

APPLICATION SUMMARY  
**KILN FURNITURE**

# KILN FURNITURE FOR THE **CERAMIC INDUSTRY**

Steuler kiln furniture is customer-friendly, providing versatile solutions and perfect operating reliability. Steuler considers the thermal, mechanical and geometrical requirements as a whole and combines them in a logical qualitative unit. For this purpose, we use a variety of raw material components including cordierite, mullite and corundum.





The service life of your kiln furniture is extended and operating costs are reduced. Our customers benefit from our decades of experience and the continual product developments carried out by our development department.

Continually rising energy costs and frequently changing products in the ceramics industry demand versatile rack systems. This is the only way that the existing kiln space can be used optimally. Variable Steuler kiln car system offers the required flexibility and stability. This means kiln car systems are also suitable for use in automatic tunnel kilns, muffle kilns and bogie hearth furnaces. When there are extreme mechanical stresses, especially during long processing periods in a tunnel kiln, Steuler has developed a special plug-in system. Racks are installed stably without mortar, so an undisturbed service cycle is guaranteed. Special interlocking nubs also compensate for temperature stresses in the heating and cooling phases.



## Technical ceramics

We offer customer-specific design and efficient solutions for use as firing and transport device. These may be saggars, batts, frames or supports, for example.

## Electro ceramics

For the sintering of electroceramics (e.g. ceramic components, capacitors, varistors, piezo-ceramics), we also produce state of the art kiln furniture. High precision thin-walled designs ensure trouble-free use in automatic cycles. Low-MgO versions, specially developed for use in roller kilns, reduce reactions with the support rollers and also with the products being fired.

## Magnetic ceramics

For the firing of hard ferrites in roller kilns, a special low-MgO version has been developed to prevent reactions with the support rollers and the products being fired.



# KILN FURNITURE FOR STRUCTURAL AND FUNCTIONAL CERAMICS

Steuler kiln furniture is produced using a dry press process where all dimensions can be controlled with high precision. This ensures close dimensional tolerances in the workpieces and minimises finishing work, a definite bonus when automating production lines. The materials we use, especially cordierite, are characterised by very high thermal shock resistance – a crucial requirement for fast kiln cycles.

Take advantage of our many years of experience and our know-how even at the development stage of your powder metal components. We can advise you and together we can then develop solutions which also minimise your production costs. Our own tool-making facilities give us great flexibility in fulfilling your requirements. As a plant operator, you can also benefit from our close contacts with kiln and machine constructors. Practical requirements can be met flexibly and innovatively by our development departments.







# SINTER SUPPORTS FOR **POWDER METALLURGY**

The use of special kiln furniture minimises the finishing costs of powder metallurgical sinter parts. The smoother the firing surface, the smoother the sintered part after heat treatment. Support points can be arranged at different heights and shrinkage can also be preset to any degree needed. Steuler kiln furniture is produced using a dry press process or via vibration pressing, where all dimensions can be controlled with high precision. This ensures close dimensional tolerances in the workpieces and minimises finishing work, a definite bonus when automating production lines. The materials we use are characterised by very high resistance to temperature shocks – a crucial requirement for instant cooling and fast kiln cycles.

Sorte Brand	Sorten-Nr. Brand No.	Chemische Analyse Chemical analysis					RD BD	Po Po	KBF MOR	AGT MST	DE-t05 RUL-t05	WD Th. Exp.	Wärmeleitfähigkeit Thermal Conductivity			
		Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	MgO	TiO <sub>2</sub>							1000 °C	400 °C	800 °C	1200 °C
		%											g/cm <sup>3</sup>	Vol. %	N/ mm <sup>2</sup>	°C

### Cordierit / Cordierte

Cordirex 125 LW	3546	34	51	1,5	10,5		1,25	45	12	1150	1360	0,26	-	-	-
Cordirex 126 MW	3586	36	51	1,5	8		1,45	40	12	1260	1380	0,28	-	-	-
Cordirex 128	3596	36	52	1,4	8		2,10	18	14	1320	1380	0,28	1,20	1,35	1,50
Cordirex 132	3526	40	48	1,4	8		2,10	20	12	1350	1390	0,24	-	-	-

### Andalusit / Andalusite

Multirex 2	3621	53	43	1,1			2,28	20	-	1400	n.a.	0,48	1,45	1,60	1,80
Suprema SA 60	7836	60	38	1,0			2,58	14	-	1550	1600	0,55	1,65	1,75	1,90
Suprema SA 601 F	5136	61	37	0,8			2,50	20	10	1450	1620	0,55	1,65	1,75	1,90
Suprema SA 65 F	5146	63	35	0,8			2,50	18	15	1550	1620	0,52			
Suprema SA 70	7856	70	27	0,8			2,70	15	-	1550	1650	0,58	1,65	1,75	1,90
Suprema SA 801	8496	80	19	0,5			2,80	16		1600	> 1670	0,60	1,85	1,95	2,10

### Mullit / Mullite

Suprema ME 603 LW	7446	60	36	1,0	1,5		2,05	30	10	1320	1480	0,49	-	-	-
Suprema ME 603	7436	63	33	0,9	1,5		2,45	20	12	1380	1520	0,50	-	-	-
Suprema ME 755	5386	76	23	0,2			2,55	19	14	1600	> 1670	0,53	-	-	-
Suprema ME 75 B	6376	76	23	0,2			2,60	17	12	1500	> 1670	0,52	-	-	-
Suprema ME 80 B	6176	80	19	0,2			2,72	15	12	1500	> 1670	0,55	-	-	-

### Mullit/Korund / Mullite/Corundum

Suprema ME 85 LF	5376	86	13	0,2			2,30	34	10	1700	> 1670	0,57	-	-	-
Suprema ME 85 F	5396	86	13	0,2			2,80	19	13	1700	> 1670	0,56	-	-	-
Suprema ME 85 B	6246	86	13	0,2			2,90	16	12	1800	> 1670	0,56	-	-	-
Suprema ME 901	4676	89	10	0,2			3,05	14	10	1800	> 1670	0,60	2,30	2,40	2,50

# STEULER

Refractory **Linings**

## **STEULER-KCH GmbH**

Berggarten 1  
56427 Siershahn | GERMANY  
Phone: +49 2623 600-0  
E-Mail: [info@steuler-kch.de](mailto:info@steuler-kch.de)