TRAFALGAR

FyreBOARD Maxilite Concrete Upgrade Systems

Technical Manual

AUSTRALIAN OWNED 70 Years and Still Innovating

The Trafalgar fire stopping range includes:

Sealant | Pillows | Mortar | FR Batts
FR Collars | FR Access Panels | Pipe Wraps
FyreWrap Duct Wrap | FR Downlight Covers
Intumescent Dampers | Fire Door Hardware
Fire Rated Board and Systems | Cable Coating
FYREBOX for multiple and mixed services

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FyreBOARD Maxilite

Concrete Upgrade Systems

Product Overview

FyreBOARD Maxilite is a lightweight, high performance fire rated board. It is a calcium silicate based product, bonded together with non-organic binders, that meets all requirements for asbestos, volatile organic compounds (VOC's) and ozone depleting potential (ODP) Compounds. FyreBOARD Maxilite is available in a number of discrete thicknesses for use in the fire protection of penetrations, bulkheads and structural steel applications and is suitable for a large range of steel sizes and types.

Under AS3600 FyreBOARD Maxilite can be applied to **concrete slabs to upgrade insulation performance** and can also now address **cast-in services** and **deck box applications** to provide compliant upgrade systems.

How does it work?

FyreBOARD Maxilite is an extremely effective insulating refractory board. FyreBOARD Maxilite is stable under high temperature stress and remains strong and crack free, even when exposed to fully developed fires. The FyreBOARD Maxilite provides a thermal insulation as well as a heat sinking capacity for steel and concrete.

Key Features

- Lightweight
- Low thermal conductivity
- Up to 4 hours fire-rated protection
- Fully Tested and Approved for the Australian market
- Various methods of installation
- No mess

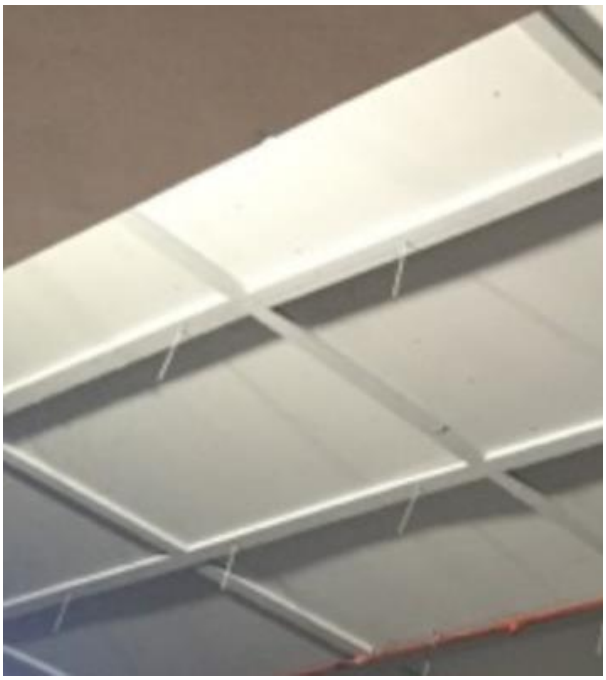
To maintain market leadership, Trafalgar stay up to date with the latest technologies and trends in passive fire protection and contemporary construction techniques. **We are 70 years strong and still innovating!**

Section A - Floor Upgrade Systems

In certain situations, concrete floors are able to achieve structural and integrity performance in relation to fire but are not able to achieve insulation performance. This is predominately due to the thickness of concrete.

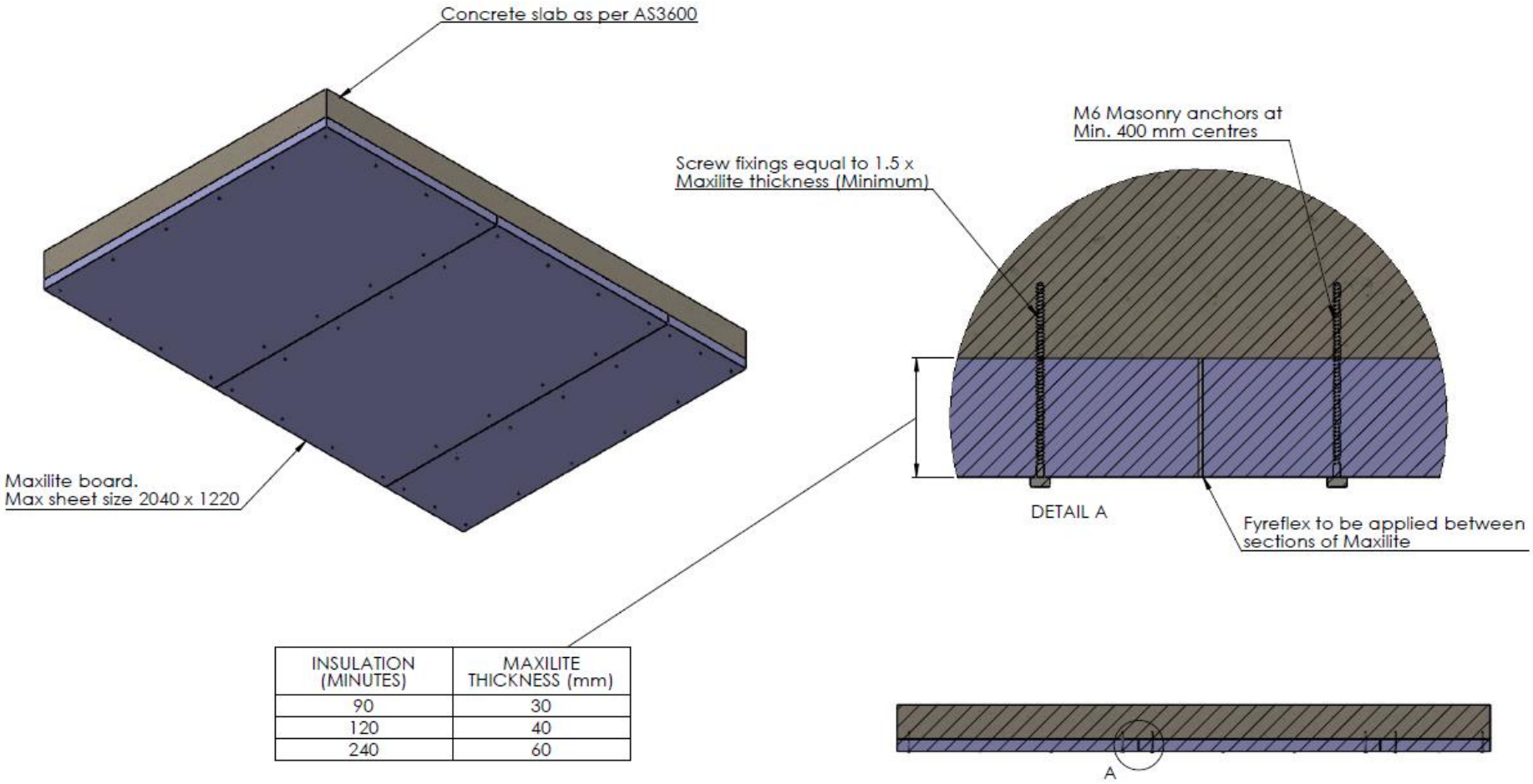
The application of FyreBOARD Maxilite to the concrete allows for the increase of insulation performance up to XXX/YYY/240 whilst preserving the original structural and integrity rating.

FRL	Up to XXX/YYY/240 (Limited to the structural adequacy of the fire barrier)
Approved Systems	Concrete built in accordance to AS 3600
Maximum Size of FyreBOARD Maxilite	No limits
Fixing Specifications	Fixings equal to 1.5x FyreBOARD Maxilite thickness (Minimum) M6 all steel masonry anchor or larger All joints sealed with FyreFLEX sealant



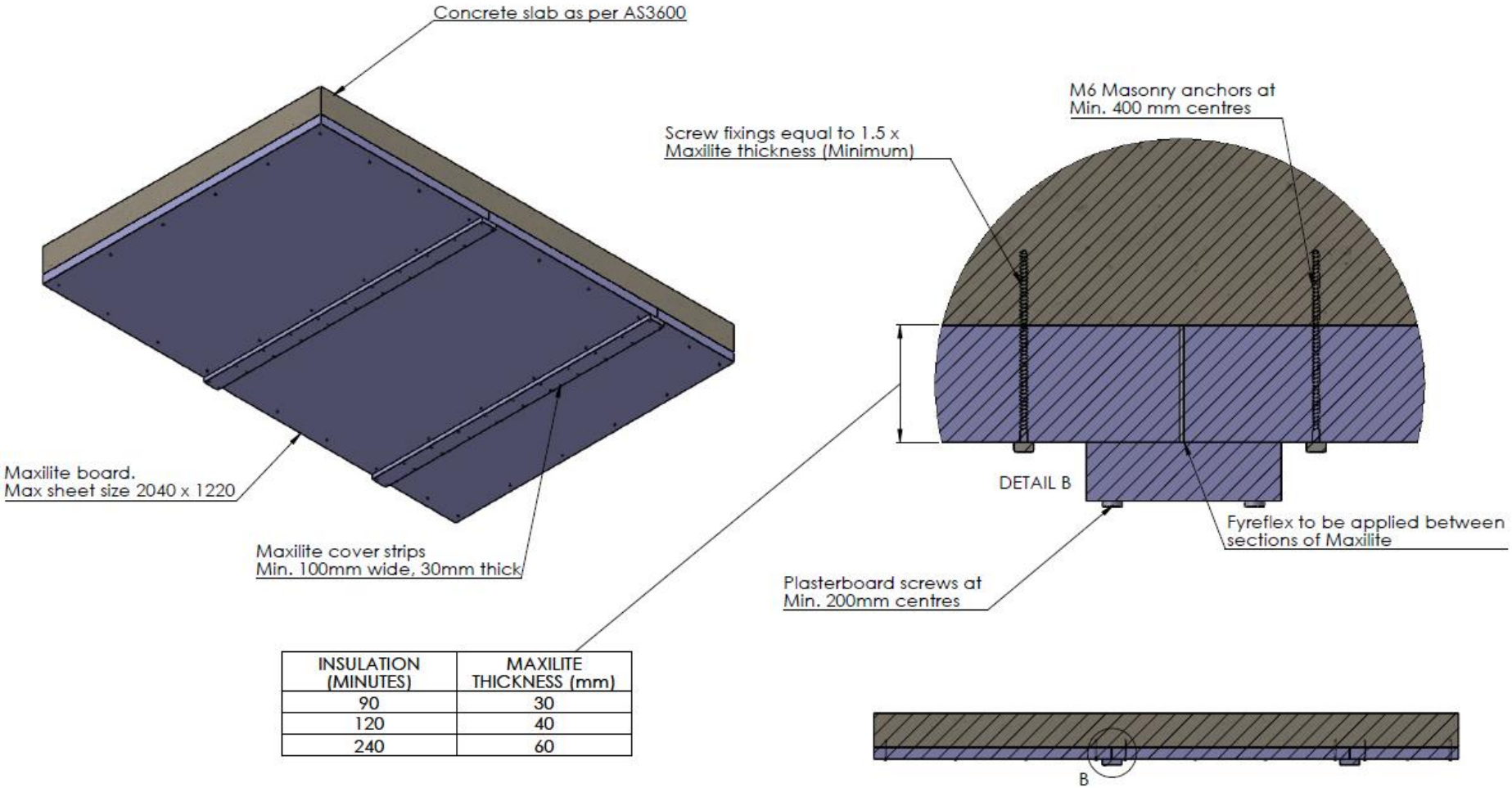
Mid install showing cover strips

Section A – Concrete Floors - Step 1



INSULATION (MINUTES)	MAXILITE THICKNESS (mm)
90	30
120	40
240	60

Section A – Concrete Floors - Step 2



INSULATION (MINUTES)	MAXILITE THICKNESS (mm)
90	30
120	40
240	60

Section B - Cast in Deck Boxes / Voids

Deck boxes, cast in services and voids in concrete slabs are becoming an increasingly popular construction practice. This creates practical and compliance issues both for the services, and for the slab.

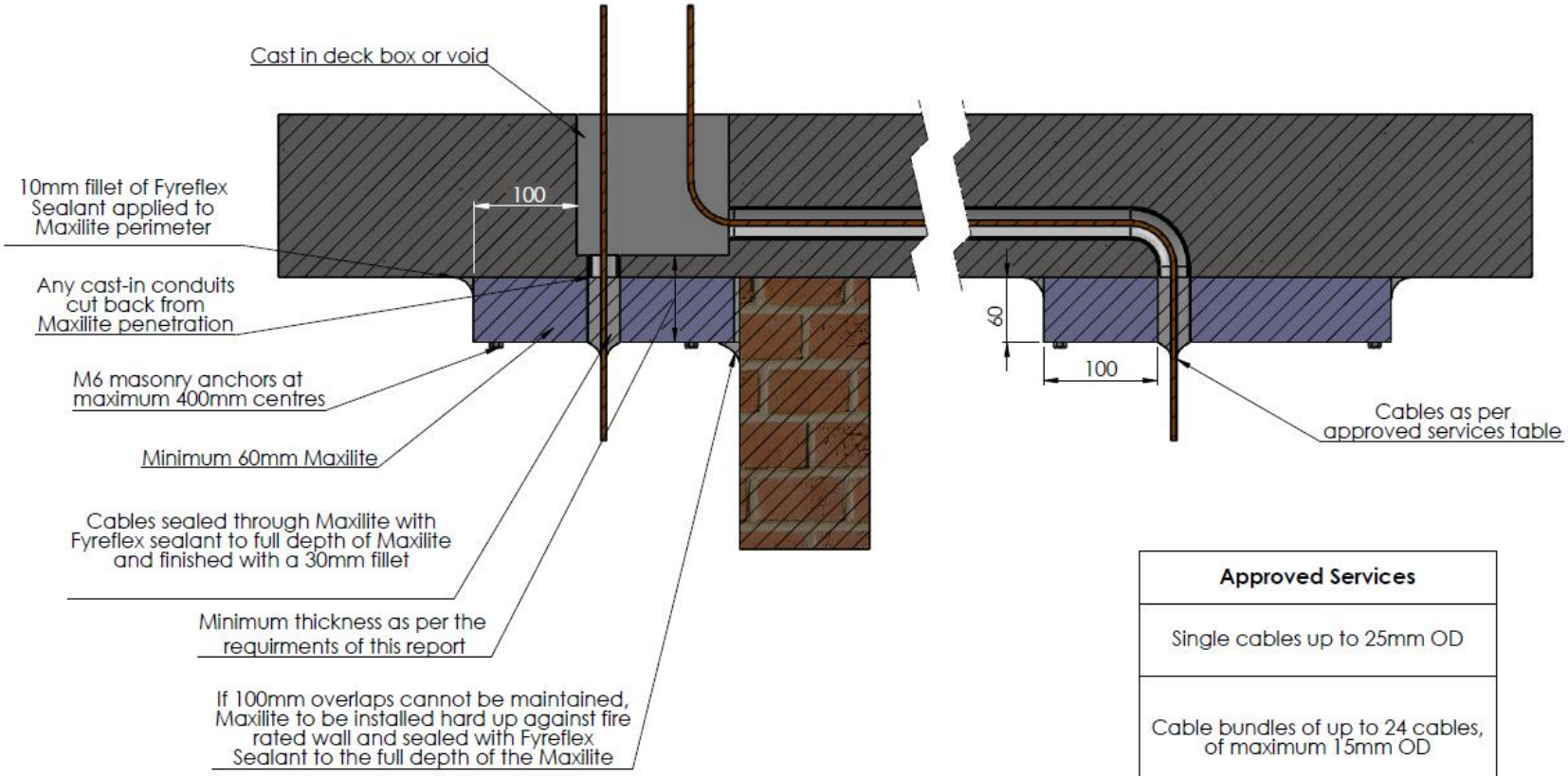
The application of FyreBOARD Maxilite to the concrete allows for cast in services to achieve an FRL up to -/120/120 whilst preserving the insulation performance of the slab. Structural adequacy is to be confirmed by a structural engineer or other appropriately qualified person.

FRL	Up to -/120/120 (Limited to the FRL of the slab)
Approved Systems	Concrete in accordance with AS 3600 and designed for cast-in deck boxes no larger than 800mm x 800mm. Cable and conduit services treated through FyreBOARD Maxilite with FyreFLEX Sealant and FyreCHOKE Micro Collars respectively.
Maximum Size of FyreBOARD Maxilite	FyreBOARD Maxilite to overlap the deck box footprint by 100mm on all sides
Fixing Specifications	Fixings equal to 1.5x FyreBOARD Maxilite thickness (Minimum) M6 all steel masonry anchor or larger Perimeter sealed with FyreFLEX sealant

Face fixed FyreBOARD Maxilite

FyreCHOKE collar installed with conduit

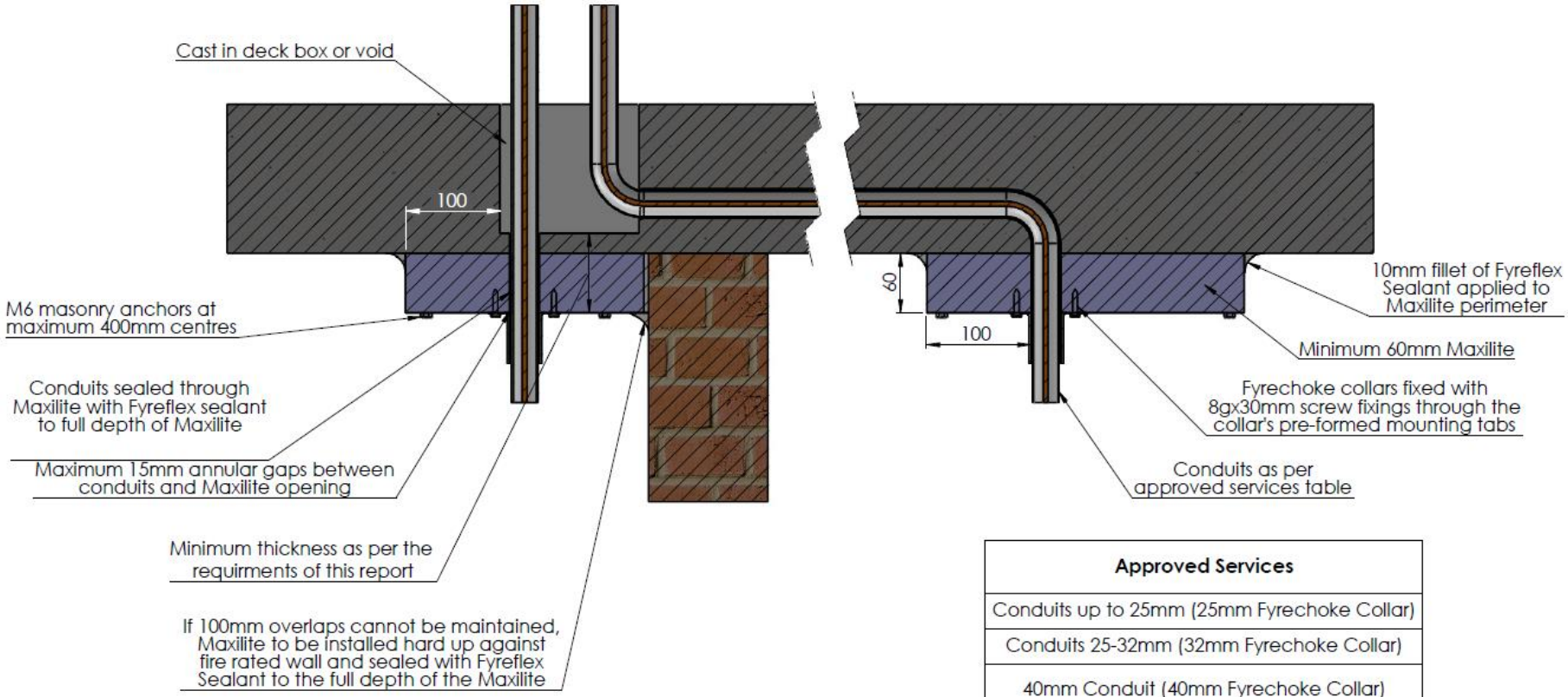
Section B – Deck Boxes - Cables



Approved Services
Single cables up to 25mm OD
Cable bundles of up to 24 cables, of maximum 15mm OD

Notes:
- Maximum annular gaps around cable services 20mm (ie. 20mm cable will require a max. 60mm opening)
- Sealant installed to full depth of Maxilite
- FRL of floor slab is maintained in regards to insulation performance only, structural adequacy to be confirmed by others

Section B – Deck Boxes - Conduit



Approved Services
Conduits up to 25mm (25mm Fyrechoke Collar)
Conduits 25-32mm (32mm Fyrechoke Collar)
40mm Conduit (40mm Fyrechoke Collar)
50mm conduit (50mm Fyrechoke Collar)

Notes:
- Fyrechoke collars installed as per approvals
- Conduits installed empty or with cables (inlcuding NBN fiber)
- FRL of floor slab is maintained in regards to insulation performance only, structural adequacy to be confirmed by others

FyreBOARD Maxilite

Concrete Upgrade Systems

Ordering Information

FyreBOARD Maxilite Fire Rated Board					
Product Code	Colour	Board Sizes	Thickness	Pallet Qty	Weight Per Board
FyreBOARD Maxilite – 30mm	White	1520 x 1000mm	30mm	30	16 kg
FyreBOARD Maxilite – 40mm			40mm	22	22 kg
FyreBOARD Maxilite – 60mm			60mm	12	32 kg
FyreBOARD Maxilite -L- 30mm	Blue	2040 x 1220mm	30mm	35	23 kg
FyreBOARD Maxilite -L- 40mm			40mm	26	30 kg
FyreBOARD Maxilite -L- 60mm			60mm	17	45 kg

FyreBOARD Maxilite FAQ:

1. What type of fixings are required? **Fixings must be all steel and suitable for Masonry (Zinc plated, or Galvanised fixings are suitable). Fixings must be a minimum 1.5 x FyreBOARD Maxilite thickness.**
2. Are cover strips required? **For slab upgrades, cover strips are required for the full length of any joins.**
3. What is the required spacing between cast in services? **FyreBOARD Maxilite can accommodate 50mm between penetrations, measured edge to edge.**
4. Is it suitable for NBN conduit? **Yes, we have test 25mm NBN conduit passing through a FyreCHOKE collar, installed through FyreBOARD Maxilite.**
5. Do I need to seal both ends of the conduit? **FyreCHOKE Collars are only required where the conduit passes through FyreBOARD Maxilite. No sealant or collar is needed on the top side.**
6. I have limited access, can I apply FyreBOARD Maxilite to the top side of the slab? **This is not a common application, contact Trafalgar's technical team to discuss your application in more detail.**