



Insulating Fire Brick

STANDARD ASTM C 155 GRADES

BNZ Materials, Inc

Effective: Mar-16

BNZ	BNZ	BNZ	BNZ	BNZ	BNZ	BNZ	BNZ	BNZ	BNZ
23A	23	23HS	26	26R	26-60	28	3000	32	32

Classification Group	ISO 2245 ASTM C 155	125-0.5-L 23	125-0.6-L 23	125-0.65-L 23	140-0.8-L 26	140-0.8-L 26	140-0.8-L 26	150-0.9-L 28	160-1.05-L 30	170-1.2-L 32
Classification Temperature	°C	1260	1260	1260	1430	1430	1430	1540	1650	1760
Density	ASTM C 134 g/cm ³	0.53	0.60	0.67	0.78	0.78	0.80	0.88	1.04	1.20
Cold Crushing Strength	Flat Edge ASTM C 133 MPa	1.0	0.9	1.3	1.9	1.9	2.0	2.3	3.0	3.1
Cold Modulus of Rupture	ASTM C 133 MPa	0.8	0.7	1.0	1.4	1.3	1.3	1.5	1.7	2.1
Permanent Linear Change 24h soak at Temperature, °C	ASTM C 210 %	0.0	0.0	0.0	-0.1	-0.2	-0.2	-0.7	-0.7	-0.4
Linear Thermal Expansion Reversible, Max.	%	0.60	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.65
Deformation under Hot Load 69 kPa load, 1½h at Temperature, °C	ASTM C 16 %	0.0	0.0	0.0	-0.2	-0.1	-0.1	-0.1	-0.3	-0.2
Thermal Conductivity Mean Temperature, °C	ASTM C 182 W/(mK)									
200		0.13	0.14	0.17	0.22	0.25	0.25	0.33	0.39	0.56
400		0.15	0.16	0.19	0.25	0.27	0.27	0.34	0.41	0.57
600		0.17	0.19	0.22	0.28	0.28	0.28	0.35	0.43	0.59
800		0.20	0.22	0.25	0.31	0.30	0.30	0.37	0.45	0.60
1000		0.23	0.25	0.28	0.35	0.32	0.32	0.38	0.47	0.62
1200					0.39	0.34	0.34	0.40	0.49	0.63
Chemical Analysis	%									
Al ₂ O ₃		38.8	40.0	40.0	48.2	56.0	60.4	67.0	69.9	78.3
SiO ₂		47.8	48.8	48.8	47.8	40.5	36.1	30.5	28.1	20.7
Fe ₂ O ₃		0.4	0.7	0.7	0.6	0.5	0.4	0.3	0.3	0.2
TiO ₂		1.6	1.5	1.5	1.4	1.2	1.0	0.9	1.2	0.5
CaO + MgO		11.1	8.3	8.3	0.7	0.2	0.3	0.3	0.3	0.2
Na ₂ O + K ₂ O		0.3	0.5	0.5	1.2	1.7	1.8	1.0	0.2	0.1
Dimensional Tolerances										
Dimensions	mm	± 0.8	± 0.8	± 0.8	± 0.8	± 0.8	± 0.8	± 0.8	± 0.8	± 0.8
Out of Squareness	%	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5

The above physical and chemical properties of Insulating Fire Brick represent values obtained on standard squares in accordance with accepted test methods and are subject to normal manufacturing variations. This information is supplied as a technical service and may change without notice. Results should not be used for specification purposes, unless agreed with seller.

Form: BNZ (ASTM)
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