

SAFE-R PHENOLIC INSULATION

Steel & Timber Frame

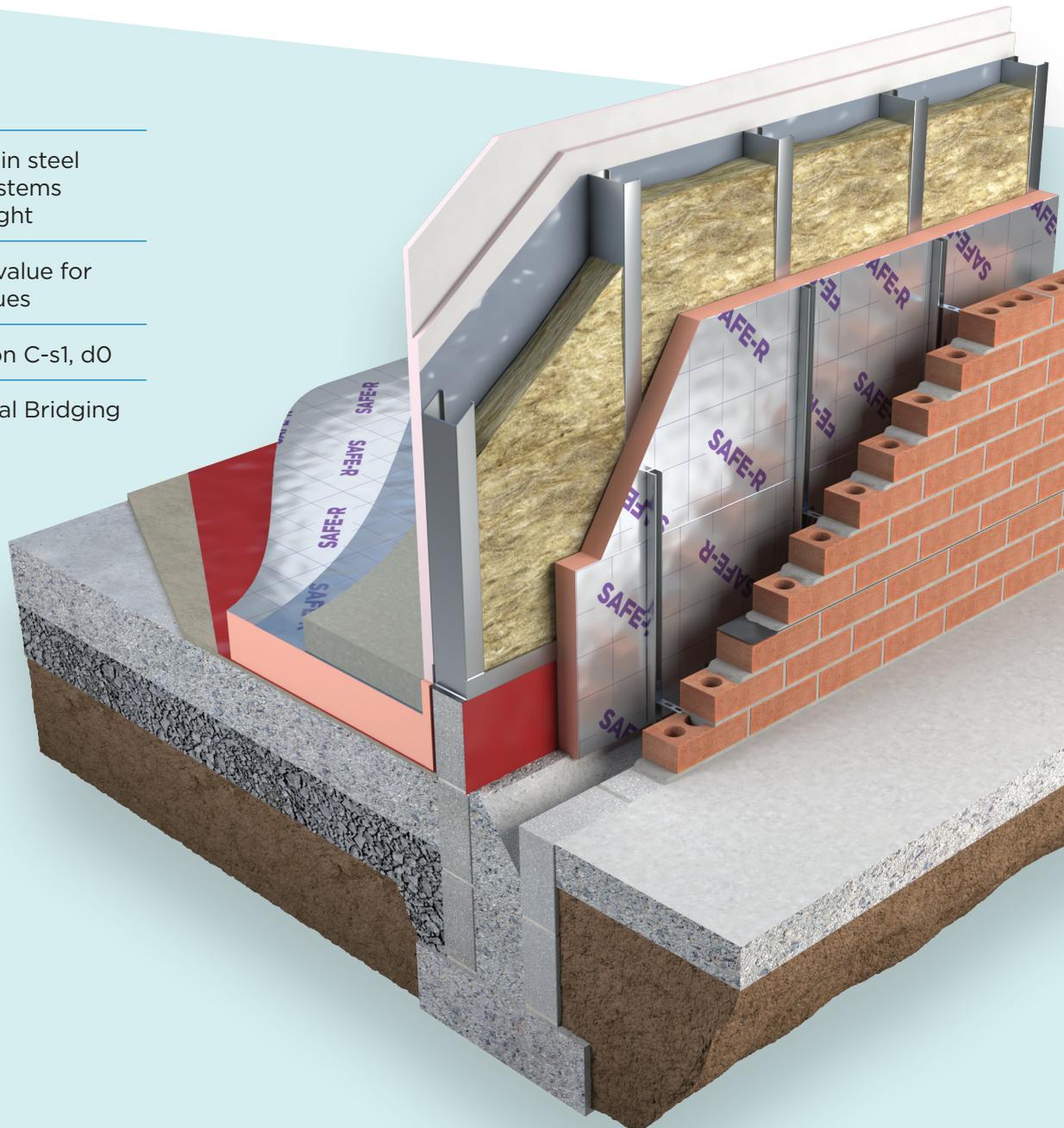
SR/FB

Suitable for use in steel
timber frame systems
up to 15m in height

Lower Lambda value for
improved U-Values

Fire Classification C-s1, d0

Reduced Thermal Bridging



SAFE-R PHENOLIC
INSULATION

Insulation for Steel & Timber Frame

SR/FB

Safe-R Framing Board is designed for use with steel or timber frame applications up to 15m in height. With a Euroclass C Fire Classification the framing board can be used between studs or as an insulated sheathing board. Using Safe-R Framing Board provides improved U-Values and Thermal Bridging detailing.

Benefits

- Suitable for use in steel timber frame systems up to 15m in height
- Lower Lambda value for improved U-Values
- Fire Classification C-s1, d0
- Reduced Thermal Bridging

Specification Clause

The wall insulation shall be Safe-R SR/FB manufactured to EN 13166:2012 + A1:2015 by Unilin Insulation, comprising of a rigid Phenolic core between composite foil facings. The Safe-R SR/FB ___mm with Agrément declared Lambda value as low as 0.020W/mK to achieve a U-Value of ___W/m²K for the wall element. To be installed in accordance with instructions issued by Unilin Insulation.

An Environmental Product Declaration (EPD), certified by IGBC is available for this product. Please contact technical support for further details.



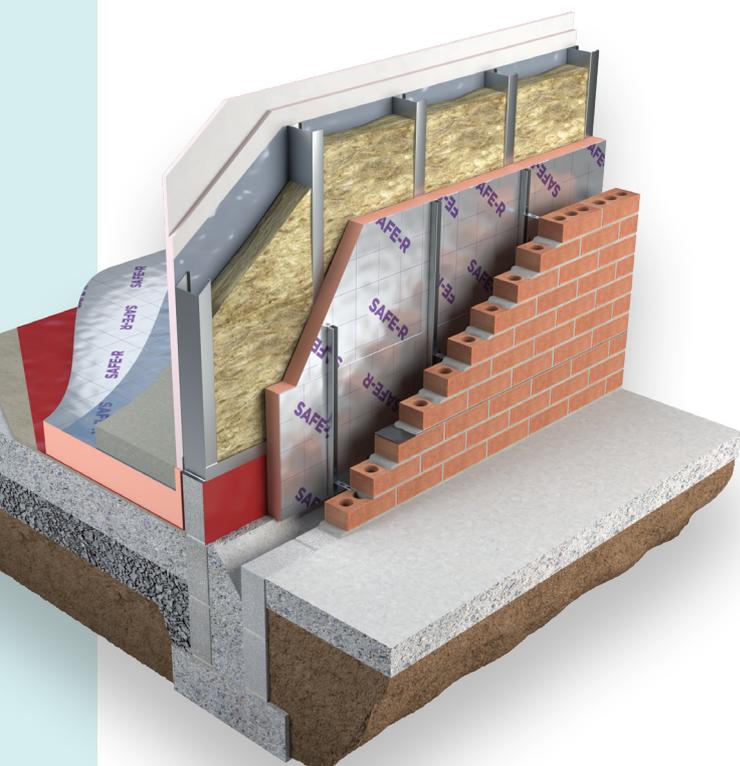
Refer to NBS clause H92 776, H20 150. Uniclass Pr 25 71 63 59.

**Thermal Resistances**

Thickness (mm)	R-Value (m ² K/W)
50	2.35
60	2.85
75	3.55
80	3.80
100	5.00
120	6.00
150	7.50

Resistance 'R' Values

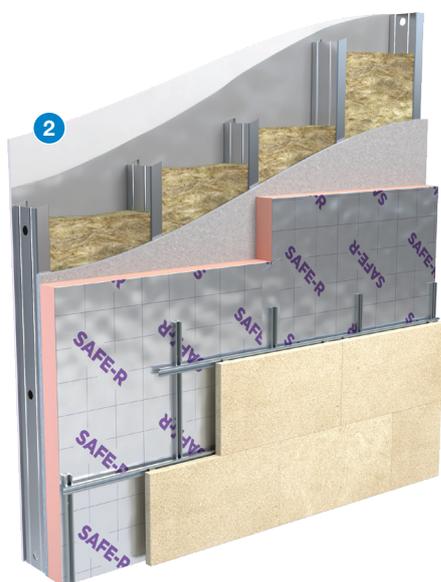
The resistance value of any thickness of Unilin insulation can be ascertained by simply dividing the thickness of the material (in metres) by its Agrément declared Lambda value, for example: Lambda 0.021 W/mK and thickness 80mm -> 0.080/ 0.021 -> R-Value = 3.80. In accordance with EN 13166:2012 + A1:2015, R-Values should be rounded down to the nearest 0.05 (m²K/W).





WALLS

SR/FB



1. Timber Framed System

Placing a lining of Safe-R Framing Board into the traditional cavity of the construction, and effectively insulating the Thermal Bridging caused by the timber studding improves the insulation value of the walls over the traditional method of insulating between studs only.

2. Steel Framed System

Buildings constructed using a steel framed system are insulated on the outer side of the construction create a 'Warm Frame', reducing the risk of condensation.

Note:

The composite foil facings on Safe-R Framing Board improves the thermal performance of the wall within an unventilated cavity. The unventilated cavity, or residual cavity, is the most effective method of preventing wind-driven rain penetrating a wall from the outside.

SR/FB

Length (mm)	2400
Width (mm)	1200
Thickness (mm)	50, 60, 75, 80, 100, 120

Other thicknesses may be available depending on minimum order quantity and lead time.

Property & Units

Thermal Conductivity	0.020 - 0.021 (W/mK)
Compressive Strength	100 (kPa)
Reaction to Fire	Euroclass C-s1, d0

Unilin CE Declaration of Performance (DoP) for this product is available for download from our website.

INSTALLATION GUIDELINES

SR/FB

Timber Framed System

1. Cut glass fibre insulation or Safe-R Framing Board to fit snugly between the timber studding. Allow slight oversize of cut to achieve 'friction fit' and seal any gaps with suitable expanding foam.
2. If partially filling, ensure the insulation is securely held in place by treated timber battens in order to prevent framing board moving within the cavity. Ensure boards are closely butted.
3. When using Safe-R Framing Board as a sheathing board, fix the insulation outside of any breather membrane or timber sheathing on the external surface (a second breather membrane may be added at this point for further protection) and temporarily fix with large headed clout nails. Ensure boards are closely butted and stagger jointed.
4. Place a sealed vapour control layer of polythene with lapped and sealed joints over the internal stud face.
5. Install cavity barriers into the cavity as required under building regulations.
6. Apply the internal finish as normal using fixings as recommended by timber frame supplier.

Steel Framed System

1. As with timber framing, Safe-R Framing Board should be fixed to the outer face of the steel frame ensuring that vertical joints meet over a metal stud. Fixings should be in accordance with the steel system manufacturers recommendations and Agrément approved. Ensure boards are closely butted.
2. Place a sealed vapour control layer with lapped and sealed joints over the inner stud face.
3. Install cavity barriers into the cavity as required under building regulations.
4. Apply the internal finish as normal.
5. Fix wall ties as recommended by steel frame supplier.

Ventilated Cladding

1. Fix treated battens or propriety framing system vertically to the wall through the insulation layer, ensuring that the system is fixed securely to the substrate.
2. Fixings should be appropriate for the weight of the cladding system, seek advice from the fixing manufacturer.
3. Horizontal tiling battens can be fixed to the vertical battens if the cladding system is to be tile hung, or the cladding fixed directly to the vertical battens.
4. An approved breather membrane may be required as part of the design.
5. Cladding system should be fixed in accordance with the manufacturer's recommendations.

Requirement for buildings over 15m in height must meet specific targets under Building Regulations - Safe-R Framing Board is suitable only for buildings under 15m. Contact Unilin Technical Support for information on insulation requirements for buildings over 15m.

THERMAL PERFORMANCE

SR/FB

Typical U-Values

Table 1

U-Value calculations to EN ISO 6946:2017
SR/FB

Timber Frame (Masonry Facing)

Build up:

- Plasterboard
- Vapour control layer
- SR/FB between 140mm timber studs
- Sheathing board
- Breather membrane
- SR/FB over studs
- Low E cavity
- Brick

Timber Frame (Masonry Facing)

Thickness of Sheathing (mm)

Between	Over	U-Value
60	50	0.16
60	60	0.15
60	80	0.13
60	100	0.12
80	50	0.15
80	60	0.14
80	80	0.12
80	100	0.11
100	50	0.13
100	60	0.12
100	80	0.11
100	100	0.10

Table 2

U-Value calculations to EN ISO 6946:2017
SR/FB

Timber Frame (Ventilated)

Build up:

- Plasterboard
- Vapour control layer
- SR/FB between 140mm timber studs
- Sheathing board
- Breather membrane
- SR/FB over studs
- Ventilated cavity between battens
- Timber cladding

Timber Frame (Ventilated)

Thickness of Sheathing (mm)

Between	Over	U-Value
60	50	0.18
60	60	0.16
60	80	0.14
60	100	0.12
80	50	0.16
80	60	0.15
80	80	0.13
80	100	0.11
100	50	0.14
100	60	0.13
100	80	0.12
100	100	0.10

THERMAL PERFORMANCE

SR/FB

Typical U-Values

Table 3

U-Value calculations to EN ISO 6946:2017
SR/FB

Steel Frame (Masonry Facing)

Build up:

- Plasterboard
- Vapour control layer
- Mineral wool between steel studs ($\lambda = 0.038$)
- Sheathing Board
- SR/FB over studs
- Low E cavity
- Brick

Table 4

U-Value calculations to EN ISO 6946:2017
SR/FB

Steel Frame (Ventilated)

Build up:

- Plasterboard
- Vapour control layer
- Mineral wool between steel studs ($\lambda = 0.038$)
- Sheathing Board
- Breather membrane
- SR/FB over studs
- Ventilated cavity between brackets
- Rainscreen Cladding

Steel Frame (Masonry Facing)

Thickness of Sheathing (mm)

Between	Over	U-Value
100	50	0.19
100	60	0.18
100	80	0.15
100	100	0.13
120	50	0.19
120	60	0.17
120	80	0.15
120	100	0.12
140	50	0.18
140	60	0.16
140	80	0.14
140	100	0.12

Steel Frame (Ventilated)

Thickness of Sheathing (mm)

Between	Over	U-Value
100	60	0.25
100	80	0.22
100	100	0.19
100	120	0.18
120	60	0.24
120	80	0.21
120	100	0.19
120	120	0.17
140	60	0.24
140	80	0.21
140	100	0.18
140	120	0.17

HANDLING, CUTTING & STORAGE

Unilin insulation should be stored off the ground, on a clean, flat surface and must be stored under cover. The polythene wrapping is not considered adequate protection for outside exposure. Care should be taken to protect the insulation in storage and during the build process.

The insulation boards can be readily cut using a sharp knife or fine toothed saw. Ensure tight fitting of the insulation boards to achieve continuity of insulation as asked for within the ACDs. Appropriate PPE should be worn when handling insulation. Please refer to Health & Safety data sheets on our website.

The boards are wrapped in polythene packs and each pack is labelled with details of grade/type, size and number of pieces per pack.

Durability

Unilin Insulation products are stable, rot proof, provide no food value to vermin and will remain effective for the lifetime of the building, depending on specification and installation. Care should be taken to avoid contact with acids, petrol, alkalis and mineral oil. When contact is made, clean materials in a safe manner before installation.





Unilin Insulation Ireland Ltd

Liscarton Industrial Estate
Kells Road, Navan
Co. Meath, Ireland
C15 NP79

t. +353 (0) 46 906 6000

e. info.ui@unilin.com

unilininsulation.ie



ISO 9001:2015+A1:2024 Quality Management Systems

ISO 14001:2015+A1:2024 Environmental Management Systems

IRL_SR/FB_December2025_v5