

Creativity and performance in Tableware

Kiln furniture performance is a key factor in manufacturing high quality tableware ceramics. With firing processes becoming faster and setting systems being automated, the accuracy and shape stability of kiln furniture becomes increasingly critical.

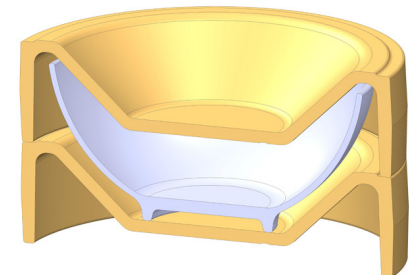
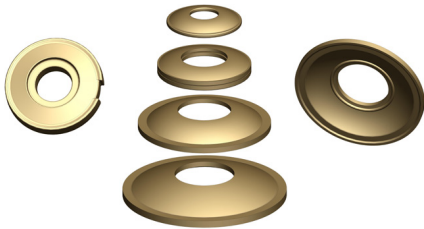
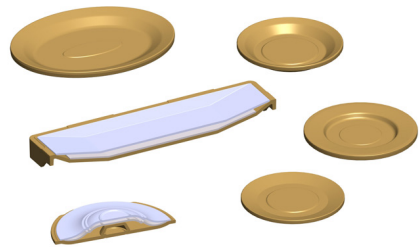
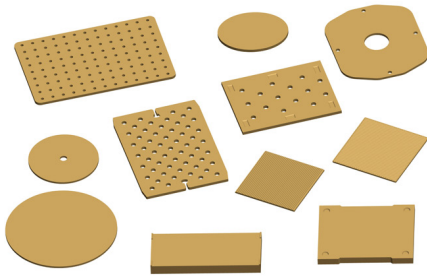
Imerys Ceramics brings to its customers:

- **high productivity** and **consequent profitability** of their firing lines through an optimized design, adapted to their product mix, allowing an optimum setting density in the kiln and automated handling;
- **quality products**: precise and stable geometrical dimensions of kiln furniture are essential to produce high quality tableware pieces;
- **lower energy consumption**, thanks to much lighter kiln furniture;
- **reduced maintenance** and **operating costs** thanks to long life-time kiln furniture: high thermal stability, thermal shock resistance and chemical inertness.

For each firing step: biscuit, glost and decoration firing, we have developed a full range of solutions to match all kinds of tableware: porcelain, stoneware, earthenware or bone china.

Each solution can be tailored to your needs thanks to our state-of-the-art design office and wide range of materials and production technologies.

OUR SOLUTIONS



BISCUIT FIRING

Characteristics

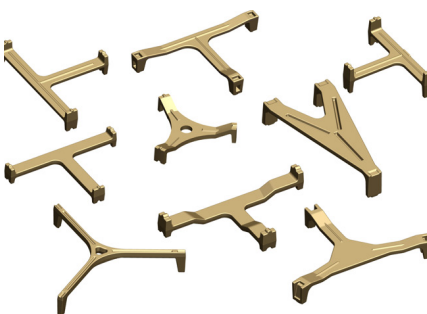
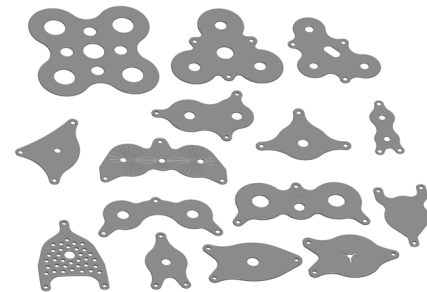
Porcelain	850°C 950°C	Cordierite or SiC; batts and biscuit setters; flame supports; caps; SiSiC beams; cordierite comb props
Stoneware	850°C 950°C	Cordierite or SiC; batts and biscuit setters; spacers; flame supports; caps; SiSiC beams; cordierite comb props
Earthenware	1050°C 1150°C	Cordierite or SiC; batts and biscuit setters; spacers; flame supports; caps; SiSiC beams; cordierite comb props
Bone China	1220°C 1250°C	Cordierite or SiC ; batts, profile & cup ring setters; NSiC batts; spacers; SiSiC & NSiC beams; NSiC comb props

GLOST FIRING

Characteristics

Porcelain	1300°C 1400°C	NSiC & RSiC batts; NSiC & RSiC setters; cordierite saggars; multi ware supports; multi spacers
Stoneware	1150°C 1250°C	NSiC & RSiC batts; cordierite saggars; cordierite or SiC setters
Earthenware	1000°C 1100°C	Cordierite; batts; T-Cranks; fish cranks; spider cranks
Bone China	1060°C 1120°C	Cordierite; batts; T-Cranks; glaze saggars

Depending on the kind of pigments and whether it is an in- or on-glaze decor, the temperature varies considerably. **Imerys Ceramics** has developed very light cordierite support to handle your pieces during the decoration firing: the **T-Cranks**.



DECORATING FIRING

Characteristics

Porcelain	Pressed T-Cranks; cast T-Cranks; perforated and ribbed cordierite batts; ultra light cast fish; ultra light setters; spider cranks
Stoneware	Pressed T-Cranks; cast T-Cranks; perforated and ribbed cordierite batts
Earthenware	Pressed T-Cranks; cast T-Cranks; perforated and ribbed cordierite batts
Bone China	Pressed T-Cranks; cast T-Cranks; perforated and ribbed cordierite batts

ADEQUATE COMPOSITIONS FOR TABLEWARE

CORDIERITE is a major component of Cordierite-Mullite kiln furniture. It has an extremely low coefficient of thermal expansion explaining the outstanding thermal shock resistance of these kiln furniture materials. The controlled combination of Mullite, as a high temperature resistant mineral and Cordierite, enables tailoring of material characteristics for a wide variety of firing profiles and application temperatures.

Characteristics	Materials
<ul style="list-style-type: none">• High thermal shock resistance• High creep resistance• High mechanical resistance• Typical products: batts, supports	<div>S-CORIT A APTAKORIT CME S-CORIT SR APTAKORIT HT CORMULL C1E</div> <div>APTAKORIT CM1 S-CORIT B S-CORIT Q CORMULL C1</div>

MULLITE in combination with Corundum, is widely used as kiln furniture in the ceramic industry. A wide variety of Mullite-Corundum kiln furniture materials is commercially available, applied for firing ceramics in temperatures ranging from 1380°C up to 1700°C. We combine acute raw material selection and precise processing to produce kiln furniture materials with highest performances for standard and special applications.

Characteristics	Materials
<ul style="list-style-type: none">• Typical products: supports, caps	<div>APTAMULL 60 KF25P</div>
<ul style="list-style-type: none">• Typical products: rollers	<div>E59 KF25E</div>

SILICON CARBIDE products are developed on a customized basis to meet customers' specific needs. The use of high purity raw materials and precise process parameters ensure the high quality and consistency of **Imerys Ceramics** kiln furniture materials: high strength, even at high temperatures, low thermal expansion, very high thermal conductivity, corrosion resistance under highest temperatures, very high hardness and resistance to wear.

Characteristics	Materials
<ul style="list-style-type: none">• Recrystallized SiC: outstanding creep resistance at high temperatures allows heavy loads up to 1600°C depending on atmosphere.• Typical products: plate setter, batts and props	<div>SC 100RG</div>
<ul style="list-style-type: none">• Nitride bonded SiC: outstanding creep resistance at high temperatures allows heavy loads up to 1550°C and provides excellent oxidation resistance.• Typical products: o-setters, fish cranks, spider cranks, multi ware support, props, caps, connectors, columns	<div>APTASINIT</div>
<ul style="list-style-type: none">• Silicon infiltrated SiC: outstanding creep resistance at low and high temperatures allows heavy loads up to 1350°C.• Typical products: beams, props, batts	<div>SC 90S</div>

Thanks to a global commercial structure and integrated logistics network, **Imerys Ceramics** is able to provide a high quality, cost-effective and reliable service to its customers, wherever they are in the world.

Serving customers worldwide



www.imerys-ceramics.com

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