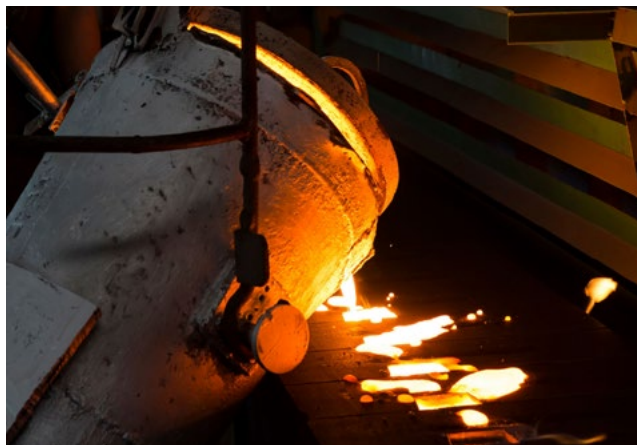




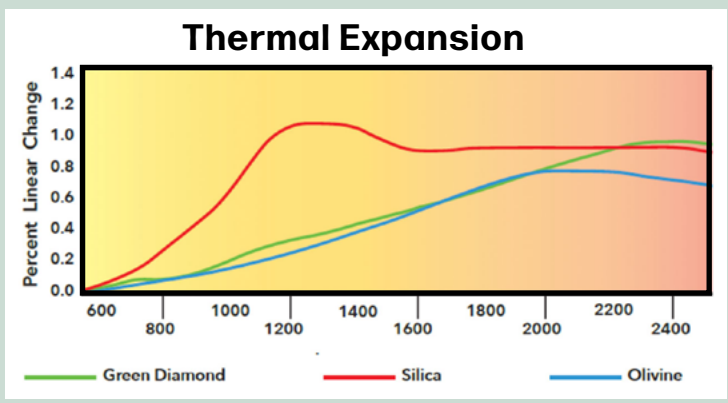
PREMIUM FOUNDRY SAND

Safety, Performance, and Casting Quality

Green Diamond Performance Materials provides synthetic olivine foundry sand engineered for better performance, reliability, cost savings, and worker safety. With low thermal expansion, low thermal conductivity, no loss on ignition, and greater insulating values, Green Diamond sand is a high-performance alternative that improves casting quality while lowering operational costs from the molding line through the finishing room.



Key Benefits of Green Diamond



Lower Thermal Expansion = Improved Casting Quality

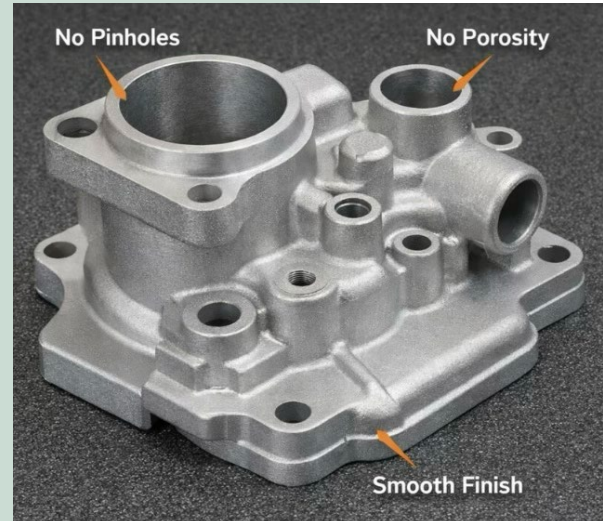
Synthetic olivine is produced with controlled chemistry and grain distribution, which reduces mold expansion and improves process repeatability. Synthetic olivine has a more stable microstructure, consistent mineral phases, low impurities and uniform grain structure improving mold performance over silica and natural olivine sands.

- Reduced veining, mold cracking, and metal penetration
- Reduced scrap rates and material waste
- Improved dimensional stability and accuracy
- Improved surface quality

No Loss On Ignition = Reduced Gas Defects

Natural olivine can contain variable amounts of iron oxide, chromite, clay minerals and trace contaminants which can cause gas evolution and surface reactions with molten aluminum. Synthetic olivine sand provides several advantages over natural olivine and silica when casting aluminum. These benefits come from controlled chemistry, lower impurities, and more consistent grain structure, which improves surface quality and reduces gas-related defects.

- Elimination of pitting, pinholes and porosity
- Improved smoother as cast surfaces
- Reduced post process finishing and machining required
- Improved process reliability in automated aluminum foundries



High Durability = Reduction in Fine Generation

High durability in foundry sand means the grains can withstand thermal shock, mechanical attrition, and repeated reclamation cycles without breaking down into fines. The higher durability of synthetic olivine over silica and natural olivine sands helps maintain stable mold properties, reduces sand consumption, and help prevent casting defects. High durability sands maintain grain integrity and minimize fines generation which leads to multiple reclamation cycles without excessive degradation.

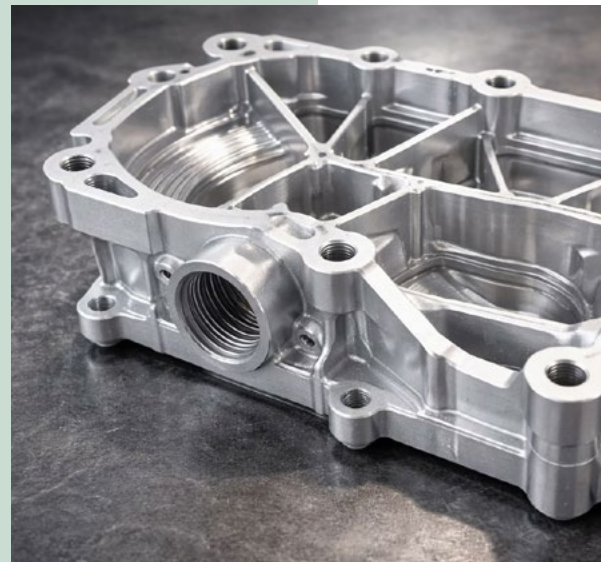
- Reduced generation of fines, cuts down on makeup sand requirements helping to decrease material costs
- Sand additions can be controlled at 10% of sand to metal ratio in a full Green Diamond system
- Less sand in equals less sand out
- Reduces binder consumption, leading to fewer emissions and improved process efficiency



Greater Insulating Values = Improved Casting Consistency

In non-ferrous casting, molds with greater insulating properties help retain heat in the molten metal longer. Because these alloys are poured at lower temperatures than iron or steel, maintaining metal temperature during filling is critical for avoiding defects. Our synthetic olivine green sand systems provide a more stable thermal behavior, consistent mold packing, and predictable heat retention for a more controlled casting process.

- Improved thin-wall casting with complete mold filling
- Reduced thermal gradients in the casting
- Improved solidification control, lower thermal stress, reduced distortion and improved mechanical properties
- Reduced surface defects from rapid cooling (surface laps)



Versatile Foundry Materials for Metal Sand Casting

Green Diamond's synthetic olivine is optimized for aluminum, brass, bronze, gray iron, ductile iron, and manganese steel ensuring versatility and compatible across a wide range of metal casting processes, making it an ideal choice for foundry manufacturers looking to improve production yields. Synthetic olivine offers several performance advantages in green sand molding systems compared to traditional silica-based sands. Its unique mineral composition and engineered particle structure help foundries achieve greater process stability, improved casting quality, and more consistent mold performance.



Metal Casting Compatibility

Optimized for aluminum, brass, bronze, gray iron, ductile iron, and manganese steel, ensuring versatility across a range of applications.

Precise Casting Methods

Engineered sizing for seamless integration into manual and automatic molding lines to maintain stable mold properties, predictable permeability, and consistent surface finish.

Premium Casting Results

Provides defect free surfaces, dimensional accuracy and consistent castings results, improving yields and reducing the need for post-processing or repairs.

A Safer, Healthier Foundry Solution

Green Diamond Synthetic Olivine Foundry Sand is designed with worker safety in mind. Our media contains less than 0.1% free silica, making it a safer alternative to traditional foundry materials. Unlike silica sand, it is not causally linked to silicosis or other occupational diseases, providing peace of mind in your production facility.



Consistent Quality from a Trusted Foundry Supplier

Green Diamond foundry sand meets American Foundry Society (AFS) and GFN (Grain Fineness Number) standards, ensuring a consistent, high-quality product with every batch.

Choosing the right foundry supplier is essential for producing high-quality castings. At Green Diamond, we offer safer work environments with low-expansion molding sand that enhances casting precision while minimizing defects, making us a trusted partner for foundries worldwide.



Choose Green!

At Green Diamond Performance Materials, we believe that strong partnerships lead to stronger foundry performance. That's why we work closely with our customers to help optimize and maintain healthy, stable green sand systems.

Contact us today to learn more about how we can optimize your casting process.



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Custom Pre-Mulling for Optimized Performance

Green Diamond offers custom pre-mulling services to deliver sand blends tailored specifically to your casting operation.

By combining Green Diamond synthetic olivine, clay, and water in controlled formulations, we provide pre-mulled green sand that integrates seamlessly into your foundry's molding system.

Our Green Diamond Foundry Pre-Mulled Green Sands are fully blended and shipped ready for immediate introduction into your green-sand system—helping streamline operations, reduce processing time, and improving mold consistency across your production line.



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