



**EXPOSED MASONRY
BEST PRACTICES**
POROTHERM CLAY HOLLOW BLOCKS

POROTHERM



POROTHERM HP PRODUCT SPECIFICATIONS (NON - LOAD BEARING)

POROTHERM HP - PRODUCT SPECIFICATIONS											
Name	Length	Width	Height	Weight	Density	Compressive Strength	Water Absorption	Efflorescence	U - Value	Sound Insulation	Free Resistance
	MM	MM	MM	Kg.	Kg/m ³	N/mm ²	%		W/m ² K	Rw (db)	Min
POROTHERM HP - 200	400	200	200	11.1	694	≥3.5	~15	Slight	1.0	44.08	240
POROTHERM HP - 150	400	150	200	8.8	733				1.2	41.90	120
POROTHERM HP - 100	400	100	200	6.3	788				1.7	38.75	90
POROTHERM HP - 200 H	200	200	200	5.6	Same as full bricks	Same as full bricks	Same as full bricks	Same as full bricks	Same as full bricks	Same as full bricks	Same as full bricks
POROTHERM HP - 150 H	200	150	200	4.4							
POROTHERM HP - 100 H	200	100	200	3.2							

TOLERANCE FOR POROTHERM				
Dimensions (mm)	400	200	150	100
Tolerance in (mm)	± 8	± 4	± 3	± 2
Weight/ Density	± 10%	As per EN 771 -1 Class D1		

Note: POROTHERM is manufactured using natural Raw materials, hence there could be variations in colour. • Compressive testing is performed as per IS 3952 method Ref: Annexure A of IS 3952. • Sound Insulation is an estimated value as per Mass Law - NBC without render considered. • Crushing strength is performed on plain parallel surface - ensured by grinding.

CLAY HOLLOW BLOCKS



POROTHERM VP PRODUCT SPECIFICATIONS (LOAD BEARING)

POROTHERM VP - PRODUCT SPECIFICATIONS

Name	Length	Width	Height	Weight	Density	Compressive Strength	Water Absorption	Efflorescence	Sound Insulation	Free Resistance
	MM	MM	MM	Kg.	Kg/m ³	N/mm ²	%		Rw (db)	Min
POROTHERM VP - 200	400	200	200	11.8	734	≥ 7.0	≤ 20	Slight	45.00	240
POROTHERM VP - 150	400	150	200	8.85	738				42.00	120
POROTHERM VP - 100	400	100	200	6.98	873				43.00	90

TOLERANCE FOR POROTHERM

Dimensions (mm)	400	200	150	100
Tolerance in (mm)	± 8	± 4	± 3	± 2
Weight/ Density	± 10% As per EN 771 -1 Class D1			

Note: POROTHERM is manufactured using natural Raw materials, hence there could be variations in colour. • Compressive testing is performed as per IS 3952 method Ref: Annexure A of IS 3952. • Sound Insulation is an estimated value as per Mass Law - NBC without render considered. • Crushing strength is performed on plain parallel surface - ensured by grinding.

EXPOSED MASONRY DOs

Exposed masonry walls to be constructed on the raised level – plinth level – minimum one meter above the finished ground level.

- This will allow walls to be away from water logging / moisture contact from soil etc.



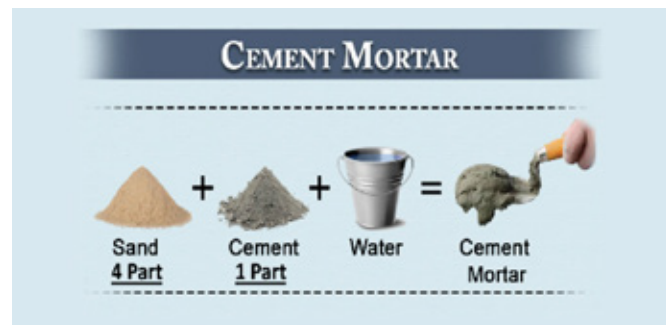
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MASONRY WALLS TO BE CONSTRUCTED USING GOOD QUALITY RAW MATERIALS:

- Graded / sieved & washed sand (avoid silt in the sand)
- 43 grade OPC cement or PSC or PPC cement of any good reputed brand (Portland Slag Cement & Portland Pozzolona Cement)
- Water to be potable water – avoid use of hard water for mixing, curing etc.

Masonry mortar for exposed masonry to be of mix 1: 4 (1 Part cement & 4 parts sand)



POROTHERM Clay Hollow Blocks to be prewetted – by spraying adequate water on the bricks.

Pre-dipping method not necessary.

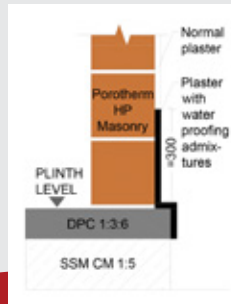


EXPOSED MASONRY - APPLICATION DOs

Provide base course / leveling course of DPC – damp proof course in PCC (1:2:4) with water proofing additive added.

- This will avoid water seepage from ground to walls
- Provide strong level base for the walls – with no settlement

DPC course / leveling course to be done and cured in advance



Line & level for the wall to be maintained and regularly checked using line string, aluminum float & water level tube.



Course planning is a must to ensure full brick used in each course

- For course planning, consider height of the brick as 212 mm (200 brick + 12 mm mortar joint)
- Hacking on to the adjacent RCC members necessary to develop a good bond with masonry & RCC
- Staggering of the vertical joints necessary (1/2 length of brick vertical joint staggered)

EXPOSED MASONRY - APPLICATION DOs

Use of masonry tool recommended to save time, mortar and provide uniform mortar thickness.

One tool for all wall sizes



Adjustable for all POROTHERM wall thicknesses



The masonry wall to be cleaned of all spill overs (cement, mortar etc.) with fresh potable water immediately after spill over or within the time it sets and leaves a stain on the surface.

- The cleaning activity to be carried out frequently using jute brush or jute rope ball & clean with potable water. Soap, acid, detergent must not be used. Stain marks can be removed easily if cleaned immediately using adequate water & little nonabrasive effort/ rubbing.

End bricks (POROTHERM VP) to be used at wall junctions, corners & wall ends to ensure proper closure of voids & high strength for door / window installations.

- Please note POROTHERM HP & POROTHERM VP renders are not similar. One may need to render / plaster the corner strips.



POROTHERM VP: Use of mesh recommended for horizontal laying of mortar

- Provides high strength & bond for load bearing walls
- Cost for GI mesh in market is approximately Rs. 3 to 4 / meter roll (100 mm. width)



POROTHERM – CONCEALED STIFFENER BAND



- Bricks to be cut using electric cutting machine
- Concealed stiffener band is to be introduced in 100 mm thick wall at every one meter height or as recommended in the design
- This will save on time, money & labor
- Channels can be cut & used for introducing RCC stiffener band in masonry



POROTHERM – PRECAST CONCEALED DOOR LINTELS

POROTHERM Lintels can be casted at site. Reinforcement details to be followed as per structural detailing provided by the structural engineer. Maximum span of the lintel to be restricted to 1.5 meters.



EXPOSED MASONRY – APPLICATION DOs

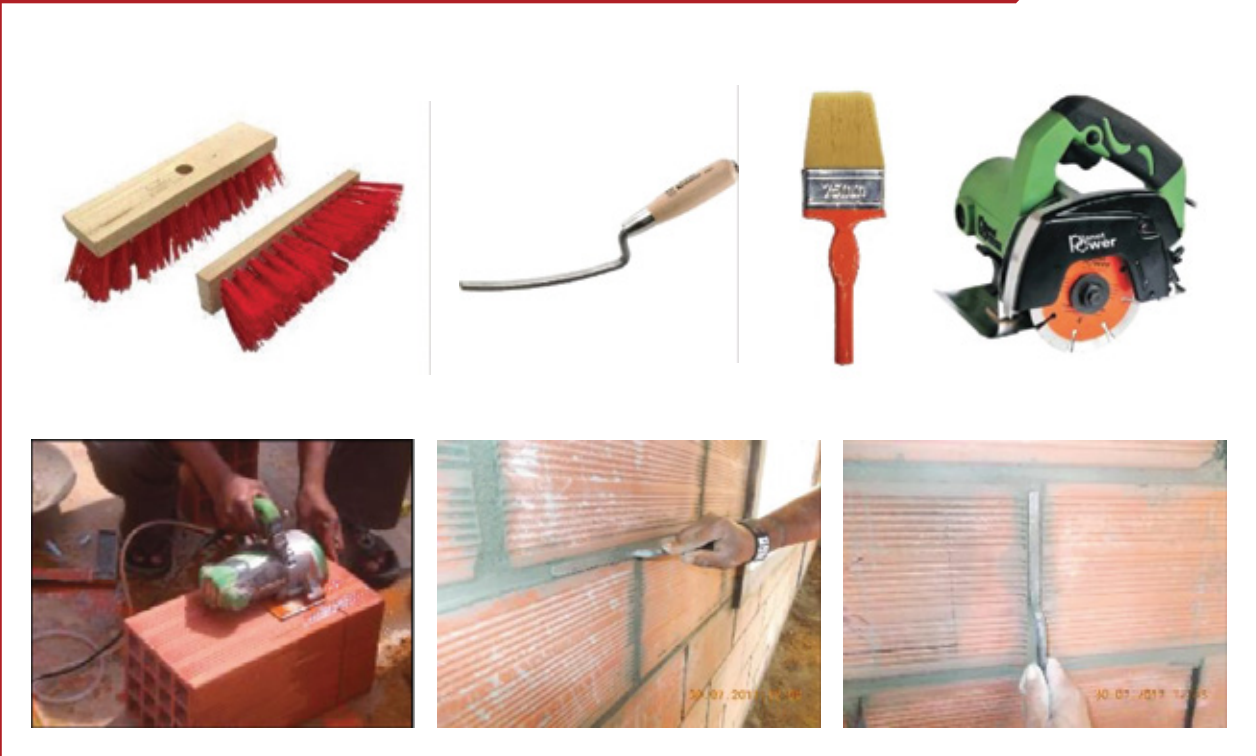
Once masonry is done and cured adequately – jointing & pointing activity needs to be done mandatorily

- It is a mandatory / necessary activity to be conducted
- Use sieved clean washed fine sand + cement (43 grade) in 1:1 ratio
- Color pigment of choice or grog (fine burnt clay brick granules) mixed with white cement can be used to give desired texture / color to the mortar joints

Post jointing & pointing activity walls needs to be cured adequately to avoid joints cracking or mortar powdering

Specific tools needs to be used for jointing & pointing – trowel, brush, pointer, notch trowel, masking tape etc.

EXPOSED MASONRY – APPLICATION TOOLS





EXPOSED MASONRY – APPLICATION WEATHER PROTECTION COAT

POROTHERM clay hollow blocks are made out of 100% natural clay with zero chemical additives. It may have color variation on the bricks.

As per Indian Standard 3952 – it may have “slight” efflorescence – largely the efflorescence is from the salts present in the masonry mortar mix (which is natural)

POROTHERM is fired at very high temperatures of 900°C+

To achieve uniform color for POROTHERM walls, one may choose to apply protective coat of varnishes, paint commonly available in the market



EXPOSED MASONRY – THINGS TO LOOK AT



PLANNING STAGE:

- Plan in advance for exposed masonry
- Wet areas such as kitchen, utility, toilets should not be exposed
- Sun shades / slope roofs should have adequate projection, waterproofing to be done at abutment areas. Ensure no water clogging on sun shade areas – should be open and clean to drain out water freely.

CONSTRUCTION STAGE:

- Good quality construction practices adopted
- Curing done adequately for the masonry joints & for jointing pointing
- Bearing for lintels should be minimum 200mm on each side
- Cross wall to be interconnected with tooth connections
- Packing of the joints to be done properly – leaving no space for any void or through & through gap

EXPOSED MASONRY:

- In exposed masonry the masonry wall are left exposed without plaster or render
- The brick masonry wall may be coated using protective coats

PROTECTIVE COATS ARE AVAILABLE

- In desired paint color – terracotta color

OR

- Transparent protective coat – in gloss & matt finish
Gloss would provide some shine to the surface
Matt would provide no shine to the surface
- Protective coats need to be re-applied after an interval of some years depending on the weathering of the surface, etc.

EXPOSED MASONRY – THINGS TO LOOK AT



SOME RECOMMENDATIONS:

Asian Paints:

Color: Apex tile guard -
Copper 0587

Clear Coat: Apex tile guard –
Clear 5495

Available in Matt & Gloss finish

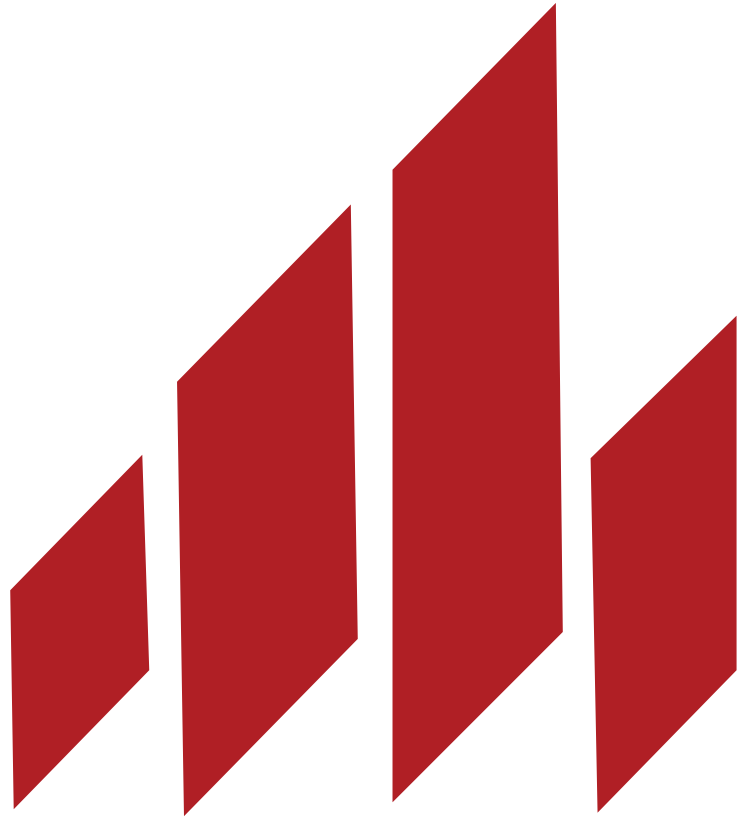


Novaxy Coating and Sealants

www.novaxy.com

WP150 – Tile Red

Novalic – Liquid Polymer – Transparent coating



For Further Guidance on Exposed Masonry

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