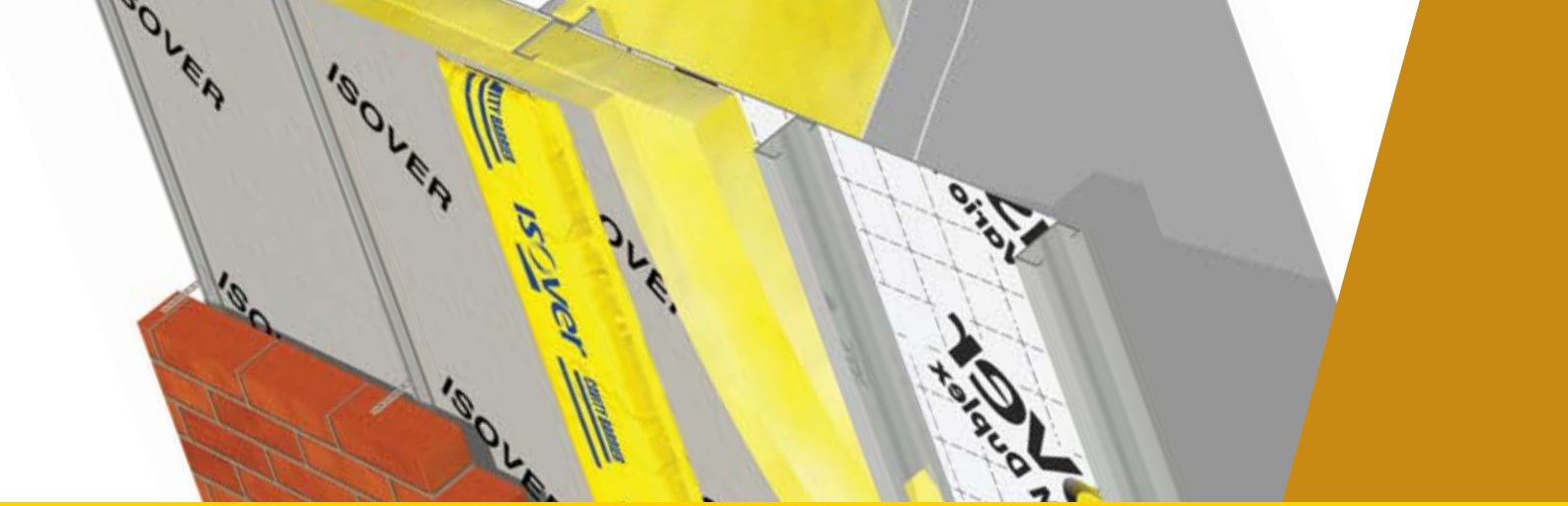


SF3+ Steel Frame Insulation System

Sustainable solutions for steel frame buildings

CI/Sfb | (21.9) | Rm1 | (M2)
Ref: DS01SF3 July 09

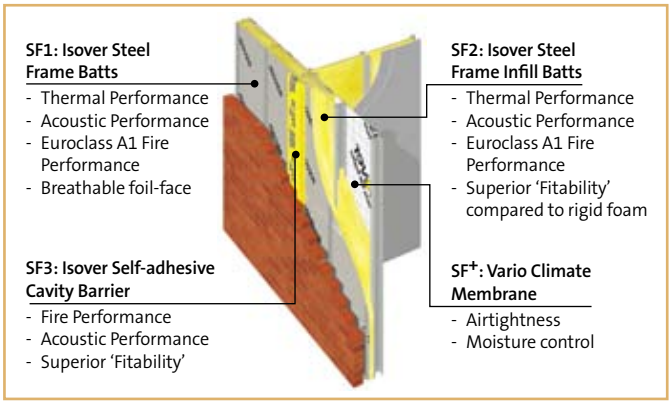
DESCRIPTION

SF3+ is a three part insulation system for use in lightweight steel frame walls in new-build projects that combines the benefits of Isover Steel Frame Batts, Isover Steel Frame Infill Batts and Isover Self Adhesive Cavity Barriers.

In addition, it offers the further option of the Isover Vario Membrane to improve air leakage performance through its patented technology.

BENEFITS

- SF3+ assists in meeting Building Regulations Part L thermal requirements and Part E acoustic requirements
- Achieves U values as low as 0.25W/m²K
- Infill product ensures no increase in building footprint
- Superior fitability increases on-site efficiencies and reduces waste
- Durable – not easily damaged in storage, during transportation or on site when installed
- Euroclass A1 fire rating.



QUALITY ASSURANCE

Isover Steel Frame Batts are manufactured under Quality Management Standard EN ISO 9001:2008.

Certificate number: FM 01032

ENVIRONMENTAL INFORMATION

Isover glass mineral wool insulation is manufactured from a combination of silica sand and up to 80% recycled post-consumer glass from building regeneration projects or flat glass manufacture that would otherwise go to landfill. This makes Isover one of the most environmentally sustainable insulation products on the market today. The material credentials of installing Isover glass mineral wool insulation include:

- Zero ODP (Ozone Depletion Potential)
- Zero GWP (Global Warming Potential)

FIRE PERFORMANCE

The Isover SF3+ system is manufactured from inherently non-combustible materials to provide complete fire safety. The glass wool products achieve a Euroclass A1 fire rating when classified in accordance with BS EN ISO 13501-1.

Furthermore, the system incorporates Isover Cavity Barriers so as not to compromise fire safety with respect to the spread of fire in wall cavities.

ACOUSTIC COMFORT | FIRE PROTECTION | THERMAL EFFICIENCY | SUSTAINABLE PRODUCT | ON-SITE FITABILITY | MOISTURE CONTROL

The World's Leading Acoustic and Thermal Insulation

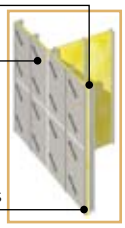
SF3+ SYSTEM DETAILS

SF1: Isover Steel Frame Batt
Fixed to the outside of the metal stud.

Full height studs to size, gauge and centres determined by design

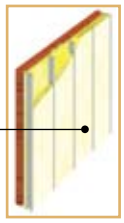
50mm Isover Steel Frame Batts (foil-faced)

Stainless steel brick tie channel at 600mm horizontal centres, fixed to studs through the insulation with stand-off screws and rubber washers



SF2: Isover Steel Frame Infill Batt
Friction fitted between studs with no additional fixings required.

Isover Steel Frame Infill Batts, friction fitted between studs (thickness to suit thermal & acoustic performance)

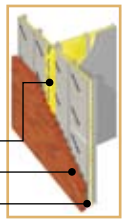


SF3: Isover Self-Adhesive Cavity Barrier
Fitted directly to the foil face of the Steel Frame Batt, unlike rigid foam insulants which require cutting back due to their general lack of fire performance.

Isover Self-Adhesive Cavity Barrier (thickness to suit designed cavity width)

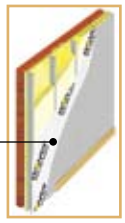
Brick outer leaf

Cavity



SF+: Vario Climate Membrane
Fixed directly onto the steel frame studs prior to the installation of gypsum wallboard, providing effective airtightness of the building envelope.

Vario Climate Membrane



'FITABILITY' AND INSTALLATION DETAILS

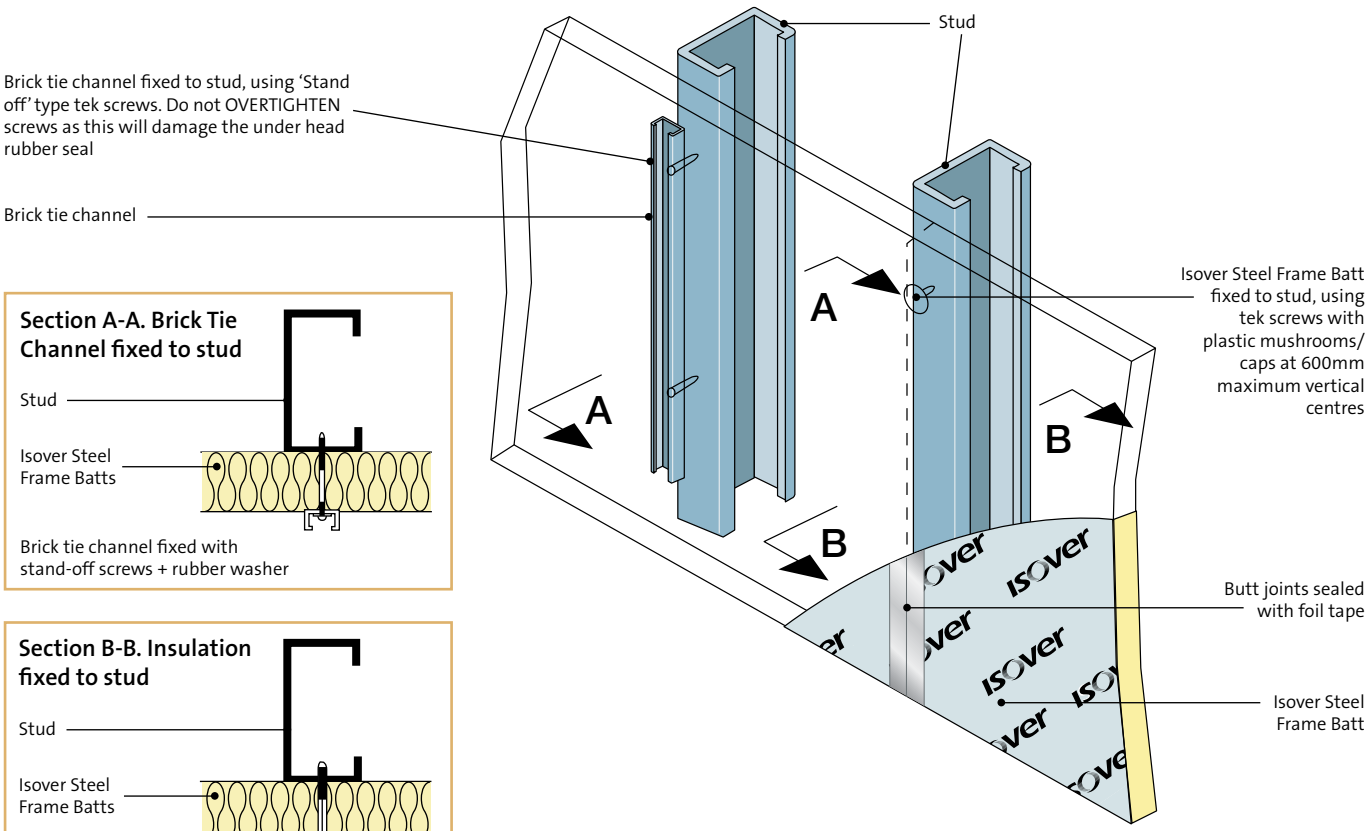
Unlike rigid or more dense insulation products, Isover glass wool has excellent 'fitability' properties and requires minimal cutting to size. This means that glass mineral wool offers a more cost effective solution due to minimal wastage and short installation time. This makes Isover one of the lowest installed cost insulants available.

Isover Steel Frame Batts are typically attached to the outer face of the stud framework by means of a standard mushroom fixing, followed by brick tie channels, secured by screw fixing through the tie channels into the stud flanges. The brick tie channels should be fixed with stand-off screws at typically 225mm min, 450mm max, vertical centres (subject to design considerations) through the insulation into the stud flanges.

The factory applied foil-facing of the Isover Steel Frame Batt is installed towards the outside of the building. The reverse side is faced with a glass tissue for improved rigidity and handling.

All foil-faced horizontal and vertical joints between the insulation batts must be sealed with self-adhesive foil tape. The batts can easily be cut with a sharp knife to fit closely around edges and apertures and all exposed edges should also be protected with foil tape.

At stud positions without brick tie channels, Isover Steel Frame Batts should be retained onto the frame with screw fixings through plastic mushrooms at 600mm vertical centres onto the studs.



Section A-A. Brick Tie Channel fixed to stud

Brick tie channel fixed with stand-off screws + rubber washer

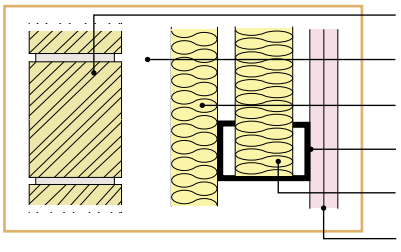
Section B-B. Insulation fixed to stud

Insulation fixed to stud with tek screws and plastic mushrooms/caps at 600mm maximum centres

THERMAL PERFORMANCE OF EXTERNAL WALLS

U-Value calculations based on the 'combined method' of BS EN ISO 6946 and BRE Digest 465.

Brick clad wall construction



103mm brickwork
50mm cavity
50mm Isover Steel Frame Batts
100mm steel stud
Isover Steel Frame Infill Batt
2 x 12.5mm Gyproc WallBoard

Insulation outside stud	Insulation between stud	U-VALUE
50mm Isover Steel Frame Batts	50mm Isover Steel Frame Infill Batts	0.29W/m^{2}K
50mm Isover Steel Frame Batts	75mm Isover Steel Frame Infill Batts	0.26W/m^{2}K
50mm Isover Steel Frame Batts	100mm Isover Steel Frame Infill Batts	0.25W/m^{2}K

Thermal Conductivity

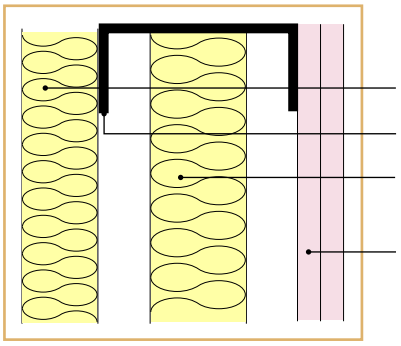
SF1 Isover Steel Frame Batt – lambda value 0.032 W/m^{2}K

SF2 Isover Steel Frame Infill Batt – lambda value 0.036 W/m^{2}K

ACOUSTIC PERFORMANCE – LABORATORY TESTED SOLUTIONS

Laboratory tests conducted at the BRE conclusively prove that Isover insulation products provide far superior acoustic performance in comparison to rigid foams.

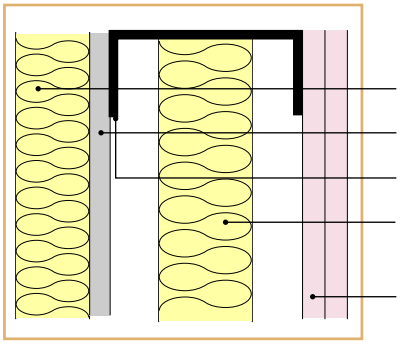
External Walls. Acoustic Performance on Internal Leaf to External Walls.



Insulation fixed to outside of studs – see table
50mm Isover Steel Frame Batts
100mm Metsec studs
50mm Isover Steel Frame Infill Batt between studs
2 x 15mm Gyproc WallBoard

Insulation type	R_w	R_w + Ctr
30mm Polyurethane Foam	34dB	30dB
30mm Isover Steel Frame Batts	39dB	34dB

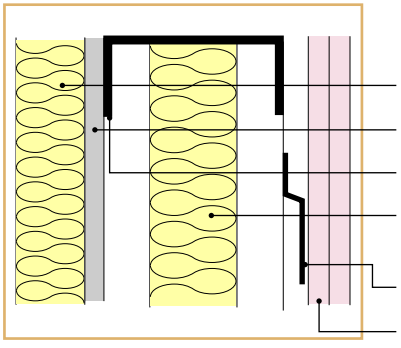
Metsec Substantiation Report MFD392



Insulation fixed to outside of studs – see table
50mm Isover Steel Frame Batts
12mm cement particle board
100mm Metsec studs
50mm Isover Steel Frame Infill Batt between studs
2 x 15mm Gyproc WallBoard

Insulation type	R_w	R_w + Ctr
30mm Polyurethane Foam	35dB	33dB
30mm Isover Steel Frame Batts	43dB	39dB

Metsec Substantiation Report MFD393



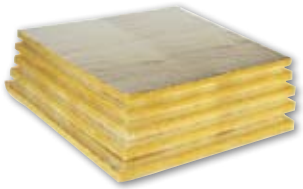
Insulation fixed to outside of studs – see table
50mm Isover Steel Frame Batts
12mm cement particle board
100mm Metsec studs
50mm Isover Steel Frame Infill Batt between studs
Gypframe RB1 Resilient Bars
2 x 15mm Gyproc WallBoard

Insulation type	R_w	R_w + Ctr
30mm Polyurethane Foam	42dB	38dB
30mm Isover Steel Frame Batts	48dB	40dB

Metsec Substantiation Report MFD394

PACKAGING AND PHYSICAL DIMENSIONS

Steel Frame Batts are compression packed in individual packs using a strong polythene packaging film. The packs are then stacked on wooden pallets with final weatherproof outer covering, giving the option of outside storage.



SF1 Isover Steel Frame Batt

Isover Steel Frame Batts are available in 1200mm X 1200mm dimensions for ease of application and once installed will tolerate exposure to weather for a limited period of time.

Order code	Product	Thickness (mm)	Batts per pallet	m² per pallet
13883	Isover SF1 Steel Frame Batt	50	40	57.60

SF2 Isover Steel Frame Infill Batt

Isover Steel Frame Infill Batts are available in 1200mm X 600mm dimensions.

Order code	Product	Thickness (mm)	Pack area (m²)	Batts per pack	Packs per pallet	m² per pallet
13880	Isover SF1 Steel Frame Infill Batt	50	11.52	16	20	230.40
13881	Isover SF1 Steel Frame Infill Batt	75	7.20	10	20	144.00
13882	Isover SF1 Steel Frame Infill Batt	100	5.76	8	20	115.20

SF3 Isover Cavity Barriers – self-adhesive grade

Isover Cavity Barriers (self-adhesive grade) are available in three easy to identify sizes for all cavity widths up to 100mm.

Note: Isover Cavity Barriers are also available in 1.2m length x 300mm and 2.4m (storey height) length x 300mm, for yellow, blue and white cavity widths.

Order code	Product	For cavity sizes (mm)	Sleeve colour	Nominal Length (mm)	Width (mm)	Barriers per pallet
13628	Isover Cavity Barrier	50-65	Yellow	1200	100	50
13590	Isover Cavity Barrier	66-80	Blue	1200	100	40
13625	Isover Cavity Barrier	81-100	White	1200	100	40

SF+ Vario Climate Membrane

Providing airtightness and moisture management of the building envelope.

Order code	Product	Units
13886	Vario Climate Membrane	m²
13892	Vario Powerflex	1 box (10 rolls)
13893	Vario KB1	1 box (5 rolls)
13894	Vario DS Sealant	1 box (12 cartridges)

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