



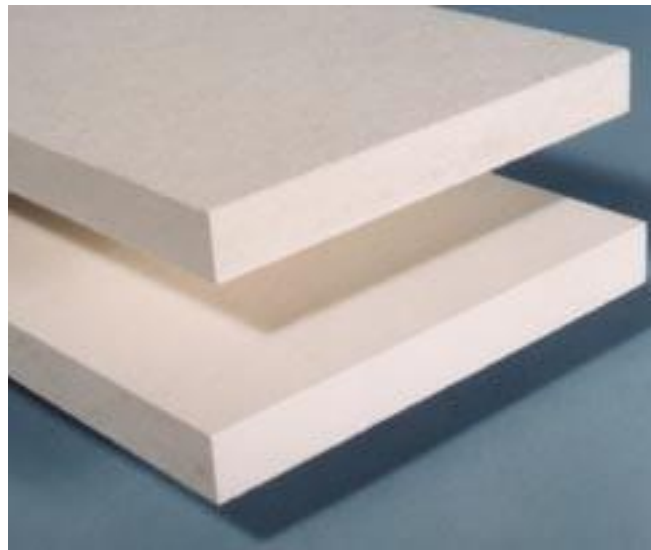
REFRACTORY SHEET CEMENT BOARD

Type ZIRCEM-6 and ZIRCEM-11

Type ZIRCEM Refractory Cement Boards are a self supporting, high strength, rigid refractory product fabricated from calcium silicate, inert fillers and reinforcing agents. Its high structural strength combined with high thermal insulating value make it ideal for many electrical, fireproofing and heat processing equipment applications up to **600°C(1112°F)**. ZIRCEM boards are highly damage resistant, non-corroding, and extremely water-resistant. ZIRCEM boards are available in full size 4' x 8' panels which offer major economic advantages in the construction of ovens, dryers, and other insulated housings for the retention and control of heat. ZIRCEM boards can be readily fabricated into various sizes and shapes for heat baffles and all types of insulating parts. ZIRCEM boards are not affected by moisture or high humidity, and will not rust, rot or corrode. The panels will not disintegrate even after prolonged immersion in water. While the material can be painted if desired, preservative treatments are not required for interior applications. ZIRCEM boards are hygroscopic and electrical resistance is reduced when it absorbs moisture. For electrical applications, ZIRCEM-11 components should be thoroughly dried or moisture proofed before use.

SUGGESTED APPLICATIONS

- Load-bearing gaskets
- Spacers and supports
- Press plates
- Machine guards
- Laboratory benchtops
- Fume hood linings
- Busbar supports
- Transformer spacers
- Terminal boxes and strips
- Electrical coil supports
- Component mounting plates
- Arc shields
- Collars and bushings
- Foundry core plates
- Induction and muffle furnace walls
- Industrial and baking oven shelving
- Soldering plates
- Splash guards
- Welding shields



ZIRCEM boards are monolithic. That is oven dried, so it machines into exceptionally fine and intricate parts without delamination.

The board is neutral gray in color, and may lighten uniformly with time. ZIRCEM boards require practically no maintenance. The hard, smooth surface does not normally need painting or preservative treatment, but either can be applied if a different aesthetic appearance is desired.

Installation Details

ZIRCEM boards can be applied directly to framing members with screws, bolts or mechanical fasteners. The board is recommended for interior applications only. All bolts or fasteners must be placed in predrilled oversized holes no closer than 1/2" from any edge. Oversized holes must be 1/16" or larger diameter for 1/4" bolts and 1/8" or larger diameter for 1/2" or larger fasteners. Bolt heads and nuts must have an adequate washer bearing surface. Applications where vibration or motion exists must utilize rubber or neoprene gasketed washers.

ZIRCEM boards should be stored horizontally in a dry, flat area.

ZIRCAR Refractory Composites, Inc.

P.O. BOX 489, FLORIDA, NY 10921-0489
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Technical Data

Bulletin No. ZRCI-310
Rev. January 2018

TYPE ZIRCEM-11

CHARACTERISTICS & PROPERTIES

TYPE	ZIRCEM-11	ZIRCEM-6
Nominal Composition, wt%		
CaSiO ₃	94	94
SiO ₂	1	1
Loss on ignition	5	5
Density, g/cc (pcf)	1.57(98)	1.602(100)
Maximum Use Temperature*, °C(°F)	600(1112)	260(500)
MOR**, MPa(psi)		
MOR @ room temp.	211(3000)	183(2600)
Compressive Strength**, MPa(psi)	939(13350)	731(10400)
Linear Shrinkage, %		
	length, width / thickness	length, width / thickness
12 hrs. at 315°C(600°F)	1.14 / 0.41	0.85/3.7
12 hrs. at 538°C(1000°F)	0.44 / 1.33	
Thermal Conductivity**, W/mK(BTU/hr ft ² °F/in.)		
121°C(250°F)	0.34(2.40)	0.34(2.40)
Moisture Content, % dry weight	7	12
Water Absorbtion, %	21	
Fire Hazard, ASTM E 84		
flame spread	0	
smoke development	0	
Volume Resistivity, ASTM D-257, ohm-cm	1.25 x 10 ¹³	7.1 x 10 ₁₀
Surface Resisitvity, ASTM D-257, ohm-cm	1.59 x 10 ¹⁶	
Arc Resistance, ASTM D-495, sec.	272	260
Dielectric Strength, ASTM D-495, volts/mil	56	35

*Maximum use temperature is dependent on variables such as stresses, both thermal and mechanical, and the chemical environment that the material experiences.

** Properties expressed parallel to thickness.

* Properties expressed perpendicular to thickness.



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AVAILABILITY

ITEM#	STANDARD SIZE
SX60	ZIRCEM-6, 48" X 96" X 1/4"
SX61	ZIRCEM-6, 48" X 96" X 1/2"
SX62	ZIRCEM-6, 48" X 96" X 3/4"
SX63	ZIRCEM-6, 48" X 96" X 1"
SX64	ZIRCEM-6, 48" X 96" X 1.5"
SX65	ZIRCEM-6, 48" X 96" X 2"
SX66	ZIRCEM-6, 48" X 48" X 1/4"
SX67	ZIRCEM-6, 48" X 48" X 1/2"
SX68	ZIRCEM-6, 48" X 48" X 3/4"
SX69	ZIRCEM-6, 48" X 48" X 1"
SX70	ZIRCEM-6, 48" X 48" X 1.5"
SX71	ZIRCEM-6, 48" X 48" X 2"
SX72	ZIRCEM-6, 24" X 48" X 1/4"
SX73	ZIRCEM-6, 24" X 48" X 1/2"
SX74	ZIRCEM-6, 24" X 48" X 3/4"
SX75	ZIRCEM-6, 24" X 48" X 1"
SX76	ZIRCEM-6, 24" X 48" X 1.5"
SX77	ZIRCEM-6, 24" X 48" X 2"

ITEM#	STANDARD SIZE
SX81	ZIRCEM-11, 48" X 96" X 3/4"
SX82	ZIRCEM-11, 48" X 96" X 1"
SX83	ZIRCEM-11, 48" X 96" X 1.5"
SX84	ZIRCEM-11, 48" X 96" X 2"
SX85	ZIRCEM-11, 48" X 48" X 1/2"
SX86	ZIRCEM-11, 48" X 48" X 3/4"
SX87	ZIRCEM-11, 48" X 48" X 1"
SX88	ZIRCEM-11, 48" X 48" X 1.5"
SX89	ZIRCEM-11, 48" X 48" X 2"
SX90	ZIRCEM-11, 24" X 48" X 1/2"
SX91	ZIRCEM-11, 24" X 48" X 3/4"
SX92	ZIRCEM-11, 24" X 48" X 1"
SX93	ZIRCEM-11, 24" X 48" X 1.5"
SX94	ZIRCEM-11, 24" X 48" X 2"

ZIRCEM Products measuring 48" x 96" are subject to a \$100 crating charge. Custom boards, shapes and preparations are available on request. Our forming processes, large inventory of custom tooling and state of the art machining techniques allow a wide variety of sizes and shapes to be made. Special geometries such as disks, rings and custom-machined shapes can be fabricated. Please contact us with your special requirements.



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