

Reduce your casting costs,
and improve your environment,
casting productivity, and quality



Reinventing shell sand technology

The Signature Series is the resin-coated shell sand that's changing the way the foundry industry thinks about shell sand technology. Our new formulations deliver a long list of benefits, including:

Improved Productivity

The Signature Series gives you higher tensile strengths for reduced wall thicknesses and better heat transfer capabilities. That translates to less sand usage and shorter invest cycles and cure times. Our higher melt points improve flowability and finish. You'll also benefit from more uniform curing and more consistent properties, and you'll have less uncured sand, so core boxes and molds will dump clean.

Reduced scrap

Drive down your scrap and associated costs with reduced lamination and peelback defects. The Signature Series also provides greater core strength for reduced breakage, and lower Loss On Ignition for fewer gas related defects. Some customers have reported as much as a 30.3% reduction in scrap costs.

We know the products, processes, and markets

Our highly experienced technical staff is available to help you choose the right products and blends to assure better casting quality and higher ROI. We'll be happy to conduct a comprehensive audit of your shell sand system. It's free, and there's no obligation.

No matter what type of metal castings you are producing, the Signature Series will out-perform typical resin coated products. For aluminum castings, our specially formulated additives provide high tensile strength at very low resin levels, for superior shake-out properties.

We provide the widest variety of coated and blended sands in the industry

Regardless of your specific requirement, Technisand can deliver a product suited to your needs. Custom sand and additive formulations can be designed for each customer. Blends can be created to improve permeability. Specialty sands such as chromite and zircon can be coated for burn-in protection. Cushioning agents can be added to eliminate veining, and iron oxides can be combined to eliminate warping. Blended silica, lake, ceramic, zircon and/or chromite sands are also available.

Tensile Strength Comparisons

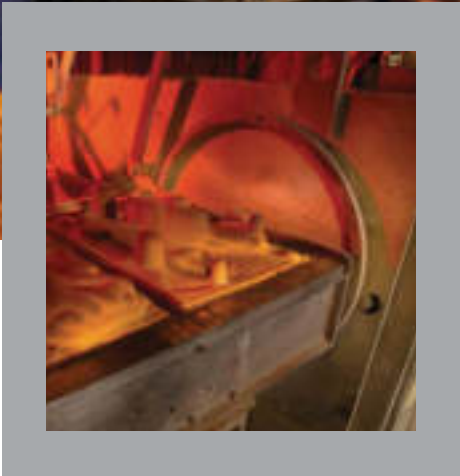
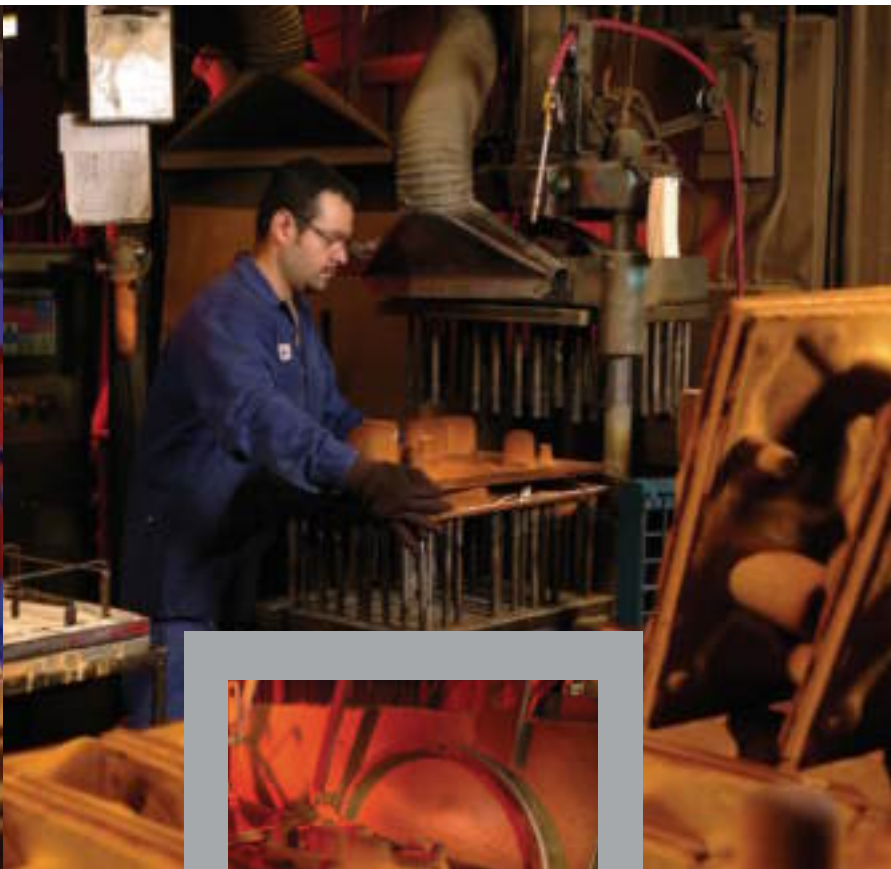
	Signature Series	Signature Series Gold
1 Minute Cold Tensile	495 psi	525 psi
3 Minute Hot Tensile	415 psi	410 psi

Test performed using 60 AFS/GFN lake sand with 3% tesin.



“Peel back was a big problem, and we had to make heavier cores, which increased our cycle times. With Signature Series our core department costs are down 30.3% over the same period a year earlier.”

Kent Brown
Tyler Pipe and Foundry



Signature Series—The New Binder Technology

When you think shell sand you often think of an older technology with limitations. Our new Signature Series has significant advantages over traditional shell sand. And it also out performs cold box, warm box, or no-bake in several areas. With the arrival of the Signature Series comes a whole new list of benefits:

- Consistent and high tensile strengths versus other binder processes
- The best dimensional tolerances
- Excellent casting surface finish
- The ability to produce complex cores at a very low core weight
- Superior hot distortion properties
- Excellent heat transfer capabilities
- Better shakeout properties
- Lower Hazardous Air Pollutant (HAP) and Volatile Organic Compound (VOC) emissions
- Elimination of ammonia odors

And Technisand products are pre-coated and ready to use, so you get all the benefits of resin-coated sand without the associated capital and operational costs of sand/resin mixing systems.

“On the majority of jobs we’re seeing faster cycle times—when you reduce the weight of the core some 20%, you reduce cycle times.”

Jim Allen
Tyler Pipe and Foundry

Reduce emissions and smoke while maintaining quality

You don't have to sacrifice performance to create a better environment in-plant or in your surrounding community. Signature Series resin coated sands from Technisand deliver the same high performance as our conventional resin coated sands, but are specifically formulated to reduce emissions, smoke and odor when producing cores and molds.

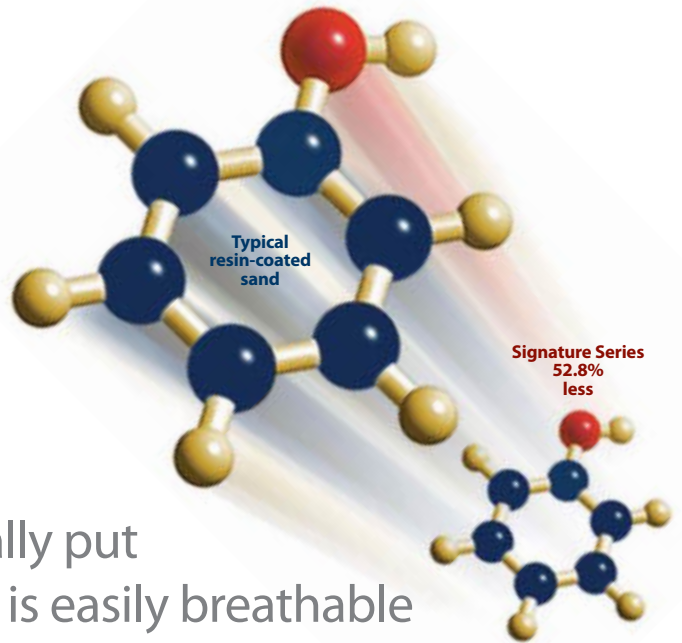
Signature Series

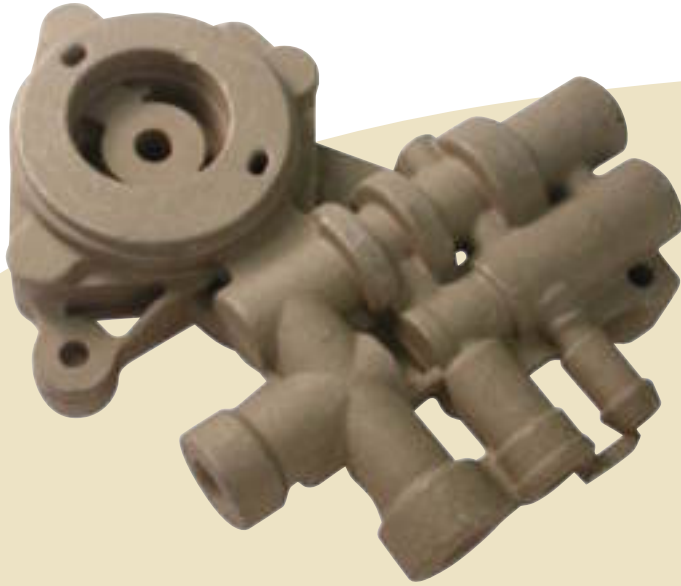
This is the first resin-coated product specifically designed to reduce free phenol emissions. And the new Signature Series is used widely and successfully in all types of foundries. The Technisand Signature Series also contains Neozien® Technology, which eliminates the offensive ammonia odor associated with traditional shell sand. Neozien ties up ammonia and leaves behind only a pleasant, subtle aroma.

“With Neozien our operators can literally put their faces in the invest area...the air is easily breathable and there's no longer that noxious ammonia odor.”

Doug Bender
Bender Foundry Services

Reduction in Free Phenol Emission





Signature Series Gold

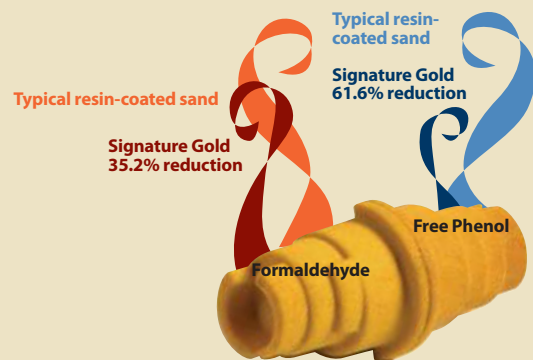
Our latest innovation is designed to reduce both free phenols and formaldehyde for even better in-plant air quality. And Signature Gold contains no ammonia-producing free hexamine, so ammonia odor is never a problem. However, Neozien Technology is used in our Gold formulations to tie up any other offensive odors that may be created during core making, mold making, and casting pouring and cooling processes.

No matter which Signature Series product you choose, you'll create a better work environment in-plant, and in your surrounding community, while reducing emissions and improving overall air quality.

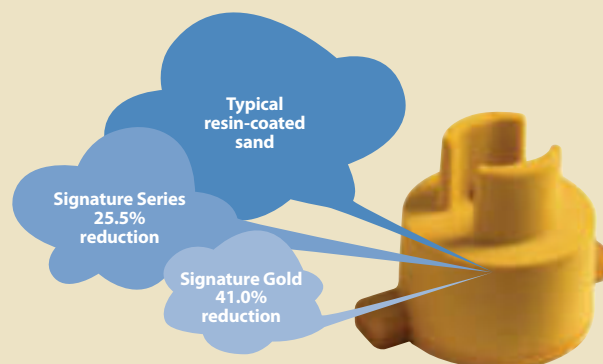
- Reduce Hazardous Air Pollutants (HAP) by more than 41.0% over traditional resin coated sand.
- Reduce free formaldehyde by 35.2%.
- Drive Free Phenol levels down 61.6%—production testing has shown free phenol actually falling below detectable limits.
- Experience lower smoke opacity resulting from reduced emissions.
- Eliminate ammonia odor with Neozien Technology

Note: Although the information supplied by Technisand is believed to be accurate, it is provided without warranty of any kind. Testing has been performed by a third party laboratory. All recommendations and/or suggestions are offered for your consideration and should be investigated and verified for the applicability and suitability for your process.

Reduction in Free Phenol and Formaldehyde Emission



Reduction in Total Hazardous Air Pollutants



Technisand and the family of Fairmount Minerals subsidiaries also offer these high-quality sands

Lake and Bank Sand

Sub-rounded shapes and natural oxides make our lake and bank sands ideal for iron foundries.

- Excellent performance in green sand systems
- Superior anti-veining properties
- High quality with cpk's that exceed 3
- Extremely consistent and low ADV (>5)
- PLC controlled blending ensures consistent particle size distribution



Silica Sands

This high-purity round grain sand is ideal for all types of foundries. Grain shape and high-purity silica content results in low binder percentages for cores and molds.

- Available in round or sub-round grain shape
- 99.9% SiO₂ purity for high refractoriness
- 3,125° F Fusion Point is ideal for steel castings
- 4-screen distribution available for higher density molds and cores
- State of the art blending ensures a consistent silica grade

Specialty Sands

We offer a wide range of specialty sands, including zircon, chromite, ceramic, and custom blends. We can blend any of our sands to create the product that best meets your specific requirements. For example, silica/lake is a superior blend for core making, with low binder levels that may not require anti-veining additives.





About Technisand

Technisand Inc., a Fairmount Minerals Ltd. Subsidiary, provides sands used in making cores and molds for the metal casting process. We offer a wide variety of resin-coated sands, including silica, lake, bank, ceramic, zircon, and chromite, as well as custom blends to meet specific customer needs. Technisand is the leader in the coating technology that has created the next generation of shell sand.

Locations

- Troy Grove, IL
- Roff, OK
- Bridgman, MI

Distributor locations can be found throughout the US, Canada, and Mexico. Call 800-255-7263 for a distributor near you.

About Fairmount Minerals

Fairmount Minerals, headquartered in Chardon, Ohio, is one of the largest producers of industrial sand in the United States. We are committed to the development and marketing of the highest quality silica sand products that consistently and cost-effectively meet our customers' requirements. Our mission is to deliver superior product performance while working to ensure the preservation of our environment and the responsible use of our natural resources.

Fairmount Minerals places great emphasis on its global responsibilities, and strives to exceed Sustainable Development standard practices and expectations. We work to ensure that our actions positively impact the three pillars of sustainability: People, Planet, and Prosperity.

People

Social Responsibility: To our employees and their families and to our communities.

Planet

Environmental Stewardship: Ensuring the preservation of our environment and the responsible use of our natural resources.

Prosperity

Economic Prosperity: For our company and for all of our stakeholders.



800-255-7263
www.technisand.com



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