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# Pre-Engineered Building

Edition: March 2024

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**Pre Engineered Building basically refers to the method of manufacturing different components for a building, transferring them to the construction site and assembling the components to set up a building.**




## **Advantages of Pre-Engineered Buildings:**

- Cost-effective & offer time savings.
- Non- combustible.
- Versatile and offer architectural options.
- Quality and durable structures.
- Low-maintenance.
- Sustainable.
- Superior strength and durability.
- Eco friendly.

## **Challenges for Pre-engineered Buildings:**

1. Rusting of steel structures.
2. Joints in Cement Board/ Panels/ EPS Panels, etc. which tends to crack.
3. Seamless surface is not possible.
4. Adhesion to the surface is not good.
5. Undulation of the surface.
6. Seepage through joints.
7. Cracks in AAC Block.
8. Adhesion of AAC Block to MS Surface is not good.

<u>STRUCTURE</u>	<u>PARTITIONS</u>
 <p><b>Mild-steel Structure</b></p>	Cement Board/ Panel
	AAC Block
	EPS Panels
	Precast Panel



**Cement Board/ Panel**



**AAC Block**



**Precast and EPS Panel**

**We are introducing the following products to address these challenges effectively:**



**Magic Xp-Elastomeric Paintable Putty/Plaster**  
**Coverage: 150-200 sq.ft. per 20 Kg**



**AAC Bond- Super Polymerized Bond**  
**Coverage: 60 sq.ft. on 150 mm width per 20 Kg**



**Rusto - Rust Inhibitive Primer**  
 (For MS surface)  
**Coverage: 65-70 sq.ft. per Ltr in two coats**



**Tilo-Polymerized Adhesive**  
 (For tile & stone pasting)  
**Coverage: 03 sq.ft. per Kg**

**LEAKPROOF SERIES**



**LPPO-Leak Proof Part One**  
 (For arresting fine pores)  
**Coverage: 40-45 sq.ft. in two coats, per Kg**



**LPPT-Leak Proof Part Two**  
 (For major cracks and voids)  
**Coverage: 7-8 sq.ft. in two coats, per Kg**

## Rate analysis of Partitions in PEBs

Particulars	Material Cost	Coverage	Cost/sq.ft.
<b>AAC Bond</b> (For pasting of 4 inches blocks)	Rs. 1230/- (20 Kg)	60 sq.ft.	<b>Rs. 20.50</b>
<b>P-Laster</b> (Directly as plaster of 3 mm on AAC Blocks)	Rs. 1250/- (20 Kg)	40 sq.ft.	<b>Rs. 31.50</b>
<b>Magic Xp</b> (On Precast/EPS/cement Panels)	Rs. 2,500/- (20 Kg)	150 sq.ft.	<b>Rs. 16.50</b>
<b>Magic Xp</b> (On cement boards)	Rs. 2,500/- (20 Kg)	200 sq.ft.	<b>Rs. 12.50</b>

**The above rates are exclusive of GST.**

### Application Procedure Of Magic Xp–Elastomeric Paintable Plaster on PEBs

- For panels, boards and AAC blocks, we suggest to affix the nylon mesh across the surface as a reinforcing agent.
- However, for modular construction like cement board/ pre-cast panel/ EPS panel/ AAC block panels, etc. you may use 4 inches nylon mesh after filling the joints with **Magic Xp- Elastomeric Paintable Putty**.
- Allow the material to sink in after every step.
- Apply **Magic Xp- Elastomeric Paintable Putty** across the surface in two coats and ensure that there are no blade marks.

## Rusto- Rust Inhibitive Primer

Rusto converts rust into stable iron thereby arresting the oxidation process and improving the life of the paint applied on top.



**Rusto - Rust Inhibitive Primer**  
(For MS surface)  
**Coverage: 65-70 sq.ft. per Ltr**  
**in two coats**



## Application Procedure:

- Clear the surface of any loose particles with 100 no. emery paper.
- Surface must be clear of any grease or oily material.
- Mix M.T.O. 15% -20% in **Rusto** to make it brushable or sprayable.
- Apply two coats with a gap of 6 to 8 hours between coats.

### **Why do we get cracks in these kind of partitions?**

Cracks happen because of thermal expansion and contraction. The material contracts when the temperature comes down and does not have a mechanism to expand when the temperature goes up.

### **Do you have a solution for this?**

Yes. We have an ELASTOMERIC product called **Magic Xp** which can expand and contract to thermal fluctuation between a temperature of 0 to 50 degree celsius. This must be applied by reinforcing with nylon mesh in the joints and an AAC block mesh has to be pasted on entire area.

### **Can we remove the undulation on walls?**

Yes, we can remove the undulation by using an aluminium tube and applying **Magic Xp** as punning.

### **Can it sustain the impact of lateral movement and earthquakes?**

Yes. The material **Magic Xp** is flexible and has an excellent adhesion to ensure good flexibility to sustain any kind of vibration and jerks as long as the substrate is in-tact.

### **When will it debond and why?**

It will debond only with water seepage from the negative side. Should it happen remove the affected portion, repair the source of seepage and re-apply **Magic Xp**.

### **Can this be used on interiors?**

Yes. This is an exterior grade product and can be used in the interiors as well.

### **How do we paste tiles/stones on dry walls?**

We have a product called **Tilo**- Polymerized Adhesive which can adhere to the walls very well.

### **How can we arrest the seepage?**

The seepages could be from positive or negative side. We can arrest seepage from the positive side by using our **Leakproof series** (LPPO and LPPT).

### **Why do steels get rust?**

Rust is a disintegrated form of iron due to the presence of oxygen. The disintegrated form of iron is chemically known as ferric-oxide.

### **How can rust be prevented?**

Rust can be prevented by using **Rusto**- Rust Inhibitive Primer. It converts the rust into non-corroding iron tannate and stops the oxidation process which ensures the rust does not reccur.

### **What do you mean by laminating the building?**

Lamination of building means protecting the surface from heat, rain, water and indentation. This will make the surface crack-free and will stop the water ingress from the outside.

“First Time Right”

**Magic Xp** in combination with  
**AAC Bond | Rusto | Tilo**  
addresses all these  
challenges effectively and  
efficiently.



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