
CERTIFICATE OF APPROVAL

No CF 420A

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

ETEX BUILDING PERFORMANCE LTD

Gordano House, Marsh Lane, Easton-in-Gordano, Bristol, BS20 0NE
Tel: 0800 145 6033

Have been assessed against the requirements of the Technical Schedule(s)
denoted below and are approved for use subject to the conditions
appended hereto:

CERTIFIED PRODUCT

Etex Building Performance Ltd
Supalux Partition & External,
Walls

TECHNICAL SCHEDULE

TS49 Vertical and Horizontal
Separating Elements

Signed and sealed for and on behalf of Exova (UK) Limited trading as
Warrington Certification



Paul Duggan
Certification Manager



Issued:
Reissued:
Valid to:
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21st July 2007
9th November 2018
8th November 2023



CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux Partitions and External Walls

1. This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
2. This approval relates to the use of the above partitions and external wall assemblies in providing fire resistance of up to 240 minutes integrity and insulation, as defined in BS 476: Part 22: 1987. Subject to the undermentioned conditions, the partitions and external wall assemblies will meet the relevant requirements of BS 5588 for fire resisting compartment walls, for periods of up to 240 minutes (dependant upon design limitations) when used in accordance with the provisions therein.
3. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section D of the Technical Standards (Scotland), Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.'
4. The partitions and external wall assemblies are approved on the basis of:
 - i) Initial type testing
 - ii) Audit testing at the frequency specified in TS49
 - iii) A design appraisal against TS49
 - iv) Inspection and surveillance of factory production control
 - v) Production surveillance under ISO 9001:2000
5. The partition assemblies comprise Supalux board screwed to and supported by a timber or steel framework and, in some cases, fitted with stone wool insulation within the cavity of the partition.
6. The external wall assemblies comprise Supalux board fastened to a steel supporting framework that is, in turn, supported by horizontal steel sheeting rails, and with stone wool insulation within the cavity. External cladding is fitted to the outside face of the assembly.
7. This approval is applicable to insulated Supalux partitions and to insulated and partially insulated Supalux external wall assemblies as described within this Certificate.
8. The partition and external wall assemblies shall be mechanically fixed to wall and/or floor constructions or structural steel members having a fire resistance of at least the same period as the partition or external wall.
9. The approval relates to on going production. Product and/or its immediate packaging is identified with the manufacturers' name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux Timber Stud Partition Assemblies

This approval relates to Supalux timber stud partition assemblies in terms of the integrity and insulation performance criteria of BS 476: Part 22: 1987.

30 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|--------------|---|
| Timber frame | <ul style="list-style-type: none">▪ Studs, 63mm deep x 50mm thick, at maximum 610mm centres.▪ Timber noggings, the same size as the studs, at horizontal board joints.▪ Perimeter timbers are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Supalux board of nominal thickness 9mm on each face of timber framework.▪ Boards are fixed using 50mm-long round head steel nails at 300mm nominal centres. Nails adjacent to board edges are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.▪ Boards are butt jointed or flush jointed. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between the studs in the cavity of the partition. The specification for the stone wool is 23kg/m³ density.▪ . |

The maximum height of the partition system is 4.0m. The length of the partition system is unrestricted.

60 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|--------------|--|
| Timber frame | <ul style="list-style-type: none">▪ Studs, 63mm deep x 50mm thick, at maximum 610mm centres.▪ Timber noggings, the same size as the studs, at horizontal board joints.▪ Perimeter timbers are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Supalux board of nominal thickness 9mm on each face of timber framework.▪ Boards are fixed using 50mm-long round head steel nails or M4 x 50mm-long steel woodscrews at 300mm nominal centres. Nails or screws adjacent to board edges are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.▪ Boards are butt jointed or flush jointed. |

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Supalux Timber Stud Partition Assemblies

- Stone wool
- Stone wool is fitted tightly between the studs in the cavity of the partition. The specification for the stone wool is 45kg/m³ density.
 - Alternative thicknesses and densities of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions.

The maximum height of the partition system is 4.0m. The length of the partition system is unrestricted.

90 minutes

The minimum specification for the Supalux partition system is as follows:

- Timber frame
- Studs, 75mm deep x 50mm thick, at maximum 610mm centres.
 - Timber noggings, the same size as the studs, at horizontal board joints.
 - Perimeter timbers are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres.
- Boards
- Supalux board of nominal thickness 9mm on each face of timber framework.
 - Boards are fixed using 50mm-long round head steel nails at 200mm nominal centres or M4 x 50mm-long steel woodscrews at 300mm nominal centres. Nails or screws adjacent to board edges are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.
 - Boards are butt jointed or flush jointed.
- Stone wool
- Stone wool is fitted tightly between the studs in the cavity of the partition. The minimum specification for the stone wool is 50mm thick x 100kg/m³ density.
 - Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions.

The maximum height of the partition system is 4.0m. The length of the partition system is unrestricted.

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Supalux Timber Stud Partition Assemblies

120 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|--------------|---|
| Timber frame | <ul style="list-style-type: none">▪ Studs, 89mm deep x 50mm thick, at maximum 610mm centres.▪ Timber noggings, the same size as the studs, at horizontal board joints.▪ Perimeter timbers are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Supalux board of nominal thickness 15mm on each face of timber framework.▪ Boards are fixed using 63mm-long round head steel nails at 200mm nominal centres or M4 x 63mm-long steel woodscrews at 300mm nominal centres. Nails or screws adjacent to board edges are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.▪ Boards are butt jointed or flush jointed. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between the studs in the cavity of the partition. The minimum specification for the stone wool is 80mm thick x 100kg/m³ density. The wool is fitted in two layers with the joints between layers staggered by minimum 150mm.▪ Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The maximum height of the partition system is 4.0m. The length of the partition system is unrestricted.

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux Steel Stud Partition Assemblies – Integrity and Insulation

This approval relates to Supalux steel stud partition assemblies in terms of the integrity and insulation performance criteria of BS 476: Part 22: 1987.

30 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|-------------|---|
| Steel frame | <ul style="list-style-type: none">▪ Ceiling and floor channels, 50mm web x 25mm flanges x 0.5mm thick.▪ C-studs, 48mm web x 32/34mm flanges x 0.5mm thick, at maximum 610mm centres.▪ Perimeter channels are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Supalux board of nominal thickness 9mm on each face of steel framework.▪ Boards are screwed to the studs and perimeter channels with M4 x 25mm-long steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.▪ Horizontal board joints are backed by a Supalux cover strip, 75mm wide x 9mm thick, fastened using M4 x 16mm-long self-tapping screws at nominal 300mm centres on both sides of the joint.▪ Boards are butt jointed or flush jointed. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between and filling the studs in the cavity of the partition. The minimum specification for the stone wool is 60mm thick x 23kg/m³ density.▪ Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The length of the partition system is unrestricted.

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ETEX BUILDING PERFORMANCE LTD

Supalux Steel Stud Partition Assemblies – Integrity and Insulation

For partitions with a height greater than 3m, up to 10m, the specification of the partition is changed as follows:

Partition height

Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum Height (mm) with studs centres of	
					610(mm)	407(mm)
CS50/RX	50	36/34	6	0.52	4000	4000
CS60/RX	60	36/34	6	0.52	4000	4000
CS70/RX	70	36/34	6	0.52	4000	4000
CS70/B	70	36/34	6	0.7	4000	4600
CS70/Y	70	36/33	6	1.2	5300	6200
CS90/RX	90	36/34	6	0.52	4000	4400
CS90/B	90	36/34	6	0.7	4600	5400
CS90/W	90	36/34	6	0.9	5400	6300
CS90/Y	90	36/33	6	1.2	6250	7300
CS146/RX	146	36/34	6	0.52	4750	5700
CS146/B	146	36/34	6	0.7	6000	7100
CS146/Y	146	36/33	6	1.2	8400	9750
Boxed sections						
CS146Y/UXT72B	146	36/33	6/0	1.2/0.7	10000	10000
CS146Y/UDT92B	146	36/33	6/0	1.2/0.7	10000	10000
CS146Y/UXT92W	146	36/33	6/0	1.2/0.9	10000	10000
CS50RX/CS50RX	50	36/34	6	0.52/0.52	4000	4000
CS70Y/CS70Y	70	36/33	6	1.2/1.2	6300	7500
Cold rolled I sections						
IS70B	70	39	-	0.7	4050	5400
IS90B	90	39	-	0.7	4700	6300

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Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum Height (mm) with studs centres of	
					610(mm)	407(mm)
Alternative sections						
	48.8	47/49	6.0	0.6	4000	4000
	48.8	47/49	6.0	0.7	4000	4000
	48.8	47/49	6.0	1.0	4000	4000
	58.8	47/49	6.0	0.6	4000	4000
	73.8	47/49	6.0	0.6	4000	4300
	73.8	47/49	6.0	0.7	4100	4800
	73.8	47/49	6.0	1.0	5150	6000
	98.8	47/49	6.0	0.6	4350	5200
	98.8	47/49	6.0	0.7	4800	5700
	98.8	47/49	6.0	1.0	6150	7200
	123.8	47/49	6.0	0.6	4950	5850
	148.8	47/49	6.0	0.6	5400	6450

Top and bottom channels

The steel top and bottom channel sections have approximately the same web dimension as the studs so that the studs are a sliding fit in the channels. The minimum size of the top and bottom channel sections is 50mm web x 25mm flanges x 0.5mm thick. The channels have at least the same thickness as the studs. For heights above 4.5m the bottom channel has a minimum flange dimension of 40mm. For heights above 6m the bottom channel has a minimum flange dimension of 50mm.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

Top channel and expansion allowance

The minimum depth of the top steel channel and the minimum expansion allowance for the studs at different partition heights are as follows:

Height - m	Minimum depth of top channel - mm	Minimum expansion allowance - mm
3	52	20
4	52	24
5	72	28
6	72	35
8	72	45
10	146	55

Deflection head

The allowance for expansion may be provided at stud joints and/or by the studs sliding up into the top channel. Any joint in the stud that incorporates an expansion allowance must not decrease the strength of the stud.

For heights up to 5m the design of the deflection head allows the studs to slide into the top channel, either with the space (10mm maximum) above the Supalux facing boards filled with Promaseal mastic or the top channel mounted on minimum 2 x 9mm layers of Supalux board (Figure 1). For heights above 5m the designs are shown in Figures 2 & 3.

- Figure 2 – the Supalux facing boards are stopped short of the top channel and Supalux cover fillets (1 x 9mm) and cover panels (minimum 1 x 9mm) screwed to the top channel. The cover panels overlap the facing boards by at least 50mm.
- Figure 3 - An additional steel channel or two steel angles are fastened to the concrete soffit. Supalux cover panels (minimum 1 x 9mm) are screwed to these additional steel sections so that they overlap the Supalux facing boards by at least 50mm.
- It must be ensured that the screw fixings for the boards do not restrict the expansion allowance.
- The stone wool extends to the top of the partition cavity.

Stone wool

When the web dimension of the studs is increased, thus increasing the depth of the cavity in the partition, then the thickness of the 23kg/m³ stone wool is increased to fill the cavity. More than one layer of stone wool may be used provided that it fills the cavity.

As an alternative to increasing the stone wool thickness, the stone wool can be supported at 3m maximum vertical centres from horizontal steel channels, the same size as the studs, fitted between the studs. The stone wool is fixed to the horizontal channels using galvanised steel angle, minimum 25mm x 25mm x 0.5mm thick, fastened with M4 steel self-tapping screws at 300mm maximum centres.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

60 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|-------------|---|
| Steel frame | <ul style="list-style-type: none">▪ Ceiling and floor channels, 50mm web x 32mm flanges x 0.5mm thick.▪ C-studs, 48mm web x 32/34mm flanges x 0.5mm thick, at maximum 610mm centres.▪ Perimeter channels are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Supalux fillets, 50mm wide x 9mm thick, covering the studs and channels on both faces of the steel framework. Fillets fastened with M4 steel self-tapping screws at any convenient centres.▪ Supalux board of nominal thickness 9mm on each face of steel framework.▪ Boards are screwed to the studs and perimeter channels, through the fillets, with M4 x 25mm-long steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.▪ Horizontal board joints are backed by a Supalux cover strip, 50mm wide x 6mm thick, fastened using M4 x 16mm-long self-tapping screws at nominal 300mm centres on both sides of the joint.▪ Boards are butt jointed or flush jointed. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between and filling the studs in the cavity of the partition. The minimum specification for the stone wool is 60mm thick x 45kg/m³ density.▪ Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The length of the partition system is unrestricted.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

For partitions with a height greater than 3m, up to 10m, the specification of the partition is changed as follows:

Partition height

Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum Height (mm) with studs centres of	
					610(mm)	407(mm)
CS50/RX	50	36/34	6	0.52	4000	4000
CS60/RX	60	36/34	6	0.52	4000	4000
CS70/RX	70	36/34	6	0.52	4000	4000
CS70/B	70	36/34	6	0.7	4000	4250
CS70/Y	70	36/33	6	1.2	4950	5800
CS90/RX	90	36/34	6	0.52	4000	4000
CS90/B	90	36/34	6	0.7	4200	4900
CS90/W	90	36/34	6	0.9	4900	5800
CS90/Y	90	36/33	6	1.2	5800	6700
CS146/RX	146	36/34	6	0.52	4150	4800
CS146/B	146	36/34	6	0.7	5350	6300
CS146/Y	146	36/33	6	1.2	7600	8800
Boxed sections						
CS146Y/UXT72B	146	36/33	6/0	1.2/0.7	9800	10000
CS146Y/UDT92B	146	36/33	6/0	1.2/0.7	9800	10000
CS146Y/UXT92W	146	36/33	6/0	1.2/0.9	9850	10000
CS50RX/CS50RX	50	36/34	6	0.52/0.52	4000	4000
CS70Y/CS70Y	70	36/33	6	1.2/1.2	5800	6600
Cold rolled I sections						
IS70B	70	39	-	0.7	4000	4500
IS90B	90	39	-	0.7	4500	5250

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Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum Height (mm) with studs centres of	
					610(mm)	407(mm)
Alternative sections						
	48.8	47/49	6.0	0.6	4000	4000
	48.8	47/49	6.0	0.7	4000	4000
	48.8	47/49	6.0	1.0	4000	4300
	58.8	47/49	6.0	0.6	4000	4000
	73.8	47/49	6.0	0.6	4000	4000
	73.8	47/49	6.0	0.7	4000	4400
	73.8	47/49	6.0	1.0	4800	5550
	98.8	47/49	6.0	0.6	4000	4650
	98.8	47/49	6.0	0.7	4450	5200
	98.8	47/49	6.0	1.0	5700	6600
	123.8	47/49	6.0	0.6	4400	5250
	148.8	47/49	6.0	0.6	4800	5750

Top and bottom channels

The steel top and bottom channel sections have approximately the same web dimension as the studs so that the studs are a sliding fit in the channels. The minimum size of the top and bottom channel sections is 50mm web x 25mm flanges x 0.5mm thick. The channels have at least the same thickness as the studs. For heights above 4.5m the bottom channel has a minimum flange dimension of 40mm. For heights above 6m the bottom channel has a minimum flange dimension of 50mm.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

Top channel and expansion allowance

The minimum depth of the top steel channel and the minimum expansion allowance for the studs at different partition heights are as follows:

Height - m	Minimum depth of top channel - mm	Minimum expansion allowance - mm
3	52	20
4	52	24
5	72	28
6	72	35
8	72	45
10	146	55

Deflection head

The allowance for expansion may be provided at stud joints and/or by the studs sliding up into the top channel. Any joint in the stud that incorporates an expansion allowance must not decrease the strength of the stud.

For heights up to 5m the design of the deflection head allows the studs to slide into the top channel, either with the space (10mm maximum) above the Supalux facing boards filled with Promaseal mastic or the top channel mounted on minimum 2 x 9mm layers of Supalux board (Figure 1). For heights above 5m the designs are shown in Figures 2 & 3.

- Figure 2 – the Supalux facing boards and fillets are stopped short of the top channel and Supalux cover fillets (1 x 9mm + 1 x 9mm) and cover panels (minimum 1 x 9mm) screwed to the top channel. The cover panels overlap the facing boards by at least 50mm.
- Figure 3 - An additional steel channel or two steel angles are fastened to the concrete soffit. Supalux cover panels (minimum 1 x 9mm + 1 x 9mm) are screwed to these additional steel sections so that they overlap the Supalux facing boards by at least 50mm.
- It must be ensured that the screw fixings for the boards do not restrict the expansion allowance.
- The stone wool extends to the top of the partition cavity.

Stone wool

When the web dimension of the studs is increased, thus increasing the depth of the cavity in the partition, then the thickness of the 45kg/m³ stone wool is increased to fill the cavity. More than one layer of stone wool may be used provided that it fills the cavity.

As an alternative to increasing the stone wool thickness, the stone wool can be supported at 3m maximum vertical centres from horizontal steel channels, the same size as the studs, fitted between the studs. The stone wool is fixed to the horizontal channels using galvanised steel angle, minimum 25mm x 25mm x 0.5mm thick, fastened with M4 steel self-tapping screws at 300mm maximum centres.

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ETEX BUILDING PERFORMANCE LTD

Supalux Steel Stud Partition Assemblies – Integrity and Insulation

90 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|-------------|--|
| Steel frame | <ul style="list-style-type: none">▪ Ceiling and floor channels, 50mm web x 25mm flanges x 0.5mm thick.▪ C-studs, 48mm web x 32/34mm flanges x 0.5mm thick, at maximum 610mm centres.▪ Perimeter channels are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Supalux fillets, 75mm wide x 9mm thick, covering the studs and channels on both faces of the steel framework. Fillets fastened with M4 steel self-tapping screws at any convenient centres.▪ Supalux board of nominal thickness 12mm on each face of steel framework.▪ Boards are screwed to the studs and perimeter channels, through the fillets, with M4 x 32mm-long steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.▪ Horizontal board joints are backed by a Supalux cover strip, 75mm wide x 9mm thick, fastened using M4 x 25mm-long self-tapping screws at nominal 300mm centres on both sides of the joint.▪ Boards are butt jointed or flush jointed. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between and filling the studs in the cavity of the partition. The minimum specification for the stone wool is 60mm thick x 60kg/m³ density. The wool is fitted in two layers with the joints between layers staggered by minimum 150mm.▪ Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The length of the partition system is unrestricted.

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ETEX BUILDING PERFORMANCE LTD

Supalux Steel Stud Partition Assemblies – Integrity and Insulation

For partitions with a height greater than 3m, up to 10m, the specification of the partition is changed as follows:

Partition height

Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum height (m) with studs centres of	
					610(mm)	407(mm)
CS50/RX	50	36/34	6	0.52	4000	4000
CS60/RX	60	36/34	6	0.52	4000	4000
CS70/RX	70	36/34	6	0.52	4000	4000
CS70/B	70	36/34	6	0.7	4000	4000
CS70/Y	70	36/33	6	1.2	4000	4400
CS90/RX	90	36/34	6	0.52	4000	4000
CS90/B	90	36/34	6	0.7	4000	4000
CS90/W	90	36/34	6	0.9	4000	4300
CS90/Y	90	36/33	6	1.2	4350	5100
CS146/RX	146	36/34	6	0.52	4000	4000
CS146/B	146	36/34	6	0.7	4000	4350
CS146/Y	146	36/33	6	1.2	5500	6650
Boxed sections						
CS146Y/UXT72B	146	36/33	6/0	1.2/0.7	7500	8700
CS146Y/UDT92B	146	36/33	6/0	1.2/0.7	7600	8700
CS146Y/UXT92W	146	36/33	6/0	1.2/0.9	7750	8850
CS50RX/CS50RX	50	36/34	6	0.52/0.52	4000	4000
CS70Y/CS70Y	70	36/33	6	1.2/1.2	4500	5250
Cold rolled I sections						
IS70B	70	39	-	0.7	4000	4000
IS90B	90	39	-	0.7	4000	4500

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Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum height (m) with studs centres of	
					610(mm)	407(mm)
Alternative sections						
	48.8	47/49	6.0	0.6	4000	4000
	48.8	47/49	6.0	0.7	4000	4000
	48.8	47/49	6.0	1.0	4000	4000
	58.8	47/49	6.0	0.6	4000	4000
	73.8	47/49	6.0	0.6	4000	4000
	73.8	47/49	6.0	0.7	4000	4000
	73.8	47/49	6.0	1.0	4000	4250
	98.8	47/49	6.0	0.6	4000	4000
	98.8	47/49	6.0	0.7	4000	4000
	98.8	47/49	6.0	1.0	4200	5000
	123.8	47/49	6.0	0.6	4000	4000
	148.8	47/49	6.0	0.6	4000	4000

Top and bottom channels

The steel top and bottom channel sections have approximately the same web dimension as the studs so that the studs are a sliding fit in the channels. The minimum size of the top and bottom channel sections is 50mm web x 25mm flanges x 0.5mm thick. The channels have at least the same thickness as the studs. For heights above 4.5m the bottom channel has a minimum flange dimension of 40mm. For heights above 6m the bottom channel has a minimum flange dimension of 50mm.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

Top channel and expansion allowance

The minimum depth of the top steel channel and the minimum expansion allowance for the studs at different partition heights are as follows:

Height - m	Minimum depth of top channel - mm	Minimum expansion allowance - mm
3	52	20
4	52	24
5	72	28
6	72	35
8	72	45
10	146	55

Deflection head

The allowance for expansion may be provided at stud joints and/or by the studs sliding up into the top channel. Any joint in the stud that incorporates an expansion allowance must not decrease the strength of the stud.

For heights up to 5m the design of the deflection head allows the studs to slide into the top channel, either with the space (10mm maximum) above the Supalux facing boards filled with Promaseal mastic or the top channel mounted on minimum 2 x 9mm layers of Supalux board (Figure 1). For heights above 5m the designs are shown in Figures 2 & 3.

- Figure 2 – the Supalux facing boards and fillets are stopped short of the top channel and Supalux cover fillets (1 x 9mm + 1 x 12mm) and cover panels (minimum 1 x 12mm) screwed to the top channel. The cover panels overlap the facing boards by at least 50mm.
- Figure 3 - An additional steel channel or two steel angles are fastened to the concrete soffit. Supalux cover panels (minimum 1 x 9mm + 1 x 12mm) are screwed to these additional steel sections so that they overlap the Supalux facing boards by at least 50mm.
- It must be ensured that the screw fixings for the boards do not restrict the expansion allowance.
- The stone wool extends to the top of the partition cavity.

Stone wool

When the web dimension of the studs is increased, thus increasing the depth of the cavity in the partition, then the thickness of the stone wool is increased to fill the cavity. Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions.

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ETEX BUILDING PERFORMANCE LTD

Supalux Steel Stud Partition Assemblies – Integrity and Insulation

120 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|-------------|---|
| Steel frame | <ul style="list-style-type: none">▪ Ceiling and floor channels, 75mm web x 40mm flanges x 0.6mm thick.▪ C-studs, 73.8mm web x 47/49mm flanges x 0.6mm thick, at maximum 610mm centres.▪ Perimeter channels are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 500mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Supalux board of nominal thickness 15mm on each face of steel framework.▪ Boards are screwed to the studs and perimeter channels with M4 x 32mm-long steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.▪ Horizontal board joints are backed by a Supalux cover strip, 100mm wide x 9mm thick, fastened using M4 x 25mm-long self-tapping screws at nominal 300mm centres on both sides of the joint.▪ Boards are butt jointed or flush jointed. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between and filling the studs in the cavity of the partition. The minimum specification for the stone wool is 70mm thick x 128kg/m³ density. The wool is fitted in two layers with the joints between layers staggered by minimum 150mm.▪ Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The length of the partition system is unrestricted.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

For partitions with a height greater than 3m, up to 9m, the specification of the partition is changed as follows:

Partition height

Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum height (m) with studs centres of	
					610(mm)	407(mm)
CS90/B	90	36/34	6	0.7	4000	4000
CS90/W	90	36/34	6	0.9	4000	4000
CS90/Y	90	36/33	6	1.2	4000	4300
CS146/RX	146	36/34	6	0.52	4000	4000
CS146/B	146	36/34	6	0.7	4000	4000
CS146/Y	146	36/33	6	1.2	4650	5550
Boxed sections						
CS146Y/UXT72B	146	36/33	6/0	1.2/0.7	6350	7200
CS146Y/UDT92B	146	36/33	6/0	1.2/0.7	6400	7350
CS146Y/UXT92W	146	36/33	6/0	1.2/0.9	6550	7450
CS70Y/CS70Y	70	36/33	6	1.2/1.2	4000	4200
Cold rolled I sections						
IS70B	70	39	-	0.7	4000	4000
IS90B	90	39	-	0.7	4000	4000
Alternative sections						
	73.8	47/49	6.0	0.6	4000	4000
	73.8	47/49	6.0	0.7	4000	4000
	73.8	47/49	6.0	1.0	4000	4000
	98.8	47/49	6.0	0.6	4000	4000
	98.8	47/49	6.0	0.7	4000	4000
	98.8	47/49	6.0	1.0	4000	4150
	123.8	47/49	6.0	0.6	4000	4000
	148.8	47/49	6.0	0.6	4000	4000

Top and bottom channels

The steel top and bottom channel sections have approximately the same web dimension as the studs so that the studs are a sliding fit in the channels. The minimum size of the top and bottom channel sections is 75mm web x 40mm

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Top channel and expansion allowance

flanges x 0.6mm thick. The channels have at least the same thickness as the studs. For heights above 6m the bottom channel has a minimum flange dimension of 50mm.

The minimum depth of the top steel channel and the minimum expansion allowance for the studs at different partition heights are as follows:

Height - m	Minimum depth of top channel - mm	Minimum expansion allowance - mm
3	75	24
4	75	32
5	75	40
6	75	42
9	147	60

The allowance for expansion may be provided at stud joints and/or by the studs sliding up into the top channel. Any joint in the stud that incorporates an expansion allowance must not decrease the strength of the stud.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

- Deflection head** For heights up to 5m the design of the deflection head allows the studs to slide into the top channel, either with the space (15mm maximum) above the Supalux facing boards filled with Promaseal mastic or the top channel mounted on minimum 2 x 9mm layers of Supalux board (Figure 1). For heights above 5m the designs are shown in Figures 2 & 3.
- Figure 2 – the Supalux facing boards are stopped short of the top channel and Supalux cover fillets (1 x 15mm) and cover panels (minimum 1 x 15mm) screwed to the top channel. The cover panels overlap the facing boards by at least 50mm.
 - Figure 3 - An additional steel channel or two steel angles are fastened to the concrete soffit. Supalux cover panels (minimum 1 x 15mm) are screwed to these additional steel sections so that they overlap the Supalux facing boards by at least 50mm.
 - It must be ensured that the screw fixings for the boards do not restrict the expansion allowance.
 - The stone wool extends to the top of the partition cavity.
- Stone wool** When the web dimension of the studs is increased, thus increasing the depth of the cavity in the partition, then the thickness of the stone wool is increased to fill the cavity. Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

240 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|-------------|--|
| Steel frame | <ul style="list-style-type: none">▪ Ceiling and floor channels, 149mm web x 40mm flanges x 1mm thick.▪ C-studs, 148mm web x 49/52mm flanges x 0.6mm thick, at maximum 610mm centres.▪ Perimeter channels are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Two layers of Supalux board of nominal thickness 12mm on each face of steel framework.▪ Boards are screwed to the studs and perimeter channels with M4 x 38mm-long steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between layers.▪ Horizontal board joints are staggered between layers by at least 600mm. The outer layer board joints are fastened to the inner layer of Supalux using M4 x 25mm-long self-tapping screws at nominal 300mm centres on both sides of each joint.▪ Inner layer boards are butt jointed. Outer layer boards are butt jointed or flush jointed. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between and filling the studs in the cavity of the partition. The minimum specification for the stone wool is 100mm thick x 100kg/m³ density. The wool is fitted in two layers with the joints between layers staggered by minimum 150mm.▪ Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The length of the partition system is unrestricted.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

For partitions with a height greater than 3m, up to 9m, the specification of the partition is changed as follows:

Partition height

Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum Height (mm)	
					610(mm)	407(mm)
CS146/B	146	36/34	6	0.7	4000	4000
CS146/Y	146	36/33	6	1.2	4000	4850
Boxed sections						
CS146Y/UXT72B	146	36/33	6/0	1.2/0.7	5500	6450
CS146Y/UDT92B	146	36/33	6/0	1.2/0.7	5600	6500
CS146Y/UXT92W	146	36/33	6/0	1.2/0.9	5700	6600
Alternative sections						
	148.8	47/49	6.0	0.6	4000	4000
	148.8	47/49	6.0	1.5	5000	6700
	148.8	47/49	6.0	2	6100	8100
	147	49	6.0	1.5	5000	6900
	147	49	6.0	2	6150	8100
	197	49	6.0	1.5	5200	7200
	197	49	6.0	2	6700	9000

Top and bottom channels

The steel top and bottom channel sections have approximately the same web dimension as the studs so that the studs are a sliding fit in the channels. The minimum size of the top and bottom channel sections is 100mm web x 40mm flanges x 1.5mm thick. The channels have at least the same thickness as the studs. For heights above 6m the bottom channel has a minimum flange dimension of 50mm.

Top channel and expansion allowance

The minimum depth of the top steel channel and the minimum expansion allowance for the studs at different partition heights are as follows:

Height - m	Minimum depth of top channel - mm	Minimum expansion allowance - mm
3	149	24
4	149	32
5	149	40
6	149	42
8	149	50
9	197	52

The allowance for expansion may be provided at stud joints and/or by the studs sliding up into the top channel. Any joint in the stud that incorporates an expansion allowance must not decrease the strength of the stud.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

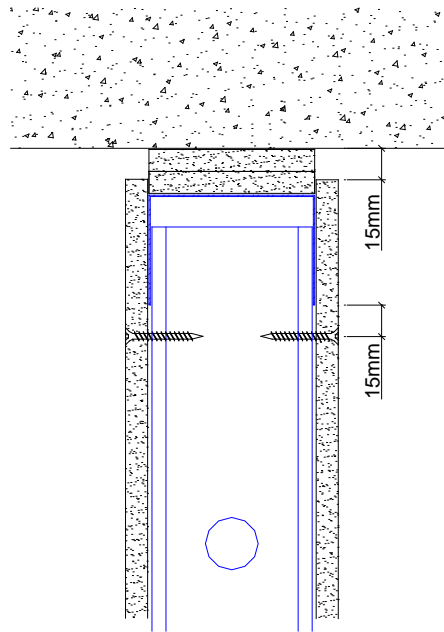
- Deflection head** For heights up to 5m the design of the deflection head allows the studs to slide into the top channel, either with the space (15mm maximum) above the Supalux facing boards filled with Promaseal mastic or the top channel mounted on minimum 2 x 9mm layers of Supalux board (Figure 1). For heights above 5m the designs are shown in Figures 2 & 3.
- Figure 2 – the Supalux facing boards are stopped short of the top channel and Supalux cover fillets (2 x 12mm) and cover panels (minimum 2 x 12mm) screwed to the top channel. The cover panels overlap the facing boards by at least 50mm.
 - Figure 3 - An additional steel channel or two steel angles are fastened to the concrete soffit. Supalux cover panels (minimum 2 x 12mm) are screwed to these additional steel sections so that they overlap the Supalux facing boards by at least 50mm.
 - It must be ensured that the screw fixings for the boards do not restrict the expansion allowance.
 - The stone wool extends to the top of the partition cavity.
- Stone wool** When the web dimension of the studs is increased, thus increasing the depth of the cavity in the partition, then the thickness of the stone wool is increased to fill the cavity. Alternative thicknesses of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions.

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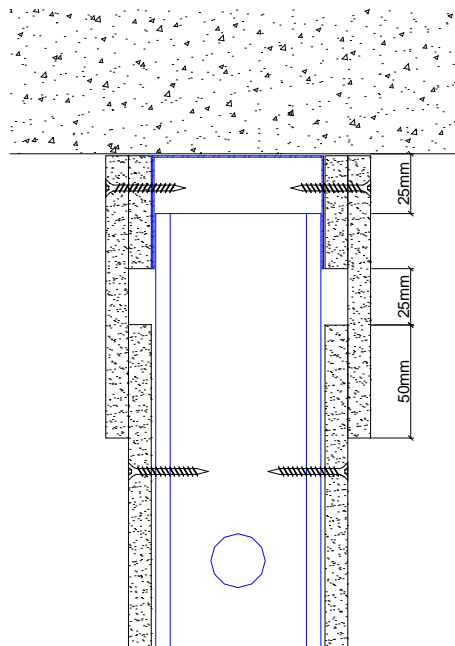
Supalux Steel Stud Partition Assemblies – Integrity and Insulation

Figure 1
Deflection
head –
15mm



Stone wool not shown for clarity.

Figure 2
Deflection
head –
25mm

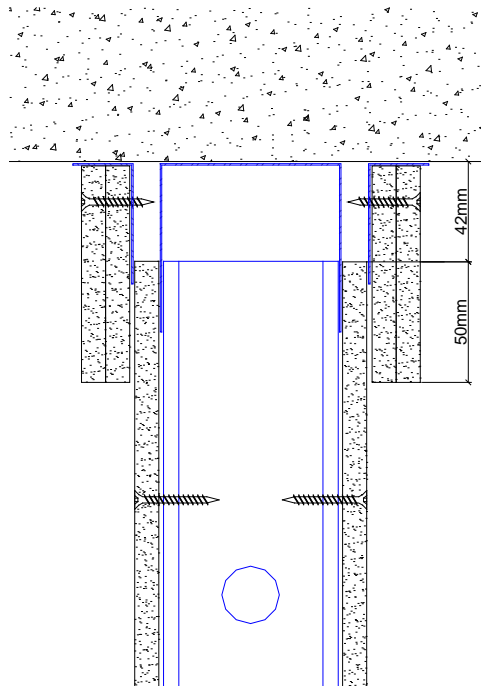


Stone wool not shown for clarity.

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Supalux Steel Stud Partition Assemblies – Integrity and Insulation

Figure 3
Deflection
head –
42mm



Stone wool not shown for clarity.

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ETEX BUILDING PERFORMANCE LTD

Supalux Steel Stud Partition Assemblies – Integrity only

This approval relates to Supalux steel stud partition assemblies in terms of the integrity performance criteria of BS 476: Part 22: 1987. Fire exposure from board side only.

Up to 120 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|-------------|--|
| Steel frame | <ul style="list-style-type: none">▪ Ceiling and floor channels, 50mm web x 25mm flanges x 0.5mm thick.▪ C-studs, 48mm web x 32/34mm flanges x 0.5mm thick, at maximum 610mm centres.▪ Perimeter channels are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 600mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Supalux fillets, 75mm wide x 9mm thick, covering the studs and channels on the fire face of the steel framework. Fillets fastened with M4 x 25mm-long steel self-tapping screws at any convenient centres.▪ Supalux board of nominal thickness 9mm on the fire face of steel framework.▪ Boards are screwed to the studs and perimeter channels, through the fillets, with M4 x 25mm-long steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs and are staggered between faces.▪ Horizontal board joints are backed by a Supalux cover strip, 75mm wide x 9mm thick, fastened using M4 x 25mm-long self-tapping screws at nominal 300mm centres on both sides of the joint.▪ Boards are butt jointed or flush jointed. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between the studs in the cavity of the partition. The specification for the stone wool is 45kg/m³ density. |

The length of the partition system is unrestricted.

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Supalux Steel Stud Partition Assemblies – Integrity only

For partitions with a height greater than 3m, up to 10m, the specification of the partition is changed as follows:

Partition
height

Stud Size	Web (mm)	Flange (mm)	Lip (mm)	Thickness (mm)	Maximum Height (mm)	
					610(mm)	407(mm)
CS50/RX	50	36/34	6	0.52	4000	4000
CS60/RX	60	36/34	6	0.52	4000	4000
CS70/RX	70	36/34	6	0.52	4000	4000
CS70/B	70	36/34	6	0.7	4000	4250
CS70/Y	70	36/33	6	1.2	4950	5800
CS90/RX	90	36/34	6	0.52	4000	4000
CS90/B	90	36/34	6	0.7	4200	4900
CS90/W	90	36/34	6	0.9	4900	5800
CS90/Y	90	36/33	6	1.2	5800	6700
CS146/RX	146	36/34	6	0.52	4150	4800
CS146/B	146	36/34	6	0.7	5350	6300
CS146/Y	146	36/33	6	1.2	7600	8800
Boxed sections						
CS146Y/UXT72B	146	36/33	6/0	1.2/0.7	9800	10000
CS146Y/UDT92B	146	36/33	6/0	1.2/0.7	9800	10000
CS146Y/UXT92W	146	36/33	6/0	1.2/0.9	9850	10000
CS70Y/CS70Y	70	36/33	6	1.2/1.2	5800	6600
CS50RX/CS50RX	50	36/34	6	0.52/0.52	4000	4000
Cold rolled I sections						
IS70B	70	39	-	0.7	4000	4500
IS90B	90	39	-	0.7	4500	5250
Alternative sections						
	48.8	47/49	6.0	0.6	4000	4000
	48.8	47/49	6.0	0.7	4000	4000
	48.8	47/49	6.0	1.0	4000	4300
	58.8	47/49	6.0	0.6	4000	4000

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	73.8	47/49	6.0	0.6	4000	4000
	73.8	47/49	6.0	0.7	4000	4400
	73.8	47/49	6.0	1.0	4800	5550
	98.8	47/49	6.0	0.6	4000	4650
	98.8	47/49	6.0	0.7	4450	5200
	98.8	47/49	6.0	1.0	5700	6600
	123.8	47/49	6.0	0.6	4400	5250
	148.8	47/49	6.0	0.6	4800	5750

Top and bottom channels

The steel top and bottom channel sections must have approximately the same web dimension as the studs so that the studs are a sliding fit in the channels. The minimum size of the top and bottom channel sections is 50mm web x 25mm flanges x 0.5mm thick. The channels must have at least the same thickness as the studs. For heights above 4.5m the bottom channel must have a minimum flange dimension of 40mm. For heights above 6m the bottom channel must have a minimum flange dimension of 50mm.



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Supalux Steel Stud Partition Assemblies – Integrity only

Top channel and expansion allowance

The minimum depth of the top steel channel and the minimum expansion allowance for the studs at different partition heights are as follows:

Height - m	Minimum depth of top channel - mm	Minimum expansion allowance - mm
3	52	20
4	52	24
5	72	28
6	72	35
8	72	45
10	146	55

The allowance for expansion may be provided at stud joints and/or by the studs sliding up into the top channel. Any joint in the stud that incorporates an expansion allowance must not decrease the strength of the stud.

Deflection head

For heights up to 5m the design of the deflection head allows the studs to slide into the top channel, either with the space (10mm maximum) above the Supalux facing boards filled with Promaseal mastic or the top channel mounted on minimum 2 x 9mm layers of Supalux board (Figure 1 – board on fire face only). For heights above 5m the designs are shown in Figures 2 & 3.

- Figure 2 (board on fire face only) – the Supalux facing boards and fillets are stopped short of the top channel and Supalux cover fillets (2 x 9mm) and cover panels (minimum 1 x 9mm) screwed to the top channel. The cover panels overlap the facing boards by at least 50mm.
- Figure 3 (board on fire face only) - An additional steel channel or steel angle is fastened to the concrete soffit. Supalux cover panels (minimum 2 x 9mm) are screwed to these additional steel sections so that they overlap the Supalux facing boards by at least 50mm.
- It must be ensured that the screw fixings for the boards do not restrict the expansion allowance.

Stone wool

- Stone wool is fitted tightly between the studs in the cavity of the partition. The specification for the stone wool is 45kg/m³ density.

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux Solid Partition Assemblies – Integrity and Insulation

This approval relates to Supalux solid partition assemblies in terms of the integrity and insulation performance criteria of BS 476: Part 22: 1987.

30 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|------------|--|
| Steel | ▪ Perimeter angles, 30mm x 30mm x 0.6mm thick. |
| angles | ▪ Perimeter angles are bedded on intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 500mm nominal centres. |
| Boards | ▪ Supalux boards 15mm + 15mm nominal thickness. The layers either sandwich the protruding leg of the perimeter angles or are fastened to one face.
▪ The two layers of Supalux board are independently fixed to the perimeter angles with M4 steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners.
▪ Both vertical and horizontal board joints are staggered by at least 600mm between layers. The edges of the Supalux boards are fastened to the opposite layer with M4 x 30mm-long self-tapping screws at nominal 300mm centres on both sides of each joint.
▪ Boards are butt jointed. |
| Stone wool | ▪ None. |

The maximum height of the partition system is 5.0m. The length of the partition system is unrestricted.

60 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|--------|--|
| Steel | ▪ Perimeter angles, 30mm x 30mm x 0.6mm thick. |
| angles | ▪ Perimeter angles are bedded on intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 500mm nominal centres. |
| Boards | ▪ Supalux boards 20mm + 15mm nominal thickness. The layers either sandwich the protruding leg of the perimeter angles or are fastened to one face.
▪ The two layers of Supalux board are independently fixed to the perimeter angles with M4 steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. |

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Supalux Solid Partition Assemblies – Integrity and Insulation

- Both vertical and horizontal board joints are staggered by at least 600mm between layers. The edges of the Supalux boards are fastened to the opposite layer with M4 x 30mm-long self-tapping screws at nominal 300mm centres on both sides of each joint.
- Boards are butt jointed.
- Stone wool
 - None.

The maximum height of the partition system is 5.0m. The length of the partition system is unrestricted.

90 minutes

The minimum specification for the Supalux partition system is as follows:

- Steel
 - Perimeter angles, 30mm x 30mm x 0.8mm thick.
- angles
 - Perimeter angles are bedded on intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 500mm nominal centres.
- Boards
 - Supalux boards 25mm + 20mm nominal thickness. The layers either sandwich the protruding leg of the perimeter angles or are fastened to one face.
 - The two layers of Supalux board are independently fixed to the perimeter angles with M4 steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners.
 - Both vertical and horizontal board joints are staggered by at least 600mm between layers. The edges of the Supalux boards are fastened to the opposite layer with M4 x 35mm-long self-tapping screws at nominal 300mm centres on both sides of each joint.
 - Boards are butt jointed.
- Stone wool
 - None.

The maximum height of the partition system is 5.0m. The length of the partition system is unrestricted.

120 minutes

The minimum specification for the Supalux partition system is as follows:

- Steel
 - Perimeter angles, 30mm x 30mm x 0.8mm thick.
- angles
 - Perimeter angles are bedded on intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 500mm nominal centres.

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Supalux Solid Partition Assemblies – Integrity and Insulation

- | | |
|------------------------|--|
| Boards,
option
A | <ul style="list-style-type: none">▪ Supalux boards 25mm + 25mm nominal thickness. The layers either sandwich the protruding leg of the perimeter angles or are fastened to one face.▪ The two layers of Supalux board are independently fixed to the perimeter angles with M4 steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners.▪ Both vertical and horizontal board joints are staggered by at least 600mm between layers. The edges of the Supalux boards are fastened to the opposite layer with M4 x 45mm-long self-tapping screws at nominal 300mm centres on both sides of each joint.▪ Boards are butt jointed. |
| Boards,
option
B | <ul style="list-style-type: none">▪ Supalux boards 20mm + 15mm + 15mm nominal thickness. The protruding leg of the perimeter angles is sandwiched between the 20mm layer and the first 15mm layer.▪ The three layers of Supalux board are independently fixed to the perimeter angles with M4 steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners.▪ Both vertical and horizontal board joints are staggered by at least 600mm between layers. The 20mm layer is installed first. When the first 15mm layer is installed the edges of the Supalux boards are fastened to the opposite layer with M4 x 30mm-long self-tapping screws at nominal 300mm centres on both sides of each joint. The second 15mm layer is fastened to the other two layers, around the perimeter and down the centre of each panel, with M4 x 45mm-long self-tapping screws at nominal 300mm centres.▪ Boards are butt jointed. |
| Stone
wool | <ul style="list-style-type: none">▪ None. |

The maximum height of the partition system is 5.0m. The length of the partition system is unrestricted.

240 minutes

The minimum specification for the Supalux partition system is as follows:

- | | |
|-----------------|---|
| Steel
angles | <ul style="list-style-type: none">▪ Perimeter angles, 50mm x 32mm x 1.2mm thick.▪ Perimeter angles are bedded on intumescent sealant and fastened to the surrounding construction, through the 32mm leg, with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 400mm nominal centres. |
| Boards | <ul style="list-style-type: none">▪ Four layers of Supalux board each 25mm nominal thickness. The layers either sandwich the protruding leg of the perimeter angles or are fastened to one face.▪ The first two layers of Supalux board are independently fixed to the perimeter angles with M4 steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. |

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux Solid Partition Assemblies – Integrity and Insulation

- Both vertical and horizontal board joints are staggered by at least 600mm between layers. The edges of the Supalux boards are fastened to the opposite layer with 13mm wide x 45mm-long steel staples at nominal 150mm centres on both sides of each joint.
 - The third and fourth layers are fastened to the adjacent layer, around the perimeter and down the centre of each panel, with 13mm wide x 45mm-long steel staples at nominal 150mm centres.
 - Boards are butt jointed.
 - None.
- Stone wool

The maximum height of the partition system is 5.0m. The length of the partition system is unrestricted.

240 minutes partially insulated

The minimum specification for the Supalux partition system is as follows:

- Steel angles
- Perimeter angles, 50mm x 50mm x 1.0mm thick.
 - Perimeter angles are bedded on intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit the type of surrounding construction) at 500mm nominal centres.
- Boards
- Supalux boards 25mm + 20mm nominal thickness for 90 minutes insulation and 25mm + 25mm nominal thickness for 120 minutes insulation. The layers either sandwich the protruding leg of the perimeter angles or are fastened to one face.
 - The two layers of Supalux board are independently fixed to the perimeter angles with M4 steel self-tapping screws at 300mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners.
 - Both vertical and horizontal board joints are staggered by at least 600mm between layers. The edges of the Supalux boards are fastened to the opposite layer with M4 x 35mm-long (90 minutes) or 45mm-long (120 minutes) self-tapping screws at nominal 300mm centres on both sides of each joint.
 - Boards are butt jointed.
 - None.
- Stone wool

The maximum height of the partition system is 5.0m. The length of the partition system is unrestricted.

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux Shaft Wall Partition Assemblies – Integrity and Insulation

This approval relates to Supalux steel stud shaft wall partition assemblies in terms of the integrity and insulation performance criteria of BS 476: Part 22: 1987.

60 or 120 minutes

The minimum specification for the Supalux partition system is as follows:

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|----------------------|--|
| Steel frame | <ul style="list-style-type: none">▪ Bottom channel, 88mm web x 40mm flanges x 1.2mm thick.▪ Head channel, 88mm web x 70mm flanges x 1.2mm thick.▪ Side perimeter channels, 85mm web x 40mm flanges x 1.2mm thick.▪ I-studs formed from two channels, each 85mm web x 40mm flanges x 1.2mm thick, at maximum 610mm centres. Channels are fastened together with M5 steel self-tapping screws at 300mm nominal centres.▪ Perimeter channels are bedded on stone wool or intumescent sealant and fastened to the surrounding construction with M6 all-steel anchor bolts (or equivalent to suit type of surrounding construction) at 600mm nominal centres. |
| Boards on shaft face | <ul style="list-style-type: none">▪ Supalux board, of nominal thickness 9mm, tightly fitted between studs and held in place with steel securing channels, 72mm web x 25mm flanges x 0.7mm thick, fixed to the stud web with M5 self-tapping screws at nominal 300mm centres.▪ Horizontal board joints are backed by a Supalux cover strip, 100mm wide x 9mm thick, fastened using M4 x 16mm-long self-tapping screws at nominal 200mm centres on both sides of the joint. |
| Boards on room face | <ul style="list-style-type: none">▪ A Supalux fillet, 100mm wide x 20mm thick (60 minutes) or 25mm thick (120 minutes), covering the studs and channels of the steel framework. Fillets fastened with M4 steel self-tapping screws at any convenient centres.▪ Supalux board, 9mm nominal thickness, is screwed to the studs and perimeter channels, through the fillets, with M4 x 38mm-long steel self-tapping screws at 200mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the studs.▪ Horizontal board joints are backed by a Supalux cover strip, 100mm wide x 9mm thick, fastened using M4 x 16mm-long self-tapping screws at nominal 200mm centres on both sides of the joint. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is fitted tightly between and filling the studs in the cavity of the partition. The minimum specification for the stone wool is 75mm thick x 45kg/m³ density (60 minutes) or 75mm thick x 100kg/m³ density (120 minutes).▪ Alternative thicknesses and densities of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The maximum height of the partition system is 7.0m (60 minutes) or 6.4m (120 minutes). The length of the partition system is unrestricted.

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux External Wall Assemblies within 1m from the Relevant Boundary – Integrity and Insulation

This approval relates to Supalux external wall assemblies within 1m from the relevant boundary in terms of the integrity and insulation performance criteria of BS 476: Part 22: 1987 with fire attack from either face.

30, 60 or 120 minutes

The minimum specification for the Supalux external wall system is as follows:

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| Support frame | <ul style="list-style-type: none">▪ Horizontal steel sheeting rails at 2.2m maximum vertical centres.▪ Sheeting rails supported by structural steel columns that are clad with a proprietary fire protection system to the required fire resistance rating.▪ Supalux board cover fillets, 9mm thick x depth of sheeting rail, are fitted to both faces of the sheeting rails, fixed with M4 steel self-tapping screws at nominal 300mm centres. |
| Grid | <ul style="list-style-type: none">▪ Flamebraker T-section system or equivalent. The main T's and cross T's have a minimum depth and table width of 35mm x 35mm and minimum thickness of 0.55mm.▪ Main T's are positioned vertically at 603mm nominal centres on both sides of the sheeting rails and suspended from the sheeting rails with minimum 18mm wide x 0.8mm thick galvanised steel straps that pass over the sheeting rails.▪ The webs of the main T's on the external face are cut away around the sheeting rails.▪ Perimeter steel angles, minimum 25mm x 25mm x 0.6mm thick, are fastened to the surrounding construction on the internal face with minimum M5 steel screws (into non-combustible plugs for masonry/concrete constructions) at nominal 500mm centres. |
| Boards on external face | <ul style="list-style-type: none">▪ Supalux board, of nominal thickness 9mm, is screwed to the main T's with M4 steel self-tapping screws at 200mm nominal centres. All screws are positioned nominal 12mm from board edges and 40mm from board corners. Vertical board joints coincide with the main T's.▪ Horizontal board joints are backed by Flamebraker cross T. The board edges are fastened to the cross T's using M4 steel self-tapping screws at nominal 200mm centres on both sides of the joint.▪ External cladding, a single skin of steel, aluminium or fibre cement sheeting, is fastened to the sheeting rails, through the Supalux boards, with steel fixings. The profiled cladding must have a Class 0 rating in terms of the national building regulations. |
| Boards on internal face | <ul style="list-style-type: none">▪ Supalux board, 600mm wide x 9mm thick, is fitted into the main T's and retained by spring steel wedges fitted into pre-punched holes in the stems of the main T's. The wedges are fitted at 150mm nominal centres.▪ Flamebraker cross T's are fitted at horizontal board joints, with spring steel wedges retaining the Supalux boards. |

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ETEX BUILDING PERFORMANCE LTD

Supalux External Wall Assemblies within 1m from the Relevant Boundary – Integrity and Insulation

- Stone wool
- For a fire resistance rating of 60 minutes, stone wool, minimum 80mm thick x 23kg/m³ density, is suspended in the cavity of the external wall by fixing to the underside of the sheeting rails, extending down past lower rails behind the internal lining. The stone wool is fixed to the sheeting rails using galvanised steel angle, minimum 50mm x 25mm x 0.5mm thick, fastened with M4 steel self-tapping screws at 300mm maximum centres.
 - For a fire resistance rating of 120 minutes, wired stone wool, minimum 50mm thick x 128kg/m³ density or 80mm thick x 90kg/m³ density, is suspended in the cavity of the external wall by fixing to the underside of the sheeting rails. The stone wool is fixed to the sheeting rails using galvanised steel angle, minimum 50mm x 25mm x 0.5mm thick, fastened with M4 steel self-tapping screws at 300mm maximum centres.
 - Alternative thicknesses and densities of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions.

The maximum length of the external wall systems is unrestricted.

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux External Wall Assemblies further than 1m from the Relevant Boundary – Integrity and Partial Insulation

This approval relates to Supalux external wall assemblies further than 1m from the relevant boundary in terms of the integrity and insulation performance criteria of BS 476: Part 22: 1987 with fire exposure from the internal face only.

120 or 240 minutes integrity and 15 minutes insulation

The minimum specification for the Supalux external wall system is as follows:

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| Support frame | <ul style="list-style-type: none">▪ Horizontal steel sheeting rails at 2.2m maximum vertical centres.▪ Sheeting rails supported by structural steel columns that are clad with a proprietary fire protection system to the required fire resistance rating. |
| Exposed grid | <ul style="list-style-type: none">▪ Flamebraker T-section system or equivalent. The main T's and cross T's have a minimum depth and table width of 35mm x 35mm and minimum thickness of 0.55mm.▪ Main T's are positioned vertically at 603mm nominal centres on the internal face of the sheeting rails and suspended from the sheeting rails with minimum 18mm wide x 0.8mm thick galvanised steel straps that pass over the sheeting rails and are fastened to them with minimum M4 steel rivets or self-tapping screws.▪ Perimeter steel angles, minimum 25mm x 25mm x 0.6mm thick, are fastened to the surrounding construction on the internal face with minimum M5 steel screws (into non-combustible plugs for masonry/concrete constructions) at nominal 500mm centres. |
| Boards on exposed grid | <ul style="list-style-type: none">▪ Supalux board, 600mm wide x 6mm thick (up to 120 minutes) or 9mm thick (240 minutes), is fitted into the main T's and retained by spring steel wedges fitted into pre-punched holes in the stems of the main T's. The wedges are fitted at 150mm nominal centres.▪ Flamebraker cross T's are fitted at horizontal board joints, with spring steel wedges retaining the Supalux boards. |
| Concealed grid | <ul style="list-style-type: none">▪ Galvanised steel top hat sections, minimum 26mm deep x 50mm web x 15mm lips x 0.6mm thick.▪ Top hat sections are positioned vertically at 600mm nominal centres on the internal face of the sheeting rails and fastened to the rails with minimum 2 x M4 steel self-tapping screws, through the lips of the section, at each junction.▪ Perimeter steel angles, minimum 25mm x 25mm x 0.6mm thick, are fastened to the surrounding construction on the internal face with minimum M5 steel screws (into non-combustible plugs for masonry/concrete constructions) at nominal 500mm centres. |
| Boards on concealed grid | <ul style="list-style-type: none">▪ Supalux board, of nominal thickness 6mm (up to 120 minutes) or 9mm (240 minutes), is screwed to the top hat sections with M4 steel self-tapping screws at 300mm nominal centres. Screws are positioned nominal 12mm from board edges and 40mm from board corners and down centre of boards. Vertical board joints coincide with the top hat sections. |

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux External Wall Assemblies within 1m from the Relevant Boundary – Integrity and Insulation

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|-------------------|--|
| External cladding | <ul style="list-style-type: none">▪ Horizontal board joints are backed by a Supalux cover strip, 100mm wide x same thickness as main boards, fastened with M4 steel self-tapping screws at nominal 300mm centres on both sides of the joint.▪ External cladding, a single skin of steel or fibre cement sheeting, is fastened to the sheeting rails with steel fixings. The profiled cladding must have a Class 0 rating in terms of the national building regulations. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is not required if 9mm-thick Supalux board is used or if the external cladding is a fibre cement product.▪ For other options stone wool, minimum 60mm thick x 23kg/m³ density, is suspended in the cavity of the external wall by fixing to the underside of the sheeting rails. The stone wool is fixed to the sheeting rails using galvanised steel angle, minimum 50mm x 25mm x 0.5mm thick, fastened with M4 steel self-tapping screws at 300mm maximum centres.▪ Alternative thicknesses and densities of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The maximum length of the external wall systems is unrestricted. The system can be used along the height of the External Wall Assemblies

240 minutes integrity and 30 minutes insulation

The minimum specification for the Supalux external wall system is as follows:

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|------------------------|---|
| Support frame | <ul style="list-style-type: none">▪ Horizontal steel sheeting rails at 2.2m maximum vertical centres.▪ Sheeting rails supported by structural steel columns that are clad with a proprietary fire protection system to the required fire resistance rating. |
| Exposed grid | <ul style="list-style-type: none">▪ Flamebraker T-section system or equivalent. The main T's and cross T's have a minimum depth and table width of 35mm x 35mm and minimum thickness of 0.55mm.▪ Main T's are positioned vertically at 603mm nominal centres on the internal face of the sheeting rails and suspended from the sheeting rails with minimum 18mm wide x 0.8mm thick galvanised steel straps that pass over the sheeting rails and are fastened to them with minimum M4 steel rivets or self-tapping screws.▪ Perimeter steel angles, minimum 25mm x 25mm x 0.6mm thick, are fastened to the surrounding construction on the internal face with minimum M5 steel screws (into non-combustible plugs for masonry/concrete constructions) at nominal 500mm centres. |
| Boards on exposed grid | <ul style="list-style-type: none">▪ Supalux board, 600mm wide x 9mm thick, is fitted into the main T's and retained by spring steel wedges fitted into pre-punched holes in the stems of the main T's. The wedges are fitted at 150mm nominal centres.▪ Flamebraker cross T's are fitted at horizontal board joints, with spring steel wedges retaining the Supalux boards. |

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Supalux External Wall Assemblies within 1m from the Relevant Boundary – Integrity and Insulation

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|--------------------------|---|
| Concealed grid | <ul style="list-style-type: none">▪ Galvanised steel top hat sections, minimum 26mm deep x 50mm web x 15mm lips x 0.6mm thick.▪ Top hat sections are positioned vertically at 600mm nominal centres on the internal face of the sheeting rails and fastened to the rails with minimum 2 x M4 steel self-tapping screws, through the lips of the section, at each junction.▪ Perimeter steel angles, minimum 25mm x 25mm x 0.6mm thick, are fastened to the surrounding construction on the internal face with minimum M5 steel screws (into non-combustible plugs for masonry/concrete constructions) at nominal 500mm centres. |
| Boards on concealed grid | <ul style="list-style-type: none">▪ Supalux board, of nominal thickness 9mm, is screwed to the top hat sections with M4 steel self-tapping screws at 300mm nominal centres. Screws are positioned nominal 12mm from board edges and 40mm from board corners and down centre of boards. Vertical board joints coincide with the top hat sections.▪ Horizontal board joints are backed by a Supalux cover strip, 100mm wide x same thickness as main boards, fastened with M4 steel self-tapping screws at nominal 300mm centres on both sides of the joint. |
| External cladding | <ul style="list-style-type: none">▪ External cladding, a single skin of steel or fibre cement sheeting, is fastened to the sheeting rails with steel fixings. The profiled cladding must have a Class 0 rating in terms of the national building regulations. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is not required if the external cladding is a fibre cement product, minimum 6mm thick.▪ For other options stone wool, minimum 60mm thick x 23kg/m³ density, is suspended in the cavity of the external wall by fixing to the underside of the sheeting rails. The stone wool is fixed to the sheeting rails using galvanised steel angle, minimum 50mm x 25mm x 0.5mm thick, fastened with M4 steel self-tapping screws at 300mm maximum centres.▪ Alternative thicknesses and densities of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The maximum length of the external wall systems is unrestricted. The system can be used along the height of the External Wall Assemblies.

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Conversion of Supalux External Wall Assemblies to Internal Partition Assemblies – Integrity and Insulation

This approval relates to Supalux internal partition assemblies, converted from external wall assemblies, in terms of the integrity and insulation performance criteria of BS 476: Part 22: 1987 with fire attack from either face.

30, 60 or 120 minutes integrity and insulation

The minimum specification for the Supalux internal partition system is as follows:

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|------------------------|---|
| Support frame | <ul style="list-style-type: none">▪ Horizontal steel sheeting rails at 2.2m maximum vertical centres.▪ Sheeting rails supported by structural steel columns that are clad with a proprietary fire protection system to the required fire resistance rating.▪ Supalux board cover fillets, 9mm thick x depth of sheeting rail, are fitted to both faces of the sheeting rails, fixed with M4 steel self-tapping screws at nominal 300mm centres. |
| Exposed grid | <ul style="list-style-type: none">▪ Flamebraker T-section system or equivalent. The main T's and cross T's have a minimum depth and table width of 35mm x 35mm and minimum thickness of 0.55mm.▪ Main T's are positioned vertically at 603mm nominal centres on both sides of the sheeting rails and suspended from the sheeting rails with minimum 18mm wide x 0.8mm thick galvanised steel straps that pass over the sheeting rails.▪ Perimeter steel angles, minimum 25mm x 25mm x 0.6mm thick, are fastened to the surrounding construction on the internal face with minimum M5 steel screws (into non-combustible plugs for masonry/concrete constructions) at nominal 500mm centres. |
| Boards on exposed grid | <ul style="list-style-type: none">▪ Supalux board, 600mm wide x 9mm thick, is fitted into the main T's and retained by spring steel wedges fitted into pre-punched holes in the stems of the main T's. The wedges are fitted at 150mm nominal centres.▪ Flamebraker cross T's are fitted at horizontal board joints, with spring steel wedges retaining the Supalux boards. |
| Concealed grid | <ul style="list-style-type: none">▪ Galvanised steel top hat sections, minimum 26mm deep x 50mm web x 15mm lips x 0.6mm thick.▪ Top hat sections are positioned vertically at 600mm nominal centres on both sides of the sheeting rails and fastened to the rails, through the Supalux fillets, with minimum 2 x M4 steel self-tapping screws, through the lips of the section, at each junction.▪ Perimeter steel angles, minimum 25mm x 25mm x 0.6mm thick, are fastened to the surrounding construction on the internal face with minimum M5 steel screws (into non-combustible plugs for masonry/concrete constructions) at nominal 500mm centres. |

CERTIFICATE No CF 420A

ETEX BUILDING PERFORMANCE LTD

Conversion of Supalux External Wall Assemblies to Internal Partition Assemblies – Integrity and Insulation

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|--------------------------|---|
| Boards on concealed grid | <ul style="list-style-type: none">▪ Supalux board, of nominal thickness 9mm, is screwed to the top hat sections with M4 steel self-tapping screws at 300mm nominal centres. Screws are positioned nominal 12mm from board edges and 40mm from board corners and down centre of boards. Vertical board joints coincide with the top hat sections.▪ Horizontal board joints are backed by a Supalux cover strip, 100mm wide x 9mm thick, fastened with M4 steel self-tapping screws at nominal 300mm centres on both sides of the joint. |
| Stone wool | <ul style="list-style-type: none">▪ Stone wool is not required for a 30 minute rating.▪ For other options stone wool, minimum 100mm thick x 23kg/m³ density or 80mm thick x 30kg/m³ density (60 minutes) or minimum 80mm thick x 100kg/m³ density (120 minutes), is suspended in the cavity of the external wall by fixing to the underside of the sheeting rails. The stone wool is fixed to the sheeting rails using galvanised steel angle, minimum 50mm x 25mm x 0.5mm thick, fastened with M4 steel self-tapping screws at 300mm maximum centres.▪ Alternative thicknesses and densities of stone wool insulation may be fitted provided that the weight per square metre is at least that specified and that the percentage of binder content by weight does not exceed that of the insulation fitted in the tested constructions. |

The maximum length of the external wall systems is unrestricted. The system can be used along the height of the External Wall Assemblies