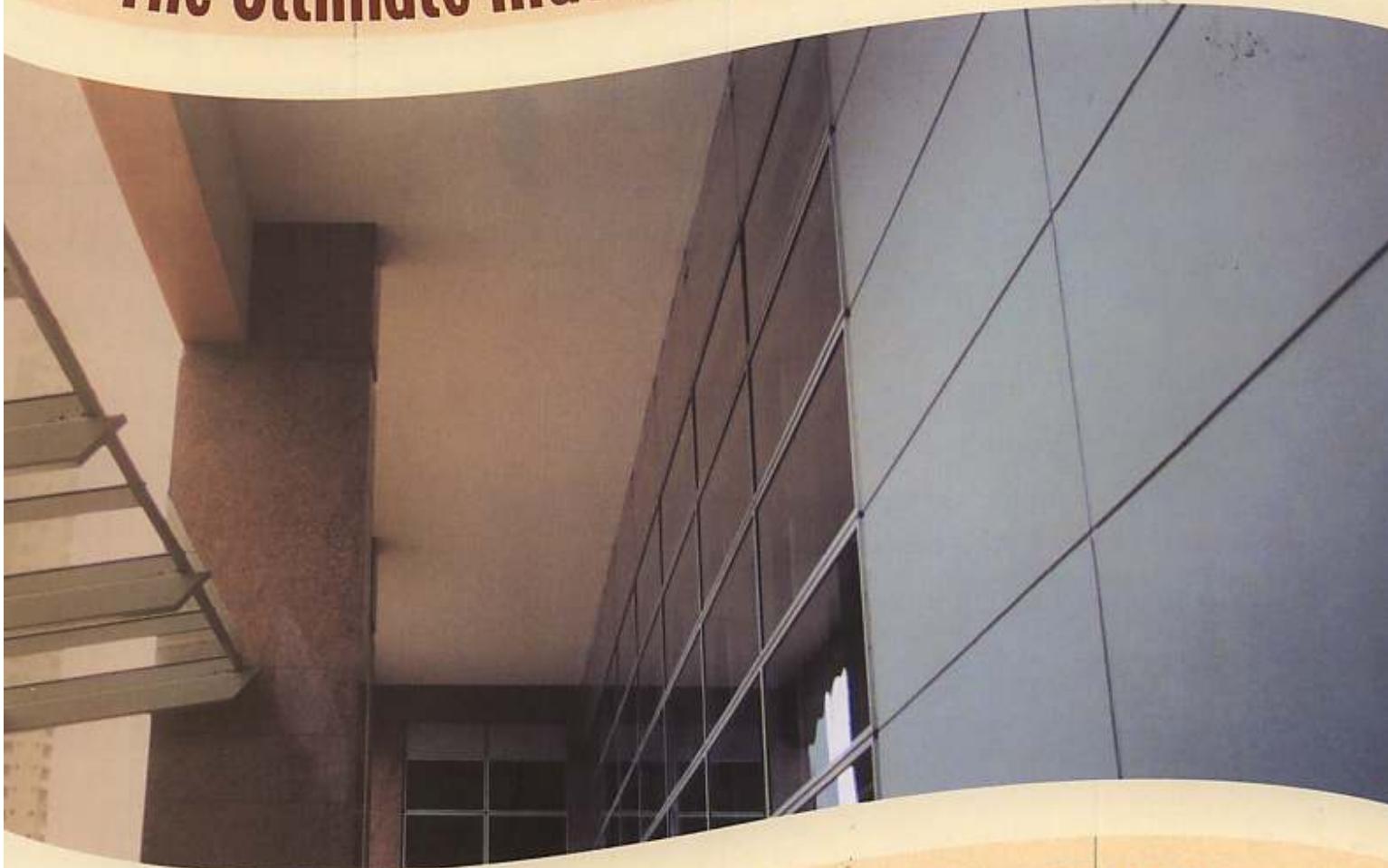


The Ultimate Multi Purpose Building Board



UCO SUPERFLEX

✓ Tough ✓ Flexible ✓ Versatile



This sign endorses that
the product is asbestos-free



CERTIFIED TO MS ISO 9001 : 2000
Registration No. : AR 0387



CERTIFIED TO MS 1296 : 1992
Certification No. PU 001804



FIRE-LISTED
Cert. No. LU001801
Listed to : BS 476 : Pt 6 : 1989
BS 476 : Pt 7 : 1987

BUILD BETTER WITH



UAC BERHAD

UCO SUPERFLEX

UCO SUPERFLEX is an autoclaved cellulose fibre cement flat board, creamy white in colour. It is an asbestos-free board with a smooth surface and a square edge.

It is tough and flexible, an ideal choice for many general building purposes, including ceiling and wall partitioning, both internally and externally. It is also used for gable end, facade, eave lining, permanent formwork and substrate flooring.

ADVANTAGES

- ✓ Tough & Flexible
- ✓ Durable
- ✓ Dimensionally stable
- ✓ Smooth surface
- ✓ Fire resistant
- ✓ Termite proof
- ✓ Non-hazardous to health – 100% asbestos-free
- ✓ Versatile in application
- ✓ Rapid installation
- ✓ Suitable for all types of finishes
- ✓ Virtually maintenance-free – cost effective

GENERAL PRODUCT INFORMATION

Product Characteristics

Basic Composition

Portland cement, refined sand and cellulose fibre

Specifications/Physical Properties

UCO Superflex is certified to MS 1296:1992 "Fire Cement Flat Sheets"

Fire Resistant

UCO Superflex is classified as *Class 'O' material under Malaysian Uniform Building By-Laws.

The product is "Fire-Listed" under SIRIM QAS Fire Listing Scheme with performance index :

a) BS 476 : Part 6 : 1989 (Fire Propagation)

Index of performance (I) = 0.0 to 1.8
Sub-index (I_1) = 0.0 to 1.1

b) BS 476 : Part 7 : 1997 (Surface Spread of Flame)

No Surface Flame Spread - Class 1 (the best class)

*Class 'O' criteria : $I < 12$, $I_1 < 6$ and No Surface Flame Spread

Density At Oven Dry

1.33 to 1.42 g/cm³

Water Absorption (by weight)

22.0% (**EMC to Saturated)

**EMC : Equilibrium Moisture Content, at 25°C & 50% Relative Humidity

Moisture Content At EMC (by weight)

8.0%

Flexural Strength (Modulus of Rupture)

	Average	Across fibre	Along fibre
Oven Dry	20	22	17
EMC	18	21	15
Saturated	13	15	11

Thermal Conductivity

Estimated at 20°C 0.30 W/m.K

Moisture Movement

0.06% to 0.08% (Saturated to EMC)

Standard Sizes and Dimensions

Nominal Thickness (mm)	Nominal weight of board (kg) For standard sizes in (mm)				
	2440 x 1220mm	1220 x 1220mm	1220 x 610mm	603 x 603mm	595 x 595mm
3.2	13.8	6.9	3.5	1.7	1.7
4.5	19.6	9.8	4.9	-	-
6.0	26.6	13.3	6.7	-	-
9.0	41.3	20.6	10.3	-	-
12.0	55.4	27.7	13.8	-	-

Other sizes and thicknesses can be manufactured subject to minimum order quantity.

Handling and Storage

Boards should be stacked flat on level surface with sufficient support such as on pallet/frame or on timber blocks as shown in diagram (i). Do not stack boards with insufficient support as shown in diagram (ii). To ensure optimum performance, store boards undercover and keep dry prior to fixing. If the boards should become wet, allow to dry before fixing is commenced.



(i) Provide sufficient support to ensure level surface.



(ii) Do not stack with insufficient support.

CEILING INSTALLATION

Timber Framing

Framing should be constructed in accordance with local building regulations and acceptable building practice.

Typical framing grid should be spaced at 610mm x 1220mm centres. However, if exposed joint (Figure 3) installation is used, adjustment to the framing centres should be taken into account.

Kiln-dried timber should be chosen to minimise shrinkage.

Nail Fixing (Figure 1)

Fasteners should be driven into each framing structure at 200mm centres maximum. Fasteners should not be placed less than 10mm from sides and 50mm from corners.

Joint

Two typical joint installations can be applied as shown in Figure 2 and Figure 3.

For large areas, ceiling should be divided into bays not exceeding 10m x 7.5m, to provide for expansion joints.

Special Framing Design Consideration :

Boards should not be fixed directly to the underside of steel or timber roof trusses or rafters. A timber ceiling frame work or a suspended ceiling grid should be used.

Suspended Ceiling Installation

The framing members for suspended ceiling (Figure 4) come in a standard kit to be installed as follows :

Main runners are fixed at 1220mm centres securely fastened to the structural soffit using an appropriate suspension at 1220mm centres. Cross Tees of 1220mm length to be fixed between the main runners at 610mm centres and another cross tee fixed at mid span between 610mm to form a grid structure of 610mm x 610mm.

Suspend the 4 sides of the ceiling board freely on the grid. Suspended ceiling boards are typically 603mm x 603mm in size.

Figure 1: Nail Fixing

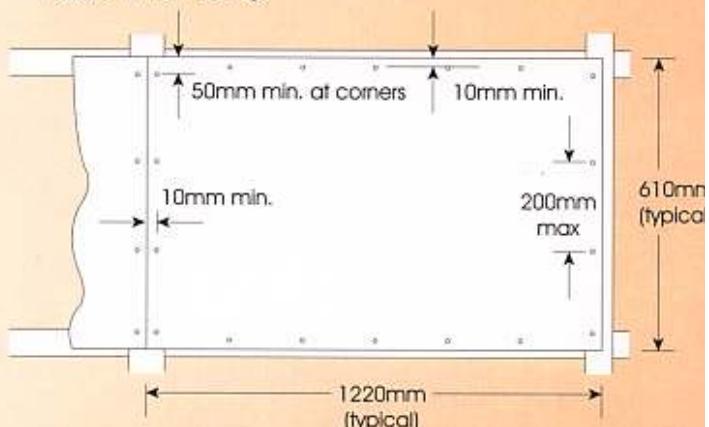


Figure 2: Joint with Batten

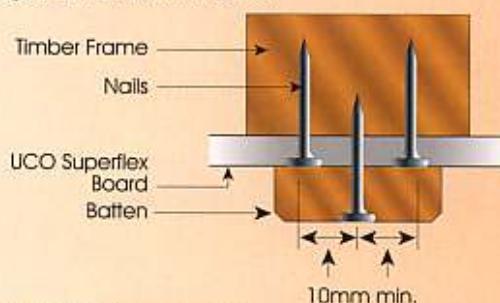


Figure 3: Exposed Joint

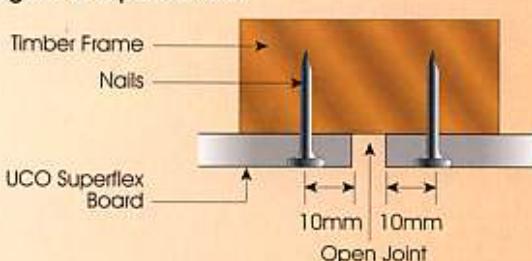
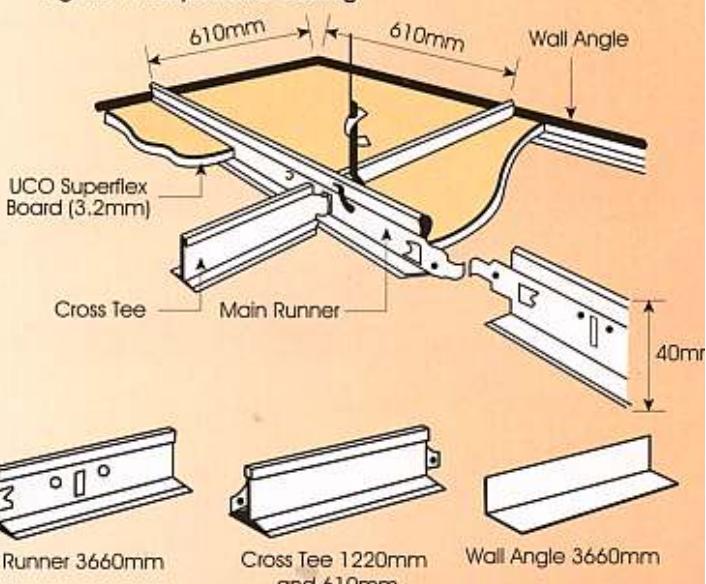


Figure 4: Suspended Ceiling



PARTITION INSTALLATION

Timber or Steel Frame

Framing should be constructed in accordance with local building regulations and acceptable building practice.

A minimum of 45mm finished plain timber or a steel frame is preferred for the face of a stud, or nogging under a joint to provide sufficient landing for nails or screws to be placed at the minimum recommended distance from the edge of the board.

Fixing Instructions (refer Figure 5 & Figure 6)

Fasteners should be driven along sides or along ends of boards at approximately 200mm centres, and along intermediate studs at approximately 300mm centres.

Fasteners should not be less than 12mm from board edges and 50mm from corners.

For steel frames, do not fix to top and bottom runners or noggings.

For large areas, expansion joints must be provided at maximum 7.5 metre intervals.

Insulation

Where foil insulation is required as a climate control and moisture barrier, it should always be fixed to the appropriate side of the stud in the framework.

Figure 5

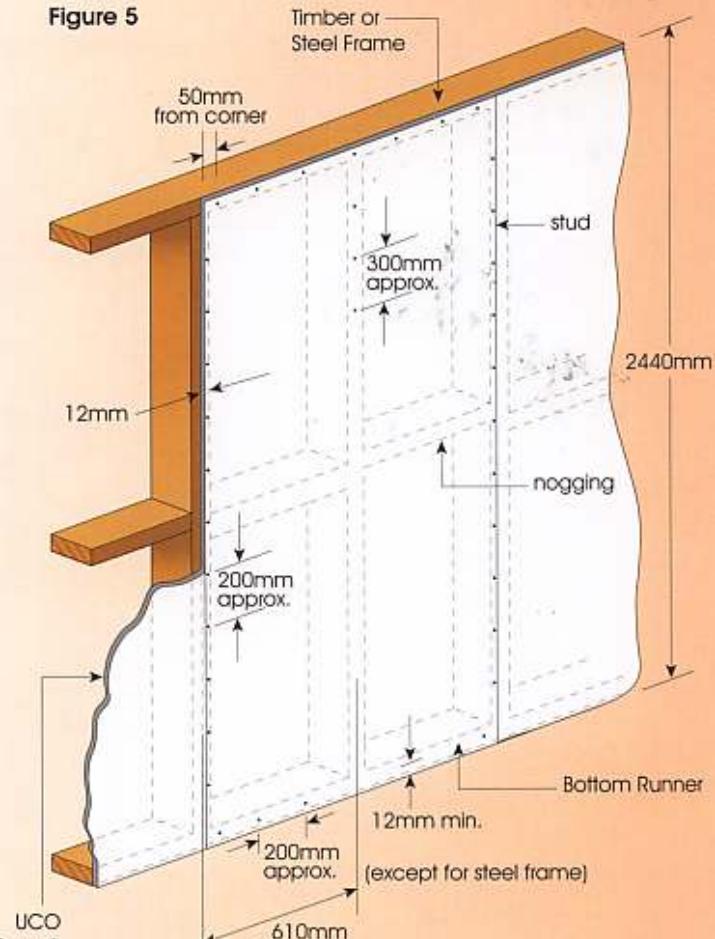
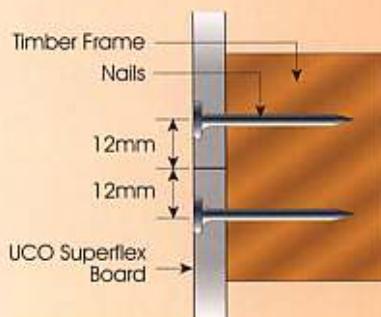


Figure 6



Painting

For excellent results, UCO Superflex boards may be painted with water-based acrylic paints. No additional primers or sealers are required. In all cases, reference should be made to the paint manufacturer's instructions.

For further information on other applications, please consult our technical sales personnel.

Fasteners

Nails (for fixing to timber frames)
Galvanised Fibre Cement Nails:
25mm long for hardwood
30mm long for softwood
(for thin ceiling board, a shorter nail may be sufficient)



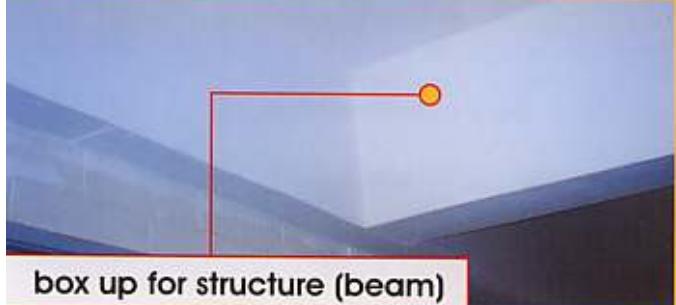
Nail

Screw (for fixing to metal frame)
Teks' Screw
Self-embedding head
– No. 8 x 20mm or longer.



Screw

UCO SUPERFLEX APPLICATIONS





UCO SUPERFLEX

WARRANTY

The recommendations in this brochure are formulated along the lines of good building practice. However, this brochure is not intended to be an exhaustive statement of all relevant data.

As the success of building projects depends on many factors outside UAC's control (e.g. quality of workmanship, particular design detail requirements etc.), UAC accepts no responsibility or liability for or in connection with the quality of the projects or their suitability when completed.

For a warranty period of one year from date of delivery of UAC's products ("UAC Products") to the purchaser ("Warranty Period"), UAC warrants that the UAC Products are free from defects which are solely due to materials or manufacturing faults. The foregoing warranty shall not apply to the extent that:

- (a) the defect, loss or damage is caused by any act, default or misuse of the UAC Products (or part thereof) by the purchaser or any third party or by failure to follow any instructions or specifications of UAC or by modification of the UAC Products or installation, application and/or combination of the UAC Products with any other product not approved by UAC; or
- (b) UAC is not notified in writing within the Warranty Period of any relevant defect in the UAC Products or part thereof.

Subject to such provisos, UAC will at its sole option and subject to the investigations, verifications and inspection of such defect by a UAC representative, either (a) replace such defective UAC Product or part thereof; or (b) re-fund the price paid for the defective UAC Product or part thereof. The liability of UAC shall include only Products with antecedent defects. The liability cannot be extended to include Products without defects which might have been delivered at the same time as the defective Products. The foregoing shall be the sole and exclusive remedy in the event of any breach of the said warranty.

To the greatest extent permitted by any applicable law, the warranties referred to the above shall be sole and exclusive and in lieu of all implied or statutory warranties (including without limitation, the implied warranties imposed by the Malaysian Sale of Goods Act 1957 and all other warranties implied by law as to merchantability, satisfactory quality or fitness for a particular purpose, or otherwise arising from course of dealing or usage of trade) or any other express or implied warranties or representations.

To the greatest extent permitted by any applicable law, in no event shall UAC be liable to the purchaser or any other person or entity for any loss or damage including without limitation special, indirect, incidental, punitive, exemplary, or consequential damages, loss of profits, loss of business or loss of use; whether based upon contract, tort, negligence or otherwise arising out of the manufacture, sale or delivery of the UAC Products, even if UAC has been advised of the possibility of such damage or loss.

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