Case Study – MIC COVID-19 Quarantine Project in Hong Kong

MODULAR INTEGRATED CONSTRUCTION (MIC) COVID-19 QUARANTINE PROJECT, HONG KONG

The MIC quarantine project was completed in early March 2020 by the Hong Kong government in order to set up a temporary quarantine facility to combat the pandemic of COVID-19. These 100 temporary single-room homes have been constructed in neat rows on an outdoor sports pitch, for anyone who the health department decides need to be isolated after coming into contact with a person who has tested positive for the virus. One of the biggest challenges was to rush and complete the construction in less than a month using lightweight construction materials that could be easily installed at the factory and later the modules could be transport to the site. These temporary rooms could be relocated and re-installed as needed.

### Products and Areas

**Completed:**
- USG Boral SHEETROCK® Glass-Mat Liner Panel Mold Tough™ - 5,000m²
- 16mm Firestop™ board - 10,000m²

**Ongoing:**
- USG Boral SHEETROCK® Glass-Mat Liner Panel Mold Tough™ - 15,379m²

### Main Contractor
China State Hai Long Construction Technology Company Limited

### Supplier
CEMAC Hong Kong

### Application
- Mould-resistant Column & Beam Fire Protection
- Mould-resistant (Cladding Wall - Liner) and Fire Rated Ceilings
Modular Fire Protection

Key attributes in the selection of the materials for the project

- Scores the highest, 10 out of 10 in the ASTM D3273 Mold Resistant Test (Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber)
- Can be exposed to limited weather up to 12 months after installation in its interior and exterior applications
- 1-hour fire rating protection in Columns and Beams
- 1-hour fire rating protection in non-load bearing Cladding walls (Shaftwall)
Modular Fire Protection

VIEW 2

CH Stud Frame
25mm USG Boral SHEETROCK® Glass-Mat Liner Panel Mold Tough®
Fire Sealant
Structural Beam RHS 200 x 200
Structural Column RHS 200 x 100
Corrugated Sheet
J Track Frame
25mm USG Boral SHEETROCK® Glass-Mat Liner Panel Mold Tough® - Fully encased Twin Beam
16mm Firestop™ boards

VIEW 3

CH Stud Frame
16mm Firestop™ boards
25mm USG Boral SHEETROCK® Glass-Mat Liner Panel Mold Tough® - Fully encased beam Module 1
Structural Beam Module 2
Structural Beam Module 1
25mm USG Boral SHEETROCK® Glass-Mat Liner Panel Mold Tough® - Fully encased structure
16mm Firestop™ boards
USG BORAL SHEETROCK® GLASS-MAT LINER PANEL MOLD TOUGH®

Glass-mat liner panels with enhanced moisture and mould-resistant gypsum core, with an uncoated inorganic green front and back-mat facer. Non-combustible, moisture and mould-resistant high-performance panels for semi-exposed shaft wall and area separation wall systems.

**Application Fields**

**Walls**
- Ideal to use in high-rise buildings enclosing the shaft wall of the lifts or elevators
- Area separation walls, mechanical and stair shafts
- High-rise commercial and mixed-use buildings

**Benefits**

**Water, Moisture and Mould Resistance**
- Mould-resistant: Scores a 10 (highest) when tested in accordance with ASTM D3273
- Resists Water: Water-resistant gypsum core with water-repellent glass-mat on both sides
- Patented Mold Tough® technology

**Meets Industry Standard**
- Comply with ASTM C1658 Part 6
- Comply with ASTM C1177 section 5.2.5 for water resistance
- Non-combustible gypsum core per ASTM E136 and BS 476: Part 4

**Exposure**
- Can be exposed to limited-weather for up to 12 months after installation in its interior and semi-exterior applications

**Fire rated**
- The panels are fire resistance in accordance to BS EN 1364-1:2015 and UL Classified (Type SLX)
- Up to 2-hour fire rated systems in accordance to BS EN 1364-1:2015

### Feature | Description
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**Thickness** | 25.4mm (1”)
**Weight** | 21.1 kg/m²
**Width** | 610mm (24”) 600mm
**Lengths** | 2440mm (8’), 2300mm*
**Edges** | Double beveled edges

Firestop™ is specifically formulated fire-resistant core plasterboard providing an ideal solution for projects where specific fire resistance ratings are required in partition wall and ceiling systems. It is used in proprietary systems providing lightweight fire and acoustic performance.

**Benefits**

- Fire-resistant
- High acoustic performance

### Feature | Description
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**Thickness** | 16mm
**Edge Profile** | Recessed Edge
**Paper Colour** | Pink
Lateral View

Single-room Homes
PRODUCT INFORMATION
See www.usgboral.com for the most up-to-date product information.

SALES & TECHNICAL INQUIRIES
technical@usgboral.com

There are many variables that can influence construction projects, which affect whether a particular construction technique is appropriate. Before proceeding with any project, we recommend you obtain professional advice to ascertain the appropriate construction techniques to suit the particular circumstances of your project. We recommend you use qualified tradespersons to install this system.

The technical information contained in this manual was correct at the time of printing. Building systems, details and product availability are, however, subject to change. To ensure the information you are using is current, USG Boral recommends you review the latest building information available on the USG Boral website.

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