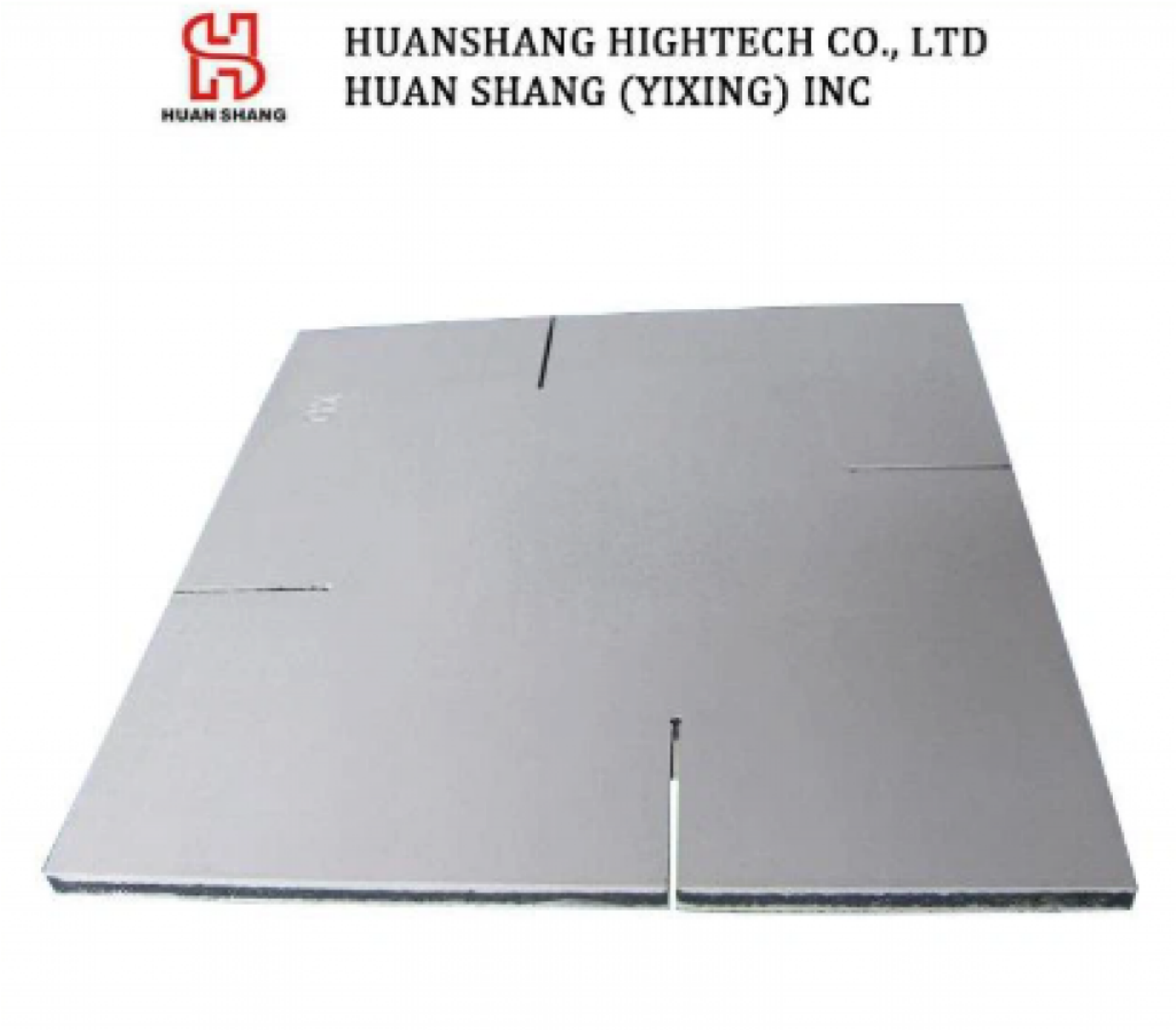
Custom Oxide Bonded SiC Carbide Plates for Ceramics: Flatness, Oxidation Resistance & Cost Control



Wuxi, Jiangsu Jan 16, 2026 (Issuewire.com**)** - As ceramic manufacturing continues to evolve toward higher precision, larger formats, and stricter cost control, kiln furniture materials play a decisive role in production efficiency and product quality. In the center of this transformation, **Custom Oxide Bonded Silicon Carbide Plate for Ceramic Products** are gaining strong attention for their balance of flatness, oxidation resistance, and economic performance. HUANSHANG HIGHTECH CO., LTD, also operating under the name HUAN SHANG (YIXING) INC, combines long-term material expertise with flexible manufacturing to deliver oxide bonded SiC plates tailored for modern ceramic kilns.

Oxide bonded silicon carbide (OBSIC) plates are widely used as kiln furniture in ceramic firing processes. Compared with traditional refractory plates, oxide bonded SiC plates offer higher strength at

elevated temperatures, improved oxidation resistance in air-fired kilns, and better dimensional stability during long firing cycles. At the same time, they provide a cost-effective alternative to fully reaction bonded SiC solutions, making them especially attractive for large-scale ceramic production where performance consistency and cost control must be carefully balanced.

Industry Outlook: Ceramic Manufacturing Drives Demand for Optimized Kiln Furniture

The global ceramic industry is undergoing significant structural changes, reshaping demand for kiln furniture such as oxide bonded SiC plates. Large-format tiles, thin slabs, and high-speed firing cycles have become standard in many markets, especially in Asia, the Middle East, and emerging economies. These trends place higher mechanical and thermal demands on kiln furniture, while also increasing sensitivity to cost per square meter of production.

One major trend is the push for improved flatness and dimensional accuracy. As ceramic tiles become larger and thinner, even minor deformation during firing can lead to warpage, cracking, or surface defects. Kiln plates must provide stable, flat support throughout the firing cycle, despite repeated thermal expansion and contraction. Oxide bonded silicon carbide plates, with their high stiffness and thermal stability, are increasingly specified to meet these requirements.

Oxidation resistance is another critical factor. Many ceramic kilns operate in oxidizing atmospheres for extended periods. Traditional materials may gradually degrade due to oxidation, reducing strength and service life. Oxide bonded SiC materials are designed to perform reliably in such environments, forming a protective oxide layer that enhances long-term durability and reduces maintenance frequency.

Cost pressure continues to shape purchasing decisions across the ceramic industry. Manufacturers face intense competition and rising energy costs, making total production cost a key concern. While advanced materials such as reaction bonded SiC offer superior performance, their higher cost may not always be justified for every application. Oxide bonded SiC plates provide an optimized balance between performance and price, supporting stable production while maintaining competitive cost structures.

Beyond ceramics, similar trends are visible in related industries such as bricks and tiles, microcrystalline stone, foam ceramic insulation materials, and refractory products. These sectors also require kiln furniture that can withstand high temperatures, mechanical load, and repeated thermal cycling without excessive cost.

From a global sourcing perspective, buyers increasingly seek suppliers capable of offering customization, consistent quality, and scalable production. As kiln designs and product specifications vary widely, standard off-the-shelf solutions are often insufficient. Manufacturers with flexible design and production capabilities are therefore gaining a competitive edge.

Looking ahead, the demand for oxide bonded silicon carbide plates is expected to grow steadily as ceramic and related industries continue upgrading kiln technology. Suppliers that can combine material expertise with cost-effective manufacturing will play a key role in supporting this transition.

HUANSHANG HIGHTECH: Custom Solutions Backed by Manufacturing Strength

Founded in 2005, HUANSHANG HIGHTECH CO., LTD is a foreign-invested enterprise specializing in high-temperature and heat-resistant materials. Operating under the names HUANSHANG HIGHTECH CO., LTD and HUAN SHANG (YIXING) INC, the company manages three family-owned factories, each

focused on different product categories. This structure allows HUANSHANG to deliver specialized expertise while benefiting from group-level integration and long-term investment.

One of HUANSHANG's core factories is dedicated to the production of sintered silicon carbide products, including reaction bonded silicon carbide (RBSIC/SiSiC) and oxide bonded silicon carbide kiln furniture. This dual-material capability enables the company to recommend the most suitable solution based on customer application, performance requirements, and budget considerations.

HUANSHANG's oxide bonded SiC plates are manufactured with strict control over raw materials, forming, and sintering processes. The result is a product with consistent density, high flatness, and reliable mechanical strength at high temperatures. Customization options are available in terms of size, thickness, edge design, and surface finish, allowing plates to integrate seamlessly into different kiln configurations.

These plates are widely used in daily use porcelain and sanitary ware production, bricks and tiles, microcrystalline stone, and foam ceramic insulation materials. In ceramic kilns, HUANSHANG oxide bonded SiC plates provide stable support for products during firing, helping to reduce deformation and improve yield. Customers report longer service life and fewer replacements compared with traditional refractory plates, contributing to lower overall operating costs.

In addition to ceramics, HUANSHANG's products serve industries such as powder metallurgy, lithium battery manufacturing, solar energy, magnetic materials, abrasive tools, geological prospecting and analysis, precision casting, food processing, and the steel industry. While application conditions vary, the underlying requirement for heat-resistant, dimensionally stable components remains consistent.

A key advantage of HUANSHANG HIGHTECH is its comprehensive product portfolio. Beyond oxide bonded SiC plates, the company supplies silicon carbide beams, rollers, radiant tubes, heat exchanger tubes, cold air tubes, grinding buckets, cantilever paddles, battens, and setters. As a group company that has also invested in and acquired additional factories, HUANSHANG is recognized as one of the industry players with a relatively complete range of kiln furniture and heat-resistant material specifications.

Customer case examples include large daily use porcelain manufacturers who adopted HUANSHANG oxide bonded SiC plates to improve flatness control in tunnel kiln, shuttle kiln and other industrial kilns. By optimizing plate design and material selection, these customers achieved better product consistency while controlling material costs. In microcrystalline stone production, the plates supported heavier loads with reduced deformation, improving line stability and output.

Balancing Performance and Cost for Long-Term Value

Quality assurance is central to HUANSHANG's manufacturing philosophy. From raw material inspection and forming to sintering and final quality checks, each stage follows strict internal standards. Continuous process optimization ensures stable performance across large production volumes.

HUANSHANG HIGHTECH positions itself as a long-term partner rather than a short-term supplier. By understanding customer processes and cost structures, the company helps clients select kiln furniture solutions that balance performance, durability, and budget requirements.

As ceramic and related industries continue to pursue higher quality, efficiency, and cost control, oxide bonded silicon carbide plates will remain a key component of modern kiln systems. HUANSHANG

HIGHTECH CO., LTD is committed to advancing customized SiC solutions that support sustainable and competitive production.

For more information about HUANSHANG's custom oxide bonded silicon carbide plates and complete kiln furniture solutions, please visit https://www.hshightec.com/.

Media Contact

HUANSHANG HIGHTECH CO., LTD

*********@outlook.com

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