



Fireclay products for building of Fireplaces and Stoves

Fireclay Bricks

Stove fireclay bricks SIII K and SIII Kp was developed specially for fireplaces, ceramic stoves and other home heating elements.

The appearance and physical and mechanical properties of the stove fireclay bricks are therefore optimised for this application area as follows:

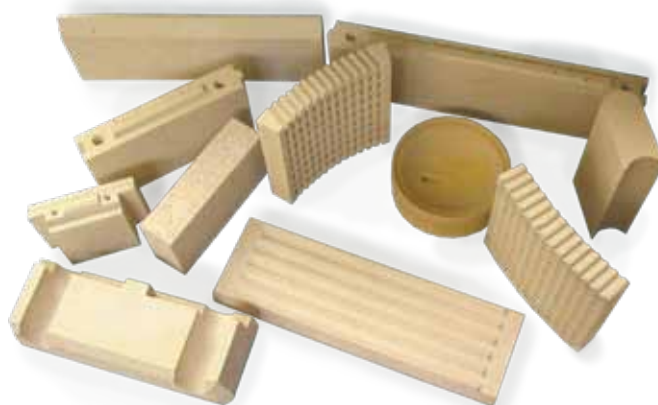
- ✿ Unified light colour shade
- ✿ Wide variability of shapes
- ✿ Optimum surface coarseness for specific applications
- ✿ Easy workability
- ✿ High dimensional accurateness
- ✿ Excellent resistance to thermal shock

High and stable quality of these products is guaranteed by use of selected suitable raw materials, purposeful and reliable manufacturing equipment and traditional more than hundred-year know-how of the staff of P-D refractories CZ, a.s., joint-stock company.

The fireclay bricks are made by dry, semi-dry and plastic moulding. This provides for virtually unlimited shaping options.

In addition to standard plastic stretched slices and plates the company produces and supplies specific shapes pursuant to individual customer requirements.

P-D Refractories CZ, a.s. is the only foreign manufacturer whose stove fireclay is certified pursuant to the Austrian standard ÖNORM B8306.



Fireclay bricks – technical parameters

Properties	SIIIKP	SIIKS	TSS
Fire resistance – ISO	164	160	
Bulk density [g/cm ³]	1.88	2.05	1.9–2.1
Porosity [%]	29	21	18–25
Pressure strength [MPa]	15	25	15–30
Resistance to temperature changes [cycles]	>30	>30	-
Additional linear changes – 1100 deg. C/2 hrs [%]	<0.1	<0.5	-
Al ₂ O ₃ content [%]	34	31	35–42
Fe ₂ O ₃ content [%]	2.5	1.5	2–3

SIIIKP – plastic extruded fireclay bricks, SIIKS – mechanically pressed fireclay bricks, TSS – building fireclay bricks

Refractory Mortars

- ✿ RUDOMAL 1100
- ✿ M-S (1.0)
- ✿ M-40 (0.7)
- ✿ M-40 (1.5)
- ✿ M-40H

RUDOMAL 1100 – A quickly solidifying stove mortar (the so called Haftmörtel) for connecting refractory masonry products with heat resistance up to 1100 deg. C. The mortar displays perfectly adhesion to virtually all absorbent and non-absorbent ceramic materials, high firmness and short hardening times, which considerably accelerates construction.

M-S (1.0) mortar – Refractory mortar with increased acid resistance for connecting acid-resistant fireclay in environments with increased chemical stress. Hardness is only achieved after development of ceramic bond, i.e. after firing at clinkering temperature (at least 900 deg. C).

M-40 (0.7) and M-40 (1.5) – Standard fireclay mortars for connecting fireclay materials; Hardness is only achieved after development of ceramic bond, i.e. after firing at clinkering temperature (at least 1000 deg. C).

M-40H – Fireclay mortar with hydraulic bond. Partial hardening increased after firing by clinkering and development of ceramic bond.

Properties	RUDOMAL 1100	M-S (1.0)	M-40 (0.7)	M-40 (1.5)	M-40H (0.7)
Al ₂ O ₃ content [%]	36	34	40	38	40
Fe ₂ O ₃ content [%]	3.7	0.7	2.3	2.6	4.4
Granularity [mm]	0–1	0–1	0–0.7	0–1.5	0–0.7
Material consumption [kg/dm ³]	1.30	1.45	1.40	1.40	1.40
Water consumption [l/100 kg]	21–23	27–31	35–40	30–35	29–34
Classification temperature [deg. C]	1 100	1 300	1 450	1 400	1 250
Bond type	hydraulic	ceramic	ceramic	ceramic	hydraulic

All these products are supplied in dry state

Refractory Mastic

- ✿ KT 1250 W
- ✿ NT 1 350
- ✿ Rudomal KV

Refractory paste-like mastics for connecting refractory lining of stoves, boilers, fireplaces etc. The mastics reliably connect fireclay bricks, insulation boards, insulation wools of Sibralt type and other ceramic materials. Highly firm after hardening already.

Properties	KT 1250 W	NT 1350	RUDOMAL KV
Al ₂ O ₃ conten [%]	29	36	18
Fe ₂ O ₃ conten [%]	1	0.8	0.4
Granularity [mm]	0–0.5	0–0.5	0–0.5
Material consumption [kg/dm ³]	1.85	1.9	2.00
Classification temperature [deg. C]	1 250	1 350	1 100
Bond type	chemical-ceramic	chemical-ceramic	chemical-ceramic
Colour	ochre	dark grey	light grey

All these products are supplied in plastic, pasta-like state

Plasters

- ✿ OMK (1.0)

TDry mix for final surface finish and decoration of stoves, fireplaces, pizza stoves and grills etc. Distinctive features include stable, bright white colour and excellent adhesion to virtually all ceramic materials.

Properties	OMK (1.0)
Al ₂ O ₃ conten [%]	18
Granularity [mm]	0–1
Material consumption – 3 mm layer [kg/m ²]	6–7
Water consumption [l/100 kg]	23–27
Classification temperature [deg. C]	400
Bond type	hydraulic
Colour	bright white

Supplied in dry state in 25 kg packages



Refractory Castables

- ✿ ZBH 115
- ✿ ZBH 120
- ✿ ZBH 120 EX
- ✿ ZBH 125
- ✿ ZBH 130
- ✿ ZBH 140

Dry refractory castable mixes processed by vibration after mixing with water. Successfully applicable for refractory lining of boilers, kiln carriages etc. or for manufacture of bricks for these and similar heating equipment.

Properties	ZBH 115	ZBH 120	ZBH 120 EX	ZBH 125	ZBH 130	ZBH 140
Al ₂ O ₃ conten [%]	44	44	40	45	46	50
Fe ₂ O ₃ conten [%]	3.8	3.8	5	3.8	1.1	0.8
Granularity [mm]	0–6 (3)	0–6 (3)	0–12	0–6 (3)	0–6 (3)	0–6 (4)
Material consumption [kg/dm ³]	2.14	2.14	2.0	2.14	2.11	2.14
Water consumption [l/100 kg]	11–12	11–12	13–14	11–12	12–13	11.5–12.3
Pressure strength [MPa/110 deg. C]	30	30	24	30	35	35
Classification temperature [deg. C]	1 270	1 270	1 250	1 270	1 320	1 430
Colour	dark grey	dark grey	dark grey	dark grey	grey	light grey

These products are supplied in dry state in 25 kg packages



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