



Kiln Shelves for Potters

Get the N-DURANCE[®] Advantage



Innovation for the Artist

Saint-Gobain has been producing innovative products since the 17th century, when we crafted mirrors for King Louis XIV's Versailles Palace. Today we offer innovation for the artist. Saint-Gobain invites you to take your talent to the next level using our innovative kiln shelves, helping you create art like you have never created before.

Whether you're a hobbyist or a professional studio potter, N-Durance® kiln shelves from Saint-Gobain Ceramics will revolutionize the way you work.

N-Durance® "The Thin, Lightweight Kiln Shelves"

Made from an advanced nitride-bonded silicon carbide composition, N-Durance® kiln shelves possess excellent thermal properties. Low mass and high thermal conductivity result in shorter firing cycles helping potters to save energy, improve productivity and reduce overall firing costs. At only 5/16-inch thick, kiln shelves are 19 times stronger and weigh 50% less than conventional one-inch thick cordierite kiln shelves. N-Durance® kiln shelves are also made flat and stay flat so there's no warping after repeated cycling even under heavy loads.

N-Durance® is Superior Compared to Cordierite

Typical Properties	Cordierite	N-Durance®
Max Use Temperature °F	2372 - Cone 10	2642 - Cone 16
Porosity (%)	30	1
Strength at Room Temp. (PSI @ 68 °F)	1,450	24,500
Strength Under Fire (PSI @ 1250 °F)	1,305	25,500
Thermal Conductivity (BTU-in./hr.ft² °F)	8	125
Weight of a 24" x 12" Shelf	Up to 21 lbs.	8 lbs.

Typical Chemical Analysis	%	%
Silicon Carbide	—	70
Silicon-Nitride Bond	—	30
Alumina	46	—
Silica	43.8	—
Magnesia	6.2	—
Other	4	—



Photo courtesy of Northern Clay Center, Minneapolis, MN.



Photo courtesy of Eric Jensen, Chicago, IL.



Photo courtesy of Cloth & Clay, Inc., St. Paul, MN

Versatile in Many Applications

N-Durance® kiln shelves exhibit outstanding performance in a variety of applications and firing atmospheres. N-Durance® kiln shelves are used in the production of commercial and manufactured clay bodies including low fire white ware, tile, stoneware and porcelain.

Gas-Fired Kilns: N-Durance® kiln shelves are most widely used in gas-fired kilns. For years the benefits of N-Durance® kiln shelves have been proven to increase productivity and save money in hobby, production and industrial applications.



Soda Firing: N-Durance® kiln shelves are a smart choice for soda firing where soda is introduced indirectly. The extremely low porosity of the shelves allows for soda drips to be easily removed without the time consuming grinding typically associated with conventional cordierite or silicon carbide shelves.

Wood Firing: N-Durance® kiln shelves are successfully used in second and third chambers of wood-fired kilns. A combination of N-Durance® kiln shelves and conventional silicon carbide shelves is often a sound kiln furniture system in areas where temperature uniformity is a problem.

Contact an Application Engineer to discuss the compatibility of N-Durance® kiln shelves with your application and firing conditions.

Photo courtesy of Bill Campbell Studios, Cambridge Springs, PA

Features	Benefits
High Strength	Supports heavy loads with minimal mass (reduces refractory-to-ware ratio)
Light Weight	Safer and easier to stack/unstack loads
Flatness Retention	Supports heavy loads without warping
Low Porosity (<1%)	Glaze resistant* (lower maintenance costs)
Excellent Thermal Properties	Faster heat transfer (reduced energy consumption)

* Kiln wash required for specific applications (e.g., porcelain). Consult an Application Engineer for more information.



Save Space and Energy in Your Electric Kiln

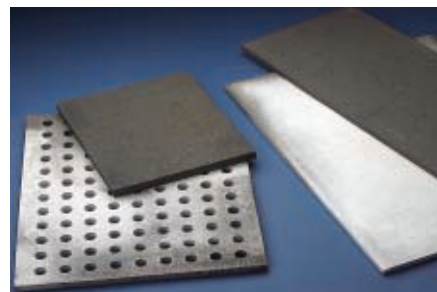
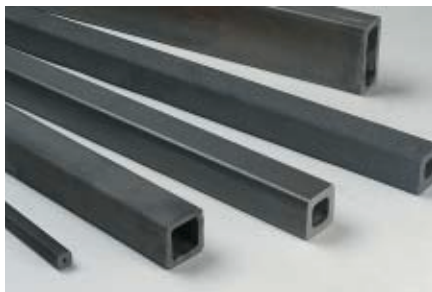
N-Durance® kiln shelves are available in 10 and 12-sided shapes (full and half) to fit top-loading resistance coil element kilns. At only 5/16-inch thick, N-Durance® kiln shelves allow for much more stacking space when compared to conventional 5/8-inch to one-inch thick cordierite kiln shelves. At less than half the weight of conventional shelves, N-Durance® kiln shelves are far easier to handle and lift in and out of the kiln.



Lower mass and faster heat transfer means shorter firing cycles and reduced energy consumption. No wonder an increasing number of potters are improving productivity and saving money using N-Durance® kiln shelves in their electric kilns.

Saint-Gobain Offers a Diverse Line of Kiln Furniture Products

Saint-Gobain also manufactures a broad range of conventional oxide-bonded and nitride-bonded silicon carbide products known as CRYSTOLON®, CRYSTON®, CARBOFRAX® and REFRAFRAX®. Other LO-MASS®, high strength, advanced silicon carbide products include CRYSTAR® 2000, ANNASICON® RT and RTH and SILIT® SK. Choose from a variety of kiln furniture components including plates, support beams and support posts. Consult an Application Engineer for more information about these products.



WARNING

N-Durance® refractory components should be stored in a dry, enclosed area. Do not expose components to any prolonged moisture including rain, snow, condensation, etc. Components exposed to prolonged moisture should be dried in accordance with Saint-Gobain's recommended drying schedule prior to normal use. Contact an Application Engineer for more information.

To prevent the hazard of electric shock from any source within an electric kiln, N-Durance® kiln shelves should not come into direct contact with electrical heating elements. Contact an Application Engineer for more information.

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