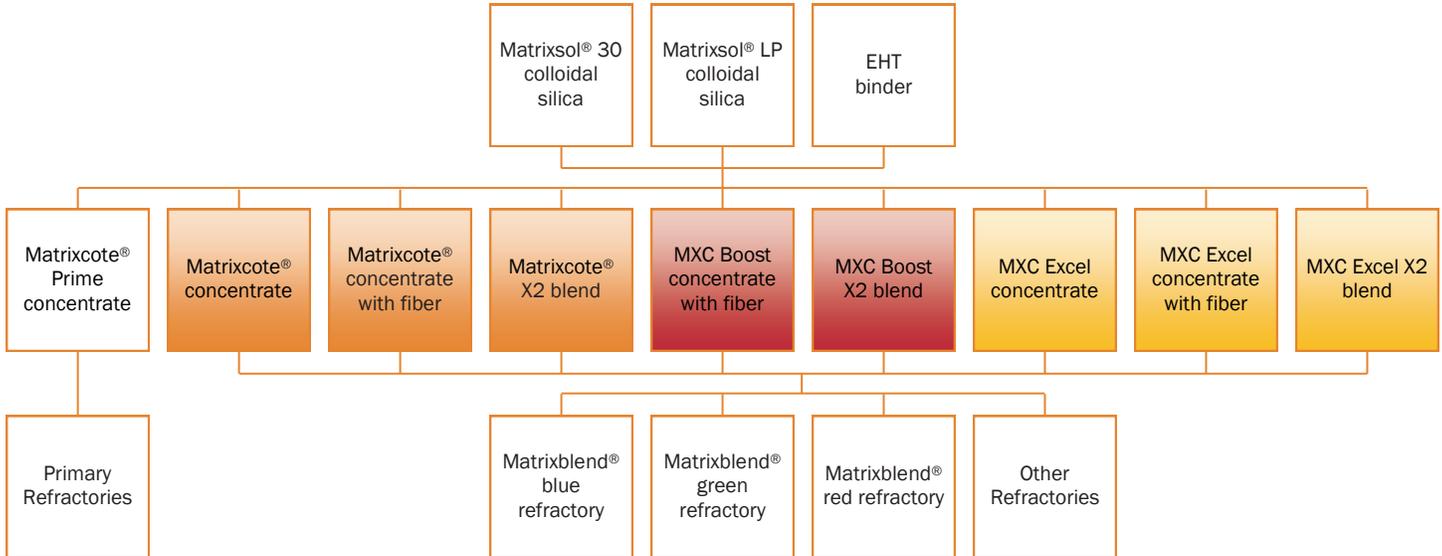
The Matrixcote system can be used in a variety of combinations, each tested to provide best-in-class performance, allowing the foundry to easily adapt slurry components to meet its specific needs.

Utilizing the Matrixcote system, slurries can be made with or without fiber components depending on the foundry's objectives.

Observations made by casters working with the Matrixcote system include:

- Slurries wet out easily, resulting in reduced slurry build time and labor costs.
- Slurries provide very even coverage on edges, reducing costs associated with patching and shell failure.
- Shells show improved crack resistance over existing materials, reducing positive metal defects, patching and post-dewax dips.
- Shells are durable during the building, firing and casting process stages, while providing lower post-cast fired strength for easy shell removal.
- Shells demonstrate excellent permeability characteristics, which results in reduced gas, non-fill, misrun and burnout-related inclusion defects and reduced scrap or rework.
- Shell bulk is built quickly, reducing the number of coats required to build the shell.

Ransom & Randolph's sales and technical teams work with you to identify your casting objectives and customize a Matrixcote system that meets those needs. To schedule an appointment, contact your R&R Regional Manager or R&R's technical team at 800.800.7496.



## RANSOM & RANDOLPH

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## Customer Success Stories

### Experience 1

#### Background

The existing system was non-R&R, fiber-based. The shell consisted of one primary coat, four backup coats and a seal coat. The shell room is equipped with a robot. Stucco was applied using a fluidized bed.

#### Goals Identified

- Decrease positive metal seen on four specific parts.
- Reduce cracking to eliminate extra seal dip post-dewax.
- Increase permeability to reduce gas defects.

#### Results

- Positive metal defects not only decreased, but were virtually eliminated.
- Cracking was eliminated and post-dewax seal dip was no longer necessary.
- Permeability testing showed the shell made with the Matrixcote system was more than twice that of the existing system. This increase in permeability allowed cleaner shell burnout and eliminated gas defects.
- An additional benefit was noted in shell removal as post-fired strength was 30% less than the existing system.

### Experience 2

#### Background

The existing system was a polymer-enhanced, non-fiber slurry. The shell consisted of four backup coats and one seal coat.

#### Goals Identified

- Reduce cracking to eliminate the need for additional coats and added cost.
- Accomplish coat reduction without using a fiber-based slurry.

#### Results

- Utilizing the Matrixcote system, shells were built with three backup coats and one seal coat; with significantly reduced cracking over the existing shell system utilizing four backup coats.



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