

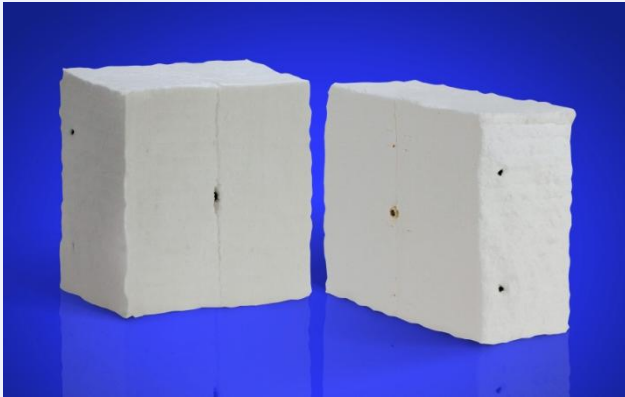
Pyro-Bloc[®] Y Modules



Datasheet Code US: 514-500

MSDS Code 201, 252

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Features

- Monolithic, edge-grained ceramic fiber module
- Uncompressed densities: 8 - 15 pcf (128 - 240 kg/m³)
- Center fire, one step weld system
- Extremely fast, efficient installation
- High density fiber resists mechanical abuse

Product Description

The Pyro-Bloc Y and Y² modules are manufactured from a high purity blend of raw materials which are used to produce R Grade (alumina-silica), ZR Grade (alumina-zirco-nia-silica), and C Grade (alumina-silica-chromia) ceramic fibers. The modules utilize a specially designed 316 stainless steel internal support system and industry standard Pyro-Bloc stud system. In addition, it has no hot face, cold face, or side constrictions which permit maximum module- to-module compression and easily conforms to irregular steel shell surfaces during installation. The modules use the proven center-fire, one-step weld system which eliminates the need for pre-laid out stud patterns.

Pyro-Bloc Y modules are edge-grained ceramic fiber blocks. The Y Module comes complete with internal support system and stud already in place.

- 12" x 12" (305mm x 305mm) modules
- 6" x 12" (152mm x 305mm) split long fiber modules
- 12" x 6" (305mm x 152mm) split short fiber modules
- Thickness from 3" - 12" (76mm - 305mm) in 1" (25.4mm) increments

Applications

- Annealing furnaces
- Heat treating furnaces
- Process heaters
- Reformers
- Ethylene furnaces
- Forge furnaces
- Steam flood units
- Homogenizing furnaces
- Incinerators

Pyro-Bloc Y² modules, 16" x 16" (406mm x 406mm), are a larger format edge-grained ceramic fiber block. The Y² modules are manufactured from R grade and ZR grade ceramic fiber. The 16" square size offers up to 78% more installed square feet per module than 12" x 12" modules. In addition, the larger format is much easier to handle when compared to 24" x 24" (610mm x 610mm) modules.

- 16" x 16" (406mm x 406mm) modules, 1.78 sf/module (0.165m²)
- Thickness from 3" - 12" in 1" increments

Pyro-Bloc[®] Y Modules



Properties	Pyro-Bloc Y R Grade	Pyro-Bloc Y ZR Grade	Pyro-Bloc Y C Grade
Color	White	White	blue/green
Density, pcf (kg/m ³)	8, 10, 12, 15 (128, 160, 192, 240)	10, 12, 15 (160, 192, 240)	12 (192)
Thickness, in. (mm) (standard)	3 - 12 (76 - 305)	3 - 12 (76 - 305)	3 - 12 (76 - 305)
Maximum temp. rating, °F (°C)	2400 (1316)	2600 (1427)	2600 (1427)
Melting point, °F (°C)	3200 (1760)	3200 (1760)	3200 (1760)
Continuous use limit, up to °F (°C)	2200 (1204)	2450 (1343)	2500 (1371)

Chemical Analysis, %			
Alumina, Al ₂ O ₃	47	37.5	43
Silica, SiO ₂	53	47	54
Zirconia, ZrO ₂	–	15.5	–
Chromia, Cr ₂ O ₃	–	–	3
Loss on ignition, L.O.I.	trace	trace	trace
Other	trace	trace	trace

Thermal Conductivity, BTU·in./hr·ft ² ·°F (W/m·k), ASTM C 201			
Measured Density, pcf (kg/m ³)	8 (128)	10 (160)	12 (192)
Mean temperature			
@ 500°F (260°C)	0.53 (0.08)	0.52 (0.07)	0.50 (0.07)
@ 1000°F (538°C)	1.13 (0.16)	1.04 (0.15)	0.96 (0.14)
@ 1500°F (816°C)	1.97 (0.28)	1.81 (0.26)	1.66 (0.24)
@ 2000°F (1093°C)	2.95 (0.43)	2.69 (0.39)	2.45 (0.35)

Installation

Modules are installed by the instant action of our industry standard Pyro-Bloc stud and stud gun. In one easy step the module is positioned against the furnace shell, securely welded*, and tightened into place in less than three seconds. This unique process self-checks and quality tests each and every weld for absolute integrity. The Pyro-Bloc modules installation procedure eliminates the need for a time consuming stud layout and pre-welding of anchors or brackets. Modules are easy to cut and fit in the field for special shape requirements.

* Independent test results on the strength of the Pyro-Bloc stud are available upon request.

The values given herein are typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Thermal Ceramics office to obtain current information.