

Superwool® Pyro-Bloc® Modules

Superwool® Pyro-Bloc® modules are innovative and ideal products for fiber lining application in furnaces, reformers, boilers and kilns. They are monolithic fiber modules which can combine the advantage of insulation performance under high temperature and rapid installation. Superwool® Pyro-Bloc® modules offer various kind of solutions to industrial market – health, safety and energy-saving.

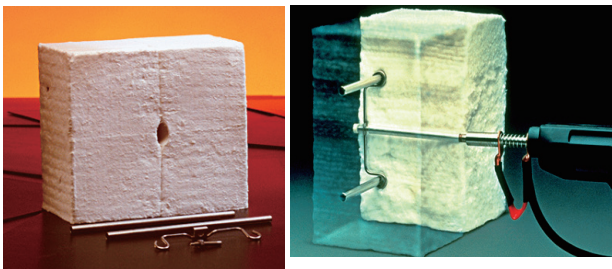


Fig. 1 Pyro-Bloc® M Module and Y Module & stud gun.

Product Description & Features

Superwool® Pyro-Bloc® modules comprise two sections of Pyro-Log®, lubricated and needled Alkaline Earth Silicate (AES) fiber “log”. These are held on position with two stainless steel tubes mounted transversely through the modules and remote from the hot face.

- High densities up to 240kg/m³ give lower thermal conductivity
- Multi-directional compression minimizes gap between modules
- Lubricant in fiber allows increased compression and hardening effect on first firing
- Lightweight and easy to cut – fast installation
- Superwool® fiber meets the requirements specified under NOTE Q of European Regulation 1272/2008. It is also exempt from Japanese regulation for Refractory Ceramic Fiber enforced in 2015.

Table 1 Thermal conductivity of Pyro-Bloc® Modules (ASTM C-201, W/m • K).

| | Superwool® Plus Pyro-Bloc® Modules | | Superwool® HT Pyro-Bloc® Modules | |
|---------------------------------------|--|------|--|------|
| Classification temperature (°C) | 1200 | | 1300 | |
| Density (kg/m ³) | 160 | 192 | 160 | 192 |
| @200°C | -- | -- | 0.07 | 0.07 |
| @400°C | 0.11 | 0.09 | 0.14 | 0.12 |
| @600°C | 0.17 | 0.15 | 0.21 | 0.17 |
| @800°C | 0.24 | 0.21 | 0.30 | 0.25 |
| @1000°C | 0.32 | 0.28 | 0.40 | 0.33 |
| @1200°C | -- | -- | 0.54 | 0.44 |

*The values are typical and given for guidance only.

Installation

Pyro-Bloc® Y Modules can be easily installed by using the special Pyro-Bloc® stud gun. It welds the stud and torques the nut with only one pull of the trigger. This version is installed directly onto a metal plate without pre-welding.

Pyro-Bloc® M Modules need pre-layout of stud, but do not require special welding tools. With a specified compression hardware (box), high-degrees of compression between modules are guaranteed.

<<How to Install M Module>>

1. Pre-weld stud
2. Compress modules with box
3. Insert modules
4. Drill nut and remove box
5. Tamp surface



Fig. 2 M Module installation (Step 2-5)



Fig. 3 Installation in heat treatment furnace -1



Fig. 4 Installation in heat treatment furnace -2

Availability

Table 2 Availability of Superwool® Pyro-Bloc®

| | |
|-------------------------------------|---------------------|
| Density /kg/m ³ (pcf) | 128 (8) |
| | 160 (10) |
| | 192 (12) |
| | 240 (15) |
| Thickness /mm | 100-300 |
| Width x Length /mm | Standard: 305 x 305 |
| Internal anchor | Standard: Stainless |

* RCF (Refractory Ceramic Fiber) grade, other shapes and anchor grade can be available on request.



Fig. 5 Installation in reformer

Applications for Iron & Steel, CPI and HRSG

- Stack, flare and ductwork linings
- Kiln car block and seals
- Burner blocks
- Peep sights

* These case studies include RCF grade Pyro-Bloc® installation.