



BNZ s.a.

BNZ s.a. Grades

RI 23 High melting point; used for glass furnace insulation as well as general furnace usage.

RI 23 B is a higher cold crush strength version of RI 23. Used for anode baking furnaces worldwide.

Calor A is the traditional Grade 25 IFB for furnace and kiln applications.

Calor B is a stronger, denser version of the Calor A.

Calor CA is a high strength version of Calor A, used extensively for aluminum reduction cells worldwide with proven resistance to aluminum, metal and

associated process fluorides. Also used for general insulation as a high cold crush strength 25 grade insulation.

Calor 26 and 26 B are general purpose 26 grade insulations, suitable for anode baking furnaces and glass melting tank insulation.

Insulating Fire Brick

Typical Data		RI 23	RI 23 B	Calor A	Calor B	Calor CA	Calor 26	Calor 26 B
Classification Group								
ISO 2245		130-0.65-L	130-0.7-L	135-0.8-L	135-0.9-L	135-1.1-L	140-0.8-L	140-0.9-L
ASTM C 155		23	23				26	
Classification Temperature		°C						
		1300	1300	1350	1350	1350	1430	1430
Density								
ASTM C 134	kg/m ³	650	700	820	900	1100	820	900
Cold Crushing Strength								
ASTM C 133	MPa – flat – edge	1.3	2.0	2.5	4.0	5.4 8.2	2.2	4.0
Permanent Linear Change		%						
ASTM C 210								
24 hrs at soaking temp: °C								
1300		-0.5	-0.5	—	—	—	—	—
1350		—	—	-0.5	-0.5	-0.5	—	—
1400		—	—	—	—	—	-0.5	-0.5
Linear Thermal Expansion		%						
Reversible 20–1000°C		0.5	0.5	0.5	0.5	0.5	0.6	0.6
Thermal Conductivity								
ASTM C 182	W/mk							
Mean temperature, °C								
200		0.17	0.17	0.21	0.23	0.29	0.24	0.26
400		0.19	0.19	0.24	0.27	0.32	0.26	0.29
600		0.22	0.23	0.28	0.30	0.36	0.29	0.32
800		0.26	0.27	0.32	0.35	0.40	0.32	0.35
1000		0.30	0.31	0.37	0.40	0.45	0.36	0.39
1200							0.40	0.43
Chemical Analysis		%						
Alumina – Al ₂ O ₃		34.0	34.0	34.0	34.0	34.0	43.0	43.0
Silica – SiO ₂		57.0	57.0	57.0	57.0	57.0	50.0	50.0
Ferric Oxide – Fe ₂ O ₃		1.2	1.2	1.2	1.2	1.2	1.0	1.0
Dimensional Tolerances		mm						
		± 1	± 1	± 1	± 1	± 1	± 1	± 1

The above physical and thermal properties for our insulating bricks are derived from averaged values on standard squares in accordance with standard test methods. No guarantees or warranties are given or implied for the above values. These figures therefore are not to be used for specification purposes. Supply specifications are available on request. This information is supplied as a technical service and may change from time to time without notice.

All s.a. grades above are available in slab form up to 600 x 400 x 100 mm format.



BNZ Materials manufactures, and is a worldwide supplier of a range of specialty industrial insulations. BNZ Insulating Fire Brick has been manufactured continuously at Zelienople, Pennsylvania for more than 60 years.

In addition to the Insulating Fire Brick product line, BNZ also manufactures many grades of Structural Insulations under the tradenames Marinite, Transite and CS85. These products are designed for use from ambient temperatures to 1800°F, in densities from 46 to 100 pcf, and will meet the demanding requirements of a variety of industries and their specific needs.

Contact BNZ for more information on these products and their applications.

Form: CALOR
Effective: Mar-01
Supersedes:

Warranty

BNZ Materials warrants that its products are manufactured in accordance with its applicable material specifications and are free from defects in workmanship and materials using BNZ's specifications as a standard. Every claim under this warranty shall be deemed waived unless in writing and received by BNZ within thirty (30) days of the date the defect was discovered and within one (1) year of the date of the shipment of the product.

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CS85,™ Marinite® & Transite® Plant Location

Billerica

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Limitation of Liability

It is expressly understood and agreed that the limit of BNZ's liability shall be the resupply of a like quantity of non-defective product and that BNZ shall have no such liability except where the damage or claim results solely from breach of BNZ's warranty.

IT IS ALSO AGREED THAT BNZ SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES FOR ANY ALLEGED NEGLIGENCE, BREACH OF WARRANTY, STRICT LIABILITY, OR ANY OTHER THEORY, OTHER THAN THE LIMITED LIABILITY SET FORTH ABOVE.