

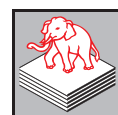
# ELEPHANT X-Bloc



X-Ray Radiation Protection



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



**ELEPHANT**  
Gypsum Board

# Elephant X-Bloc








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.

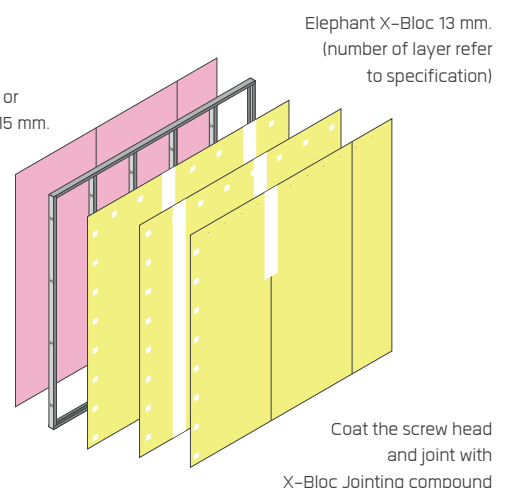
## System Benefits

-  **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**

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

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

Elephant MultiWall or  
Elephant FireBloc 15 mm.  
1 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 <sup>2</sup>

# 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 <sup>2</sup>	8 Days
Concrete Wall	 15 cm.	 360 kg./m <sup>2</sup>	7 Days
X-Bloc 4 layers	 14.1 cm.	 78.4 kg./m <sup>2</sup>	3 Days
Gypsum board with 2mm. lead	 11.1 cm.	 60 kg./m <sup>2</sup>	3 Days

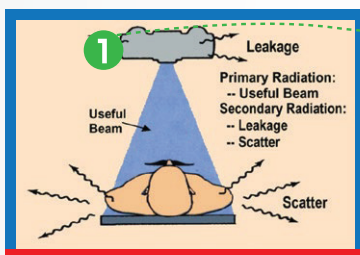
\* Refer to Thailand

## 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



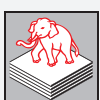
1 Check x-ray energy level

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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