

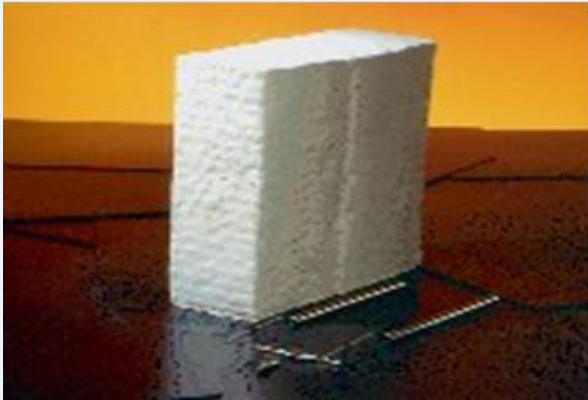
Pyro-Bloc® T-Bar Module



Datasheet Code US: 514-505

SDS Code 201, 252

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Features

- Monolithic, edge-grained ceramic fiber module
- Available in uncompressed densities from 8 to 15 pcf
- Ideal attachment systems for corner modules
- Easy access attachment allows quick installation over coated shells
- Installation techniques guarantee high on-the-wall densities

Product Description

Pyro-Bloc T-Bar module is a ceramic fiber lining system designed for high temperature furnaces that often require corrosion barriers on the shell. The T-Bar module is manufactured from a high purity blend of raw materials which is used to produce R grade (alumina silica), ZR grade (alumina-silica-zirconia), and C grade (alumina-silica-chromia) ceramic fibers.

The T-Bar module is an edge-grained ceramic fiber module that installs quickly and reliably over coated or uncoated shells with or without a vapor barrier. The modules are held to the steel casing by stainless steel studs that are pre-welded to the casing and T-Bar yokes which tie into support tubes of adjacent modules. The T-Bar Module is torqued down firmly, which holds the fiber firmly against the steel shell.

The T-Bar Module includes the fiber module and pre-embedded support tubes only. Studs, nuts, and T-Bar yokes must be purchased separately.

Applications

- Process heaters
- Heat transfer furnaces
- Ethylene furnaces
- Fume incinerators

All furnace linings requiring protective barrier against shell

Pyro-Bloc[®] T-Bar Module



Physical Properties	R Grade	ZR Grade	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)	
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·ft²·°F (w/m·K), ASTM C 201	R Grade	ZR Grade	C Grade	
Measured Density, pcf (kg/m ³)	8 (128)	10 (160)	12 (192)	15 (240)
Mean temperature				
@ 500°F (260°C)	0.53 (0.08)	0.52 (0.07)	0.50 (0.07)	0.49 (0.07)
@ 1000°F (538°C)	1.13 (0.16)	1.04 (0.15)	0.96 (0.14)	0.84 (0.12)
@ 1500°F (816°C)	1.97 (0.28)	1.81 (0.26)	1.66 (0.24)	1.43 (0.21)
@ 2000°F (1093°C)	2.95 (0.43)	2.69 (0.39)	2.45 (0.35)	2.19 (0.32)

Installation

There are a number of factors which must be considered when designing a Pyro-Bloc module lining. The use limits of Pyro-Bloc modules should be used only as a guide when considering lining installation and design. For assistance please contact your Morgan Advanced Materials account representative.

* Studs, nuts, T-Bar yokes and installation tools must be purchased separately.

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 Morgan Advanced Materials office to obtain current information.