

## Material Properties

Property	Value	Units
<b>Ambient<sup>1</sup> Density, <math>\rho_{amb}</math></b>	520	kg/m <sup>3</sup>
<b>Dry<sup>2</sup> Density, <math>\rho_{dry}</math></b>	500	kg/m <sup>3</sup>
<b>Working<sup>3</sup> Density, <math>\rho_{design}</math></b>	610	kg/m <sup>3</sup>
<b>Permanent Action, G</b>	0.3	kN/m <sup>2</sup>
<b>Characteristic Unconfined Compressive Strength, <math>f_{uc}</math></b>	1.1	MPa
<b>Modulus of Rupture, <math>f'_{ut}</math></b>	0.73	MPa
<b>Design Ultimate Limit State Bending Capacity, <math>\phi M</math></b>	0.12	kNm
<b>Design Serviceability Limit State Deflection Limit, <math>\delta_{max}</math></b>	$SPAN/_{240}$	
<b>Coefficient of contraction</b>	0.4	mm/m
<b>Coefficient of thermal expansion</b>	10	$\times 10^{-6}/^{\circ}C$



### Quality Control

#### *Quality from start to finish*

It is highly recommended that Lo xo<sup>®</sup> panels are erected by approved Installers and coated by approved applicators.

With these measures in place plus strict system protocol Lo xo<sup>®</sup> offers a warranty of 15 years on materials and 7 years on workmanship adding peace of mind to all owners. Lo xo<sup>®</sup> and associated manufacturers both adhere to the ISO 9001 international standards for management of quality.



## System Components and Accessories:

### 1. Lo xo<sup>®</sup> Cladding Panels:

Lo xo Panels are manufactured from Autoclaved Aerated Concrete (AAC) supplied in lengths of 2200mm long x 600mm wide x 50mm thick.

### 2. Lo xo<sup>®</sup> Cavity Battens:

20mm to 40mm Cavity Battens supplied in 250mm lengths or 3000mm continuous lengths

Cavity battens are manufactured from either:

- ▣ 0.42 BMT, G300 Galvanised Metal
- ▣ H3 treated pine timber, or
- ▣ Very High Density (Class VH) EPS with a density of no less than 28kg/m<sup>3</sup>

### 3. Lo xo<sup>®</sup> Cavity Batten Fixing:

- ▣ 2.87mm x 50mm (glue coated, plain shank galvanised nails) used to fix the 20mm timber battens to timber frames. (2 per batten or 2 per 600mm wall height)
- ▣ 3.05mm x 75mm (glue coated, plain shank galvanised framing nails) used to fix the 40mm timber battens to timber frames. (2 per batten or 2 per 600mm wall height);
- ▣ 12 x 40mm galvanised drill point countersunk screws used to fix the 20mm timber battens to steel frames. (2 per batten or 2 per 600mm wall height)
- ▣ 12 x 60mm galvanised drill point countersunk screws used to fix the 40mm timber battens to steel frames. (2 per batten or 2 per 600mm wall height)
- ▣ Construction Adhesive such as Maxbond, Liquid Nails or similar may be used to temporarily fix the EPS battens to the frame or building wrap.
- ▣ 12-11 x 25mm Hex Head Type 17 screws used to temporarily fix the metal battens to timber frames.

- ❑ 10-16 x 16mm Hex Head Tek screws used to fix temporarily the metal battens to metal frames.
- ❑ **Note:** A minimum of Class 3 fasteners must be used with the Loxo<sup>®</sup> Panel System. AS3566 corrosion class 3 fasteners must be used in BCA defined corrosion zones 1, 2, 3, and 4. Class 4 or Grade 304 stainless steel in the sea spray zone.

#### 4. Loxo<sup>®</sup> Cladding Panel Adhesive;

Loxo<sup>®</sup> Panel Adhesive is a polymer modified cement-based adhesive supplied in 20kg bags. It is supplied by Loxo<sup>®</sup>, mixed on-site with clean water (see instructions printed on each bag), and is applied to all edges of the panels (except control joint). Loxo<sup>®</sup> Panel Adhesive is also used for bonding Decorative Trims and banding, along with minor patching, repairs and stopping of screw heads on the Loxo<sup>®</sup> panels.



#### 5. Loxo<sup>®</sup> Cladding Panel Fasteners;

For wind zones up to and including N3, C1, the panel fasteners may be fixed into the timber battens without having to be fixed into the frame, provided the timber battens have been fixed to the frames as per the Loxo<sup>®</sup> Cavity Battens Requirements. For wind zone greater than N3, C1, the panel fasteners must penetrate into the wall frame a minimum of 25mm for timber frames and a minimum of 5 screw threads for metal frames.

- ❑ 14-10 x 75mm MP Bugle Head Type 17 screws must be used to fix the panels into the timber battens or through the 20mm cavity battens into the steel frames
- ❑ 14-10 x 100mm MP Bugle Head Type 17 screws must be used to fix the panels through the 20mm cavity battens into the timber frames or to fix panels to steel frames (up to 0.75 BMT) with battens up to a maximum cavity thickness of 40mm
- ❑ 14-10 x 125mm MP Bugle Head Type 17 screws must be used to fix the panels through the 40mm cavity battens into the timber frames.

#### 6. Loxo<sup>®</sup> Vermin Control/Cavity Closer Strips;

Metal Vermin Control Strips; or Cavity Closer Strips are continuous metal battens used to close the gap between the bottom plate and the back of the panel. Mitre cut battens at corners to maintain vermin proofing. The battens are fixed to the bottom plate at 900mm centres using:

- ❑ 12-11 x 25mm Hex Head Type 17 screws for timber frames;
- ❑ 10-16 x 16mm Hex Head Tek screws for steel frames;

Timber Vermin Control Strips; or Cavity Closer Strips are continuous timber Loxo<sup>®</sup> Cavity Battens used to close the gap between the bottom plate and the back of the panel. Mitre cut or butt timber battens at corners to maintain vermin proofing. The battens are fixed to the bottom plate at 900mm centres using hot dipped galvanized steel flat head nails.

#### 7. Loxo<sup>®</sup> Corrosion Protection Touch Up Paint

When the Loxo<sup>®</sup> Panels are cut to size, ensure that no reinforcing steel is exposed to openings or corners. When reinforcing steel is exposed it must be treated with the Loxo<sup>®</sup> Corrosion Protection Touch Up Paint. It is supplied in 250ml containers. The instructions for use are on the container.

#### 8. Damp Proof Course (DPC);

- ❑ DPC is used to prevent rising damp from concrete footings, slabs or paths wetting the base of the panels.
- ❑ All flashings should be specifically designed for the wall frames and be compatible with the Loxo<sup>®</sup> Panel System.
- ❑ Damp-proof courses should comply with the BCA, including AS 2904-1995 Damp-proof course and flashings.
- ❑ The designer should detail any specific requirements for special back-flashings required where the Loxo<sup>®</sup> Cladding Panel joins another substrate/cladding

## 9. Sarking:

Although the use of sarking is not mandatory with the Loxo<sup>®</sup> Panel System, it is good building practice to do so. However, sarking is required between:

- ❑ EPS battens and the frame to prevent trapped moisture between the batten and the frame.
- ❑ Metal battens and CCA treated timber frames to prevent corrosion of the metal batten.
- ❑ Metal battens and some LOSP treated frames to prevent corrosion of the metal batten. In the event that LOSP frames are to be used with metal battens, it is the responsibility of the project manager to confirm with the timber frame supplier if sarking is required to prevent corrosion of the metal battens.

## 10. Construction Adhesive:

Construction Adhesive such as Maxbond, Liquid Nails or similar should be used for adhering accessories such as Aluminium External Corner angles to Loxo<sup>®</sup> Cladding Panels, or temporarily fixing EPS Cavity Battens prior to the installation of the panel fasteners.

## 11. Flexible-sealant:

An external grade flexible sealant such as Bostik Seal'N'Flex or equivalent should be used at control joints, around windows, doors and penetrations through the Loxo<sup>®</sup> Panels, to prevent or reduce the amount of water ingress into the cavity. Before sealant application, check with sealant manufacturer to confirm if a primer is required when using over Loxo<sup>®</sup> (AAC) Panels.

