

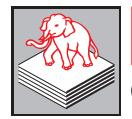
ELEPHANT X-Bloc



X-Ray Radiation Protection



The Siam Gypsum Industry (Saraburi) Co., Ltd.
A member of USG Boral Building Products

 **ELEPHANT**
Gypsum Board

Elephant



Partition gypsum board specially made for x-ray radiation protection. Includes "Barytes" which enhancing its x-ray radiation protection ability. Uses with X-Bloc jointing compound to match the performance with Lead wall properties.



Innovation for X-ray

Elephant X-Bloc partition system consist of X-Bloc gypsum board and X-Bloc jointing compound. Starred with X-ray radiation protection provides to operators in x-ray operation rooms, dental clinic and veterinary clinic.

System Benefits

 **Provide x-ray radiation protection** with X-Bloc

 **Safe for Health** contain no Lead

 **Save time spend on installation** same as regular gypsum board

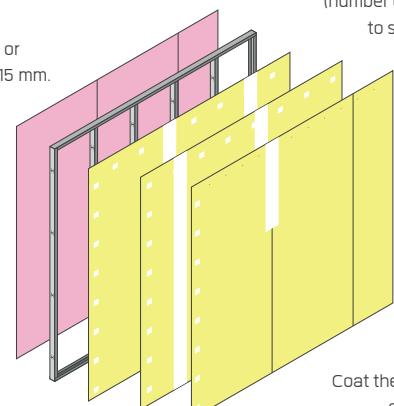
 **Easy to install** Lead wall is more complicate

 **Block the sound** up to 54 dB*

 **Fire resistant** up to 45–60 minutes**

 **Ease to extend**

Elephant MultiWall or
Elephant FireBloc 15 mm.
1 layer



Elephant X-Bloc 13 mm.
(number of layer refer
to specification)

* when install 3 layers of X-Bloc with glass wool insulation.

** Depend on the number of X-Bloc layer.

Installation

- Install Elephant X-Bloc with Elephant Prowall partition metal profile C74
- Left the space between boards for 2 mm.
- Install without leaving the space from the floor.
- Apply a coat on
 - Joint between the boards
 - Must coat every joints on every layers
 - Screw head on every layers
 - Coating along with applying the cotton tape
- DO NOT use grout to coat the joint



Product Information

| | |
|-----------------------|-------------------|
| Size | 1200x2400x13 mm. |
| Weight / piece | 49 kg. |
| Edge | Tapered |
| Compound weight / bag | 25 kg. |
| Usage / bag | 90 m ² |

Specification

Install Elephant X-Bloc partition system size 1200x2400x13 mm. with Elephant Prowall C64 size 64x34 mm. and U66 size 66x30 mm. (or C74 & U76, C92 & U94) 0.52 thickness certified by TIS. 863-2532 which produced from Hot-dip galvanized steel following TIS. 50-2538 and JIS G 3302 standard along with Elephant brand accessories. Coating the joint with X-Bloc jointing compound distributed by The Siam Gypsum Industry (Saraburi) Co., Ltd.

X-ray Operation room

| Wall Type | Thickness | Weight | Time Used |
|-----------------------------|-----------|-------------------------|-----------|
| Brick Wall | 25 cm. | 510 kg./m ² | 8 Days |
| Concrete Wall | 15 cm. | 360 kg./m ² | 7 Days |
| X-Bloc 4 layers | 14.1 cm. | 78.4 kg./m ² | 3 Days |
| Gypsum board with 2mm. lead | 11.1 cm. | 60 kg./m ² | 3 Days |

* Refer to Thailand

Elephant



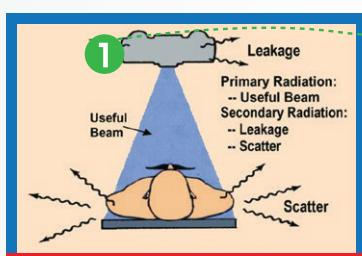
Innovation for X-ray

Performance |

Elephant X-Bloc's performance when compared to the thickness of lead wall depends on the density of emitted x-ray radius from the emitter as refer to the table, which show the comparison between Elephant X-Bloc and lead-wall thickness level (mm.) at the different density. For the safest and highest performance, the specification and system should be thoroughly considered when design x-ray radiation protecting system.

Elephant X-Bloc calculation for x-ray radiation protection

| X-ray energy | Elephant X-Bloc Lead equivalence (mm.) | | | |
|--------------|--|----------|----------|----------|
| | 1 layer | 2 layers | 3 layers | 4 layers |
| *80 kVp | 0.7 | 1.6 | 2.4 | 3.0 |
| **100 kVp | 0.63 | 1.38 | 2.09 | 2.82 |
| **120 kVp | 0.51 | 1.04 | 1.48 | 2.0 |
| **135 kVp | 0.46 | 0.78 | 1.21 | 1.52 |
| **150 kVp | 0.38 | 0.64 | 0.98 | 0.26 |



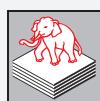
1 Check x-ray energy level

1.2mm Pb

2 Compare Lead thickness then select the number of X-Bloc layer(s) that have a greater value than X-ray room's Lead wall thickness.

* Test from New Zealand National Radiation Laboratory

** X-ray radiation protection test from Department of Medical Science, Thailand



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