

V.R. Board (vandal resistant) & Ballistic Board

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V.R. Board information

Millions of dollars are lost every year through the destruction of private and public property, and the theft of valuable machinery and equipment. Consider not only the cost of replacing stolen or damaged goods, but the added expense of repairs to premises where thieves have forced entry. A composite panel of selected materials – combined with special technology Guardian V.R. Board reduces the risk of breaking and entry. The possibilities and applications are endless – schools, shops, service stations, pharmacies, surgeries, homes and prisons – in fact anywhere that might be considered a target for vandals and thieves. Guardian V.R. Board makes it a great deterrent to breaking in (or out). Extensive testing has shown that Guardian V.R. Board is time consuming to destruct. Testing using typical burglary “tools of trade”, Guardian V.R. Board proved extremely hard to penetrate. After numerous blows from both a sledge hammer and a mattock comparatively little damage was sustained – even total destruction of the panel allowed no penetration. Entry into any premises constructed using Guardian V.R. Board would be a major task. Guardian V.R. Board won't burn, is impervious to moisture, and is extremely durable. When you add up the benefits, Guardian V.R. Board is far superior to most alternative on the market today.

HISTORY

This product was developed in 1987, to satisfy a need of the State Works Dept., Qld., to prevent breaking and entering, vandalism and theft in and around schools in that State. Since that time like products have been used in wall sheeting internally and externally in schools, police stations, courthouses, watchhouses, youth correctional centres, security rooms, internally in High Schools lining of equipment rooms in Telecom Exchange buildings, walls, ceiling and floors of “safe rooms” in Consulate staff accommodation overseas.

Subsequently more and more applications are developing as vandalism appears to be on the increase.

Major Australian companies are working with Guardian in research and advice which will flow on to both users and specifiers.

Considerable interest has been shown overseas and Guardian have access to many companies who can assist in improved technology.

The Club movement and entertainment industry can benefit from the incorporation of Guardian V.R. Board in their building programs in areas where large amounts of cash and valuables are stored.

WHERE HAS THE PRODUCT BEEN USED

- Telstra Telephone Exchanges
- Police Courts
- Corrective Services
- Primary Schools
- High Schools and Colleges
- Hospitals
- Clubs
- Embassies
- Commercial Offices
- State Rail Authorities

New applications and jobs are being added all the time.

TEST RESULTS

New and improved technology is constantly being introduced to this product and often it is years before definitive information can be given however we can report Guardian V.R. Board composites are the most tested Security panels of a like nature both inhouse, in approved environments and approved testing laboratories on the market in Australia today.

Here are some of the results in 1987

- AS1530-3-1989
 - Ignitability Index 0 Range 0-20
 - Spread of flam Index 0 Range 0-10
 - Heat evolved index 0 Range 0-10
 - Smoke developed index 0 Range 0-10
- Sound transmission is low – Reflection 98%
- Sound attenuation 30dB based on a relatively thin composite.
- “Approved for Embassies” by Government Department.
- Cyclone tested using a light steel composite “resisted a 4kg missile at 15m/s”.
- Tested by Government Department in accordance with AS3555 1988 Levels 1-6 Intruder Resistant Modular Vault Walls Panels.
- No penetration when tested in the SO class 3m Range 400 m/s Velocity. AS2343 - Part 2 - 1984.
- Adhesive functional to 120°C.
- Testing procedures involved...
 - a. Optimum Steel Thickness Determination – Soft body Impact Test.
 - b. Fixing method determination.
 - c. Site cutting determination using Electric saw, Electric Jig Saw.
 - d. Security – Hard body (Axehead) Impact Test
OxyAcetylene Cutting Test
- During a series of flexural strength tests the fibre cement did not separate at the metal-fibre cement interface.
- During a series of tests the bond was always stronger.
- Guardian V.R. Board will work well with Motion Sensors using Microwave and Passive Infrared patters with warning systems. The warning systems can be wired to a phone, computer monitor, Police Station and a siren fitted.

- Three point flexural strength apparatus was used to test and produced this report...
“...the adhesive strength was much greater than interply strength of the fibre cement. Overall density of the material is greater than compressed fibre cement. Strength is comparable to compressed fibre cement. During all the flexural strength tests the fibre cement did not separate at the metal-fibre cement interface. The bond at that point was always stronger.
Conclusion: Compared to earlier boards that I inspected the recent samples (Guardian V.R. Board) I believe to be superior.”

FIXING SUGGESTIONS FOR GUARDIAN V.R. BOARD

FIXING METHODS – In one typical test the following system was employed when used in conjunction with Rondo Studs ranging from 0.6mm to 1.2mm thick–
Deutsher - 8/18 x 35mm self embedding head
“Wing Tek” screws.
- 8/18 x 25mm extended point screws.

In another when fixing to a timber frame –
Buildex Type 17 No. 10-12 x 30mm were used.

NOTE – Panels should be pre-drilled.

STUD SPACING: 600mm centres maximum.

FIXING SPACINGS: 200mm around perimeter with minimum edge clearance 15mm. 400mm through centre of sheet.

