



Effective: Mar-16

Insulating Fire Brick

STANDARD ASTM C 155 GRADES

T	T	T	T	T	T	T	T	T	T
23C	23	23HS	26A	26	26-60	28	28HS	30	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	150-0.9-L 28	160-1.00-L 30	170-1.2-L 32
Classification Temperature		°C	1260	1260	1260	1430	1430	1430	1540	1540	1650	1760
Density		ASTM C 134 g/cm ³	0.49	0.60	0.65	0.80	0.80	0.80	0.90	0.95	1.00	1.30
Cold Crushing Strength		Flat Edge ASTM C 133 MPa	1.3	1.5	2.2	2.4	2.4	2.0	2.5	4.3	3.5	4.0
Cold Modulus of Rupture		ASTM C 133 MPa	1.0	1.0	1.3	1.5	1.5	1.3	1.7	1.7	2.0	2.0
Permanent Linear Change		ASTM C 210 %	-0.1	-0.1	-0.3	-1.0	-0.5	-0.3	-0.6	-0.6	-0.6	0.3
24h soak at Temperature, °C			1230	1230	1230	1400	1400	1400	1510	1510	1620	1730
Linear Thermal Expansion		%	0.50	0.50	0.50	0.60	0.60	0.60	0.65	0.65	0.65	0.70
Reversible, Max.												
Deformation under Hot Load		ASTM C 16 %	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2
69 kPa load, 1½h at Temperature, °C			1093	1093	1093	1204	1204	1204	1204	1204	1316	1316
Thermal Conductivity		ASTM C 182 W/(mK)										
Mean Temperature, °C												
200			0.13	0.15	0.18							
400			0.14	0.18	0.20	0.25	0.26	0.27	0.33	0.34	0.39	0.48
600			0.16	0.20	0.23	0.28	0.28	0.29	0.34	0.36	0.41	0.50
800			0.18	0.23	0.26	0.31	0.30	0.30	0.36	0.38	0.43	0.52
1000			0.21	0.26	0.30	0.35	0.33	0.32	0.37	0.39	0.45	0.54
1200						0.39	0.35	0.34	0.39	0.41	0.47	0.56
Chemical Analysis		%										
Al ₂ O ₃			37.0	40.2	40.2	45.0	50.0	59.0	64.0	64.0	72.0	77.2
SiO ₂			47.0	55.0	55.0	51.0	45.9	37.5	33.3	33.3	25.9	21.0
Fe ₂ O ₃			0.5	1.0	1.0	1.0	0.9	0.7	0.7	0.7	0.6	0.3
TiO ₂			0.3	1.0	1.0	1.1	1.2	0.8	0.6	0.6	0.3	0.4
CaO + MgO			13.8	1.5	1.5	0.5	0.8	0.5	0.4	0.4	0.3	0.5
Na ₂ O + K ₂ O			1.5	1.0	1.0	1.4	1.2	1.4	1.0	1.0	0.9	0.6
Dimensional Tolerances												
Dimensions		mm	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0
Out of Squareness		%	≤ 0.5	≤ 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: TNCR (ASTM)
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