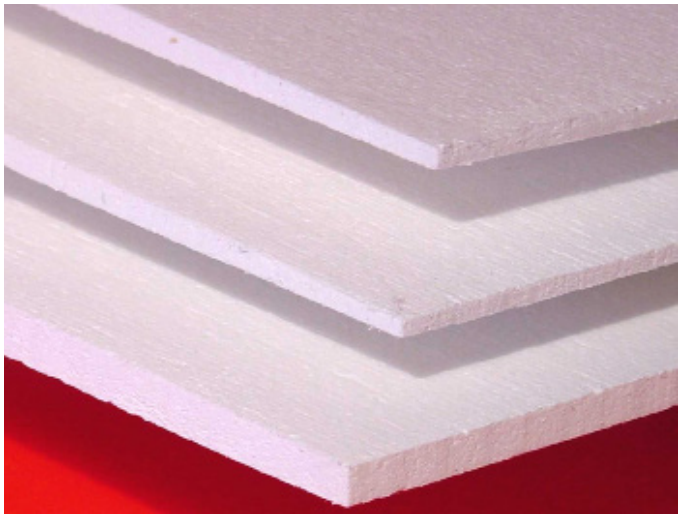
Soluble-Fiber Board Type Z-MAG Q

General Information

ZIRCAR Ceramics' Soluble-Fiber Board Type Z-MAG Q is the name of a group of rigid, low-density products that combine low-shot biosoluble Alkaline Earth Silicate (AES) fiber with an inorganic refractory binder. Z-MAG Q is made in a process that results in a uniform distribution of binder, giving these products good machinability and strength. The Non-RCF fibers built into this product are not regulated under EU Directive 97/69/EC.

Z-MAG Q is manufactured in three densities in a range of flat boards and custom configurations. All grades offer low thermal conductivity and exhibit excellent resistance to thermal shock. They are prefired, contain no organics and do not outgas when fired. Z-MAG Q exhibits very good resistance to chemical attack with the exceptions of hydrofluoric acid, phosphoric acid and strong alkalis.



Characteristics & Properties

Product Type	Z-MAG Q/14	Z-MAG Q/20	Z-MAG Q/28
Fiber	Alkaline Earth Silicate (AES) Fiber		
Color	White		
Binder	Alumina		
Typical Composition, wt. %			
Al_2O_3 (from Binder)	17		
SiO_2	62		
MgO	19		
Other	2		
Density, g/cc (pcf)	0.22 (14)	0.32 (20)	0.45 (28)
Suggested Max. Use Temperature*, °C (°F)	1050 (1922)		
Linear Shrinkage‡, %			
24 hrs. at 760°C (1400°F)	0.2	0.7	0.4
24 hrs. at 800°C (1472°F)	-	-	-
24 hrs. at 1000°C (1832°F)	2.5	2.4	2.4
24 hrs. at 1100°C (2012°F)	3.7	3.8	3.7
Modulus of Rupture**, MPa (psi)	0.5 (70)	1.2 (180)	1.1 (160)
Compressive Strength**, MPa (psi) at 10% Compression	0.1 (14)	0.4 (60)	0.7 (100)

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Characteristics & Properties Continued

Thermal Conductivity**, W/m°K (BTU/hr ft² °F/in)			
	Z-MAG Q/14	Z-MAG Q/20	Z-MAG Q/28
at 260°C (500°F)	0.06 (0.39)	0.06 (0.39)	0.08 (0.60)
at 538°C (1000°F)	0.09 (0.65)	0.09 (0.65)	0.12 (0.86)
at 816°C (1500°F)	0.15 (1.04)	0.15 (1.04)	0.18 (1.23)
at 982°C (1800°F)	0.19 (1.35)	0.19 (1.35)	0.21 (1.44)

The data presented herein is intended to help the user to determine the appropriateness of this material for their application. This data is a nominal representation of this product's properties and characteristics and therefore should not be used in preparing specifications. Properties are typical of recent production and are subject to change. * 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.

Suggested Applications

Castertips for continuous casting of aluminum strip.
Spacer boards, baffles, dams , floats and other molten non-ferrous metal contact applications.
Primary thermal insulation in furnaces and thermal process systems with temperatures to 1050°C(1922°F).
Backup thermal insulation in many high-temperature applications.
Hot appliance and scientific instrument insulation.

Availability of Standard Z-MAG Q

ITEM #	DESCRIPTION
A176C-01	Z-MAG Q/14, 24"W x 36"L x 1" T
A176C-02	Z-MAG Q/14, 24"W x 36"L x 2" T
A176D-01	Z-MAG Q/20, 24"W x 36"L x 1" T
A176D-02	Z-MAG Q/20, 24"W x 36"L x 2" T
A176E-01	Z-MAG Q/28, 24"W x 36"L x 1" T
A176E-02	Z-MAG Q/28, 24"W x 36"L x 2" T

To Order

Standard boards: order online or specify quantity, item # and description.
Standard boards are available for immediate shipment from stock.

Standard tolerances for boards are +/- 1/8" on length and width and +/- 1/16" on thickness.

Custom boards as large as 24"W x 72"L x 3"T have been manufactured.

Custom shapes: our state-of-the-art tight-tolerance machining techniques allow a wide variety of sizes and shapes to be made.

Surface treatments including rigidization with colloidal alumina (AL-R/H) or colloidal silica (SI-RIG) or coating with alumina cement (AL-CEM) and Boron Nitride are all available.

Zircar® CERAMICS

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