

**Insulfrax® S Modules, our latest product in our soluble fibre product range, are made from Insulfrax S Blanket, which is folded. This high temperature vitreous wool is a breakthrough in insulating technology. Insulfrax has very high solubility in simulated body fluids and, hence carries no hazard classification. It meets the European and German regulatory requirements.**

Insulfrax S Modules are prefabricated blocks formed from strips of Insulfrax S Blanket, which are die-cutted, folded and pressed to give two densities of finished Modules: 130 kg/m<sup>3</sup> and 160 kg/m<sup>3</sup>. The Fold is in hot face, but may be supplied in cold face, on request. These modules are specially designed to meet or improve the thermal insulation requirements of industrial furnaces or boilers. Insulfrax Modules are produced with various anchoring systems to enable quick, easy and efficient installation. Four types of Modules are offered: W.A is without an anchor system so can be tailored to a client's own anchorage method, RX2 offers an external fixing system with enhanced visibility, Weld-Loc offers a simple and quick centre fixing system and Thread-Loc provides a pre-positioned stud pattern, compatible with back-up insulation and vapour barriers.

Insulfrax S Bonded modules consist of strips of Insulfrax Blanket edge-stacked and glued together.



## GENERAL CHARACTERISTICS

Insulfrax S Modules have these outstanding characteristics:

- High temperature stability (up to 1200°C)
- Low thermal conductivity
- Low heat storage
- Faster temperature cycling
- Energy saving
- Lower installation cost
- Easy repairs
- Excellent acoustic absorption capabilities

## Typical Chemical Analysis (Fibre wt. %)

SiO <sub>2</sub>	61.0 - 67.0
CaO	27.0 - 33.0
MgO	2.5 - 6.5
Al <sub>2</sub> O <sub>3</sub>	< 1.0
Fe <sub>2</sub> O <sub>3</sub>	< 0.6

## TYPICAL APPLICATIONS

### Ceramic & Glass

- Kiln lining
- Low mass kiln cars

### Refining

- Distillation heater lining

### Heat Treatment/Metal working

- Heat treatment lining

### Non Ferrous

- Annealing
- Heat treatment linings

### Power Generation/Boilers

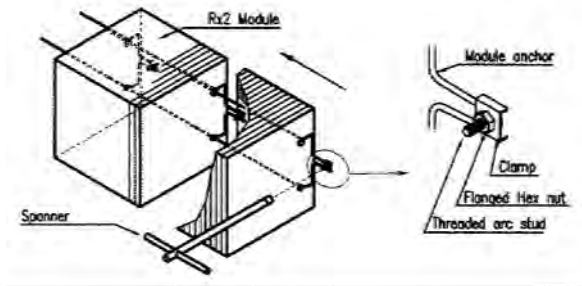
- Cogeneration ducts and silencers

Insulfrax S Blanket is designed for short term use in applications up to its classification temperature of 1200°C. For those types of industrial applications, where long term stability is important, e.g. furnace/process heater linings, the operating temperature limits are typically reduced. We encourage potential users to discuss such applications with their local Unifrax Application Engineering Department. (See contact details overleaf)

Any new and/or special use of these products, whether or not in an application listed in this datasheet, must be submitted to our technical department for their prior written approval.

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## RX2 Attachment System



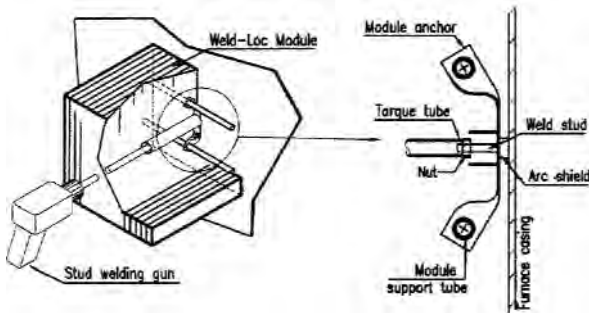
## Prismo-Block RX2 Insulfrax S Modules

Provided with a patented module anchor in AISI 321, the RX2 attachment of the Insulfrax S Modules, was designed for a rapid installation on a pre-positioned stud pattern via the side fastener which is screwed on a stud pre-welded to the casing of the furnace. A complete set (Threaded arc stud, clamp, flanged hex stud) is supplied.

### Advantages:

- Very high installation speed.
- Compatibility with backup insulation and Foil vapour barriers.
- Modules anchor compensates for variation in stud placement.

## Weld-Loc Attachment System



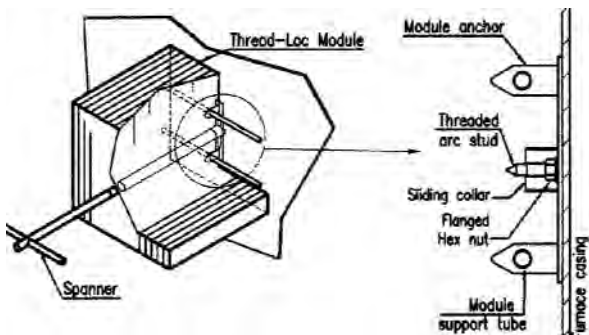
## Weld-Loc Insulfrax S Modules

A special weld assembly is installed in each Weld-Loc Insulfrax S Modules. This stud assembly permits fusion the stud base to the furnace casings and allows a threaded fastener to be torqued on the stud, drawing the Insulfrax Module to the casing plate.

### Advantages:

- Easy and simplicity of installation.
- High Installation speed.
- Permits random placement of modules on the casing.

## Thread-Loc Attachment System



## Thread-Loc Insulfrax S Modules

Provided with an all-thread weld stud and flanged nut, the Thread loc Insulfrax S Module is designed for installation on a pre-positioned stud pattern.

### Advantages:

- Compatibility with backup insulation and vapor foil barriers.
- Modules anchor compensates for variation in stud placement.
- Access to the welded fastener for full testing before the module is installed

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## TYPICAL PRODUCT PARAMETERS

### Physical Properties

	Insulfrax S Bonded Module	Insulfrax S WA, RX2, Weld-Loc, Thread-Loc
Colour	White	White
Classification Temp.	1200°C	1200°C
Recommended Operating Temp. Limit*	1100°C	1100°C
Density	160kg/m <sup>3</sup>	130, 160kg/m <sup>3</sup>
Thickness	38 - 100 mm	100 - 300 mm

\*The maximum continuous limit temperature for Modules depends upon application conditions. For applications such as hot face furnace linings, operational limits are significantly reduced by certain atmospheres, turbulence etc. In such cases, please contact your nearest Unifrax Engineering Office for advice.

### Thermal Conductivity Data (W/mK)

Density	130kg/m <sup>3</sup>	160kg/m <sup>3</sup>
400°C Mean Temp.	0.12	0.11
600°C Mean Temp.	0.16	0.15
800°C Mean Temp.	0.21	0.19
1000°C Mean Temp.	0.29	0.26

## THERMAL PROFILE TABLES

### Modules 130kg/m<sup>3</sup>

Hot Face Temperature	Insulation Thickness (mm)	100	150	200	250	300
		Cold Face Temperature				
800°C		91°C	73°C	62°C	56°C	50°C
900°C		-	81°C	69°C	62°C	58°C
1000°C		-	-	78°C	69°C	64°C

### Modules 160kg/m<sup>3</sup>

Hot Face Temperature	Insulation Thickness (mm)	100	150	200	250	300
		Cold Face Temperature				
900°C		102°C	80°C	69°C	62°C	55°C
1000°C		-	89°C	75°C	68°C	61°C
1100°C		-	-	82°C	74°C	66°C

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## Availability

Products	Bonded Modules	WA, RX2, Weld-Loc, Thread-Loc
<i>Length</i>	300 mm	300 mm
<i>Width/Compression</i>	300 mm*	300 mm*
<i>Density</i>	160kg/m <sup>3</sup>	130, 160kg/m <sup>3</sup>
<i>Thickness</i>	38,50,70,100 mm*	100,125,150,175,200,225,250,270,300 mm*
<i>Type</i>	Edge-stacked	Edge-stacked or Folded

Other thicknesses/sizes may be available on request subject to order.

## Packaging

<b>Anchors</b>	<b>130kg/m<sup>3</sup></b>	<b>160kg/m<sup>3</sup></b>
<i>RX2/WA</i>	Plastic bag	Plastic bag
<i>Weld-Loc, Thread-Loc</i>	Carton plates	Carton plates