



Supalux Ceilings

Internal and External Ceiling Systems

**Up To 2 Hours
Fire Protection**
(to AS 1530.4 - 1997)

Description

Supalux is a calcium silicate board reinforced with selected fibres and fillers. It does not contain asbestos or any other inorganic fibre.

Supalux is off-white in colour and has a smooth sanded surface on one face with a lightly textured reverse face.

Supalux is a strong, lightweight non-combustible building board for use in many fire resisting and general purpose building applications. It is a high performance board which can provide up to 2 hour fire ratings to AS 1530 part 4 and up to 4 hours to BS 476.

Applications

Supalux is designed for areas requiring up to 2 hours fire rating compliance:

- Insulated or non-insulated fire rated ceilings up to 120 mins.
- Fire rated eaves linings
- Partitions (non-load-bearing), up to 120 mins with timber studs and 240 mins with steel studs.

Special Applications

- Gas installations requiring a non-combustible board. Approved for use in accordance with Australian Gas Codes (AS 5601 and AG 601).
- Protection from radiant heat. Examples are external surfaces of kilns and furnaces.

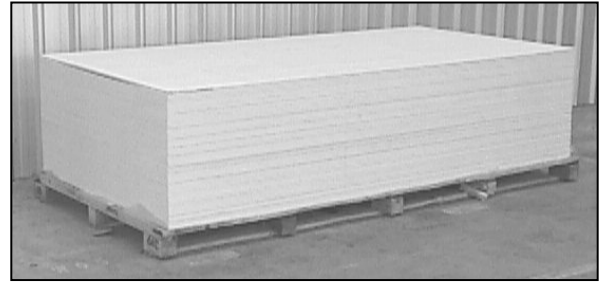
Advantages

- Fire ratings up to 2 hours to AS 1530 part 4
- Single board used for non-insulated systems
- Easily cut and shaped with timber tools
- Non-combustible
- May be finished or decorated in normal building methods
- Moisture and chemically resistant
- Withstands continuous temperatures up to 250°C.

Performance Specifications

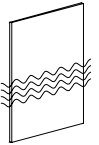
Fire Testing

Fire tests have been conducted to AS1530.3, AS1530.4, BS 476 and other international standards. Numerous approvals are available for ceilings, partitions and non-combustible applications. Please speak to Trafalgar's technical department for test data for your particular application.



Effect of Moisture

Will absorb water causing some loss of strength which is fully recovered on drying. Moisture will not cause leaching or efflorescence and has no permanent effect on the board.

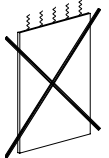


Thermal

Provides a degree of thermal insulation ($k = 0.17W/mK$) and is an ideal support for insulation materials.

Smoke Generation

As the boards contain only a small quantity of organic material and do not rely on resins or fire retardants to achieve performance, emission of smoke and toxic gasses in fire is minimal. When tested to AS 1530.3, Supalux achieves a smoke developed rating of zero.

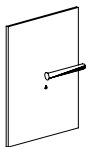


Biological

Resistant to attack by insects or vermin and will not nourish mould growth but should be sealed when used in areas where boards are liable to absorb matter that will support mould.

Chemical

Resistant to brine and chlorine, low concentrations of most acids, alkalis, bleaching agents and solvents but boards should be protected where high chemical concentrations are likely to occur. pH value 7 - 9.



Compatibility

Compatible with all common building materials; non-caustic and will not promote corrosion; will not affect bituminous compounds; should be protected when in contact with anodised aluminium.

Nominal Sizes and Weights		
Thicknesses	6, 9 and 12mm	
Width	1200 mm	
Length	2400 mm	
Weights	6mm	5.8 kg/m ²
	9mm	8.7 kg/m ²
	12mm	11.7 kg/m ²

SALES OFFICE:

Site Work

Working

General

Use normal woodworking tools

Cutting

Use a fine-toothed panel saw. For shaped cuts use a pad saw, keyhole saw or coping saw. Work with fair face upwards and support the board as cutting progresses. Quick and easy rough cuts can be made by scoring boards with a knife and snapping over a straight edge. For power sawing use a tungsten carbide or diamond tipped blade.

Drilling

Use normal low or high speed drills. Place scrap board under the drilling location to ensure a clean hole.

Sanding

Sand with conventional papers. Garnet paper is best for fine sanding.

Decorating

Painting

Prime board before painting. For water based paints apply a watered down first coat, for oil based paints use a universal primer, for textured paints use manufacturer's recommended sealer. Alkali resistant primers are not required.

Coating

Where an easily cleaned or weather proof surface is required, apply liquid plastic coating. Vapour transmission can be reduced by applying a priming coat followed by two undiluted coats of chlorinated rubber paint, epoxy resin paint, polyurethane or liquid plastic.

Health and Safety

Supalux is formulated without asbestos or any other inorganic fibre, and no special precautions are necessary in handling or working. When using power saws in a confined space, dust extraction equipment is recommended to control dust levels.

Boards will support their own weight, but are not load bearing. Horizontal boards must not be walked on as they are not designed to take additional weight between supports; if there is a risk of this occurring, warning notices should be displayed.

Refer to Material Safety Data Sheet for further information.

Warranty

Limited Warranty:

Purchase and use of this product is subject to Trafalgar's standard terms and conditions of sale. In the event of a product defect, Trafalgar's sole liability, at our option, is to replace product or return its purchase price.

All other warranties whether express or implied, including without limitations, any warranty of merchantability or fitness of purpose are expressly disclaimed unless prohibited by law or given in writing by Trafalgar Passive Products for a specific project.

Disclaimer:

Information given in this publication are given to the best of our knowledge and in good faith. Trafalgar Passive Product is not responsible if recipients of test reports, assessments or literature misinterpret the contents and wrongly use products based on those interpretations. Trafalgar Passive Fire Products reserves the right to change specification without notice.

Copyright © 2004:

This document is the property of Trafalgar Passive Products and may not be copied, used or disclosed in whole or in part except with the prior permission of Trafalgar Passive Products or if it has been furnished under contract with another party as specified in the contract. The copyright and the foregoing restriction on copying, use and disclosure extend to all media in which this information may be embodied.

SALES OFFICE:

1 Hour Supalux and Plasterboard Ceilings

Fire Rating	Specification	Detail
-/60/60 Fire from both sides of ceiling	<p>Plasterboard insulation: One layer 13 mm plasterboard either side of steel stud with 25mm x No 8 self-tapping screws at max 300mm centres.</p> <p>Facing: 9mm Supalux boards fixed to both sides with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlins and are staggered with plasterboard joints.</p> <p>Overall Thickness: 120 mm - 194 mm (dependant of width of ceiling)</p>	
-/60/60 Fire from top side of ceiling	<p>Plasterboard insulation: One layer 13 mm plasterboard either side of steel stud with 25mm x No 8 self-tapping screws at max 300mm centres.</p> <p>Facing: 9mm Supalux boards fixed to top side only with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlins and are staggered with plasterboard joints.</p> <p>Overall Thickness: 111 mm - 185 mm (dependant of width of ceiling)</p>	
-/60/60 Fire from under side of ceiling	<p>Plasterboard insulation: One layer 13 mm plasterboard either side of steel stud with 25mm x No 8 self-tapping screws at max 300mm centres.</p> <p>Facing: 9mm Supalux boards fixed to under side only with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlins and are staggered with plasterboard joints.</p> <p>Overall Thickness: 111 mm - 185 mm (dependant of width of ceiling)</p>	

2 Hour Supalux and Plasterboard Ceilings

Fire Rating	Specification	Detail
-/120/120 Fire from both sides of ceiling	<p>Plasterboard insulation: One layer 16 mm plasterboard either side of steel stud with 25mm x No 8 self-tapping screws at max 300mm centres.</p> <p>Facing: 12mm Supalux boards fixed to both sides with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlins and are staggered with plasterboard joints.</p> <p>Overall Thickness: 132 mm - 206 mm (dependant of width of ceiling)</p>	
-/120/120 Fire from top side of ceiling	<p>Plasterboard insulation: One layer 16 mm plasterboard either side of steel stud with 25mm x No 8 self-tapping screws at max 300mm centres.</p> <p>Facing: 12mm Supalux boards fixed to top side with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlins and are staggered with plasterboard joints.</p> <p>Overall Thickness: 120 mm - 194 mm (dependant of width of ceiling)</p>	
-/120/120 Fire from under side of ceiling	<p>Plasterboard insulation: One layer 16 mm plasterboard either side of steel stud with 25mm x No 8 self-tapping screws at max 300mm centres.</p> <p>Facing: 12mm Supalux boards fixed to under side with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlins and are staggered with plasterboard joints.</p> <p>Overall Thickness: 120 mm - 194 mm (dependant of width of ceiling)</p>	

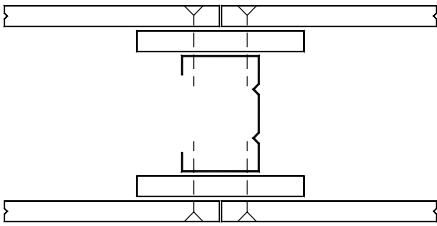
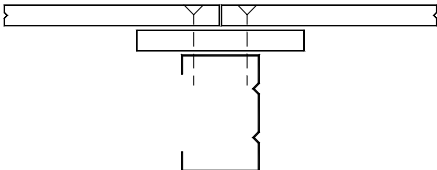
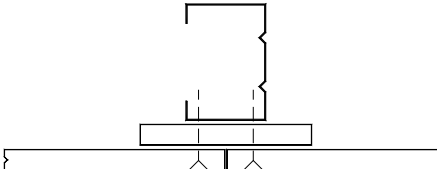
2 Hour Supalux Insulated Ceilings

Fire Rating	Specification	Detail
-/120/120 Fire from both sides of ceiling	<p>Infill: Rockwool 100 mm thick x 45 kg/m³ or 50 mm thick x 100 kg/m³.</p> <p>Joint backing: 9 mm Supalux backing strips 75 mm wide fixed on both sides of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 9 mm Supalux boards fixed to both sides with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlin locations.</p> <p>Overall Thickness: 112 mm - 186 mm (dependant of width of ceiling)</p>	
-/120/120 Fire from top side of ceiling	<p>Infill: Rockwool 100 mm thick x 45 kg/m³ or 50 mm thick x 100 kg/m³.</p> <p>Plasterboard: 13 mm fire rated plasterboard to hold rockwool in place.</p> <p>Joint backing: 9 mm Supalux backing strips 75 mm wide fixed to top side only of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 9 mm Supalux boards fixed to top side only with 32mm x No 8 self-tapping screws at max 300mm centres. Joints in Supalux occur at purlin locations.</p> <p>Overall Thickness: 107 mm - 181 mm (dependant of width of ceiling)</p>	
-/120/120 Fire from under side of ceiling	<p>Infill: Rockwool 100 mm thick x 45 kg/m³ or 50 mm thick x 100 kg/m³.</p> <p>Joint backing: 12 mm Supalux backing strips 75 mm wide fixed to under side of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 12mm Supalux boards fixed to under side with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlin locations.</p> <p>Overall Thickness: 94 mm - 168 mm (dependant of width of ceiling)</p>	

2 Hour Supalux Insulated Ceilings

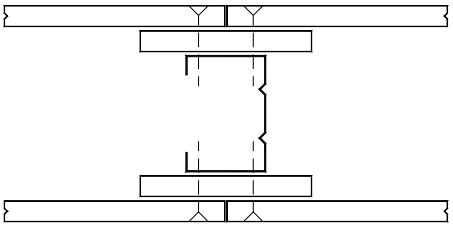
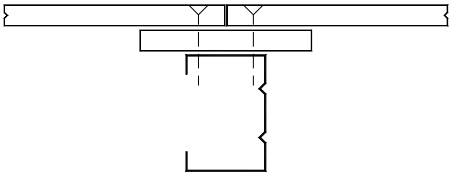
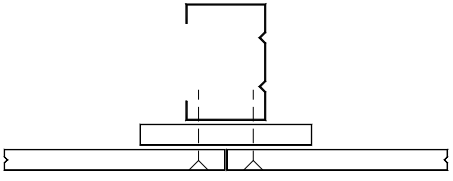
Fire Rating	Specification	Detail
<p>-/120/120</p> <p>Fire from both sides of ceiling</p>	<p>Infill: Rockwool 100 mm thick x 80 kg/m³ or 80 mm thick x 100 kg/m³.</p> <p>Joint backing: 12 mm Supalux backing strips 75 mm wide fixed on both sides of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 12mm Supalux boards fixed to both sides with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlin locations.</p> <p>Overall Thickness: 132 mm - 206 mm (dependant of width of ceiling)</p>	
<p>-/120/120</p> <p>Fire from top side of ceiling</p>	<p>Infill: Rockwool 100 mm thick x 80 kg/m² or 80 mm thick x 100 kg/m².</p> <p>Plasterboard: 16 mm fire rated plasterboard to hold rockwool in place.</p> <p>Joint backing: 12 mm Supalux backing strips 75 mm wide fixed to top side only of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 12mm Supalux boards fixed to top side only with 32mm x No 8 self-tapping screws at max 300mm centres. Joints in Supalux occur at purlin locations.</p> <p>Overall Thickness: 116 mm - 190 mm (dependant of width of ceiling)</p>	
<p>-/120/120</p> <p>Fire from under side of ceiling</p>	<p>Infill: Rockwool 100 mm thick x 80 kg/m² or 80 mm thick x 100 kg/m².</p> <p>Joint backing: 12 mm Supalux backing strips 75 mm wide fixed to under side of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 12mm Supalux boards fixed to under side with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlin locations.</p> <p>Overall Thickness: 100 mm - 174 mm (dependant of width of ceiling)</p>	

1 Hour Non-Insulated Ceilings

Fire Rating	Specification	Detail
-/60/- Fire from underside of ceiling	<p>Joint backing: 9mm Supalux backing strips 75mm wide fixed on both sides of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 9mm Supalux boards fixed to both sides of stud with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlin locations</p> <p>Overall Thickness: 112 mm - 186 mm (dependant of width of ceiling)</p>	
-/60/- Fire from top side of ceiling	<p>Joint backing: 9mm Supalux backing strips 75mm wide fixed on top side of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 9mm Supalux boards fixed to top side of stud with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlin locations.</p> <p>Overall Thickness: 94 mm - 168 mm (dependant of width of ceiling)</p>	
-/60/- Fire from under side of ceiling	<p>Joint backing: 9mm Supalux backing strips 75mm wide fixed on under side of stud with No 8 x 19 mm self-tapping screws.</p> <p>Facing: 9mm Supalux boards fixed to under side of stud with 32mm x No 8 self-tapping screws at max 300mm centres. Joints occur at purlin locations.</p> <p>Overall Thickness: 94 mm - 168 mm (dependant of width of ceiling)</p>	

SALES OFFICE:

2 Hour Non-Insulated Ceilings

Fire Rating	Specification	Detail
-/120/- Fire from underside of ceiling	<p>Joint backing: 12mm Supalux backing strips 75mm wide on both sides of stud with No 8 x 25 mm self-tapping screws.</p> <p>Facing: 12mm Supalux boards fixed to both sides of stud with 38mm x No 8 self-tapping screws at max 300 mm centres. Joints occur at purlin locations</p> <p>Overall Thickness: 124 mm - 198 mm (dependant of width of ceiling)</p>	
-/120/- Fire from top side of ceiling	<p>Joint backing: 12mm Supalux backing strips 75mm wide on top side of stud with No 8 x 25 mm self-tapping screws.</p> <p>Facing: 12mm Supalux boards fixed to top side of stud with 38 mm x No 8 self-tapping screws at max 300 mm centres. Joints occur at purlin locations.</p> <p>Overall Thickness: 100 mm - 174 mm (dependant of width of ceiling)</p>	
-/120/- Fire from under side of ceiling	<p>Joint backing: 12 mm Supalux backing strips 75mm wide on under side of stud with No 8 x 25 mm self-tapping screws.</p> <p>Facing: 12 mm Supalux boards fixed to under side of stud with 38 mm x No 8 self-tapping screws at max 300 mm centres. Joints occur at purlin locations.</p> <p>Overall Thickness: 100 mm - 174 mm (dependant of width of ceiling)</p>	

Fire Rated Soffits

Why Fire Rated Soffits?

In residential buildings with parts of the building lying within 900 mm of the boundary, external soffit lining above openings in the external wall may be required to be of a fire protective grade.

The conditions where this requirement often applies are:

- The timber roof framing extends past the external wall of the building to provide a roof overhang. (Refer Fig. 1)
- The soffit immediately below this roof framing is required to have a level of fire protection to supplement that of the ceiling of the adjoining rooms.

Supalux is ideally suited to this application. It provides fire protection without joint plastering, thus eliminating the need to introduce wet trades.

Because Supalux is not affected by damp, it will not bow, swell, shrink or warp. and it can be fixed at any time to suit the building programme.

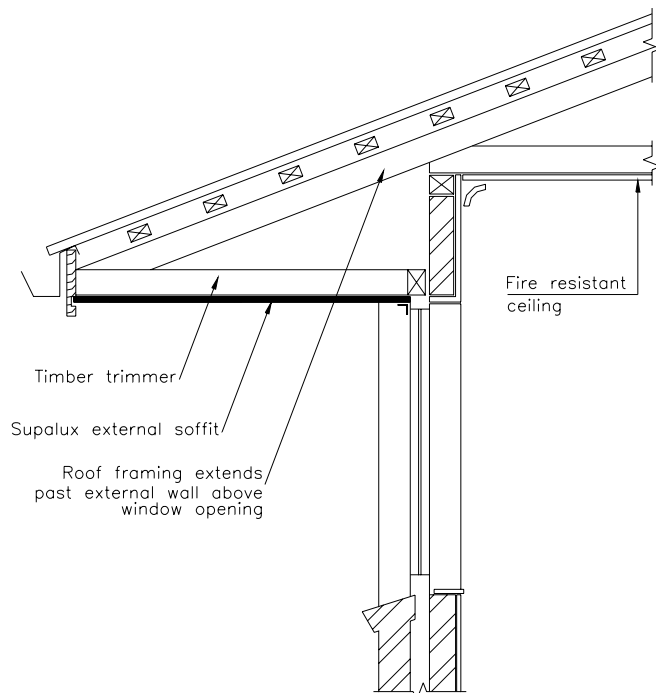


Fig 1 Fire Rated Soffit Detail

30 Min Fire Rated System

6 mm thick Supalux supported by framing at min 600 mm centres. Refer figure 2.

Supalux should be nail fixed to framework with 40x2.5mm galvanised nails at 300 mm centres.

60 Min Fire Rated System

9 mm thick Supalux supported by framing at min 600 mm centres and covered with rockwool batt, 25 mm thick x 64kg/m³ (or 60 mm x 23 kg/m³). Refer figure 3.

Supalux should be screw-fixed to framing with 40mmx10g countersunk head, stainless steel screws at 300 mm centres.

Note:

1. At joints, sheets must be butt jointed as shown in Figs 2 and 3.
2. Joints may be covered by a surface mounted batten.
3. Details shown on this page apply to timber-framed construction. Where metal frame are used, they should be first battened out with 12mm Supalux battens and Supalux soffit sheets should be fixed to the battens with screws

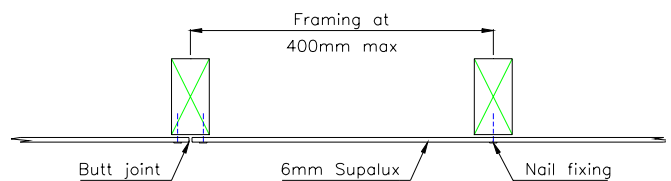


Fig 2 Section Detail - 30 minute system

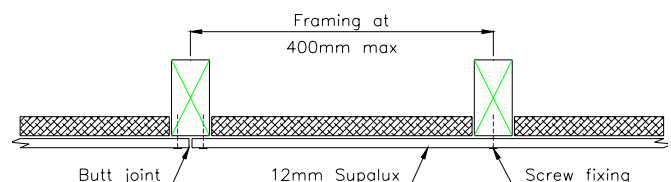


Fig 3 Section Detail - 60 minute system

Supalux Product Properties

Product Property	Value
Length and breadth tolerance (mm)	-3 to -1
Thickness tolerance (mm)	-0.7 to 0
Nominal Dry Density (kg/m ³)	875
Alkalinity / pH value	7 - 9
Moisture content (%) - Conditioned	3 - 6
Moisture movement (%) - Conditioned to Saturated	0.05
Water Absorption (%)	68
Thermal conductivity (W/mK)	0.17
Thermal movement (x 10 ⁻⁶ / °C) up to 100°C	9
Flexural modulus (N/mm ²) - Average of 2 directions	3300
Bonding Strength (N/mm ²) - Average of 2 directions	8.5
Tensile strength (N/mm ²) - Average of 2 directions	3.5
Compressive strength (N/mm ²)	6
Compressive strength (N/mm ²) at 5% compression	8
Weights (kg/m ²)	6mm 5.8 9mm 8.7 12mm 11.7

SALES OFFICE: