



## THIN BED MORTAR

**Tytan Professional Thin Bed Mortar** is designed for raising walls with thin joints, made of high-accuracy materials (flatness/height deviation not larger than 3mm per running meter). The joined elements are calibrated blocks made of autoclaved aerated concrete and grinded ceramic blocks used construction of ground outer plastered walls and inner walls. The PU mortar is dedicated both for load-bearing walls and partition walls.

### BENEFITS

BENEFITS	
EFFICIENCY OF BRICKLAYING FROM ONE PACK (CAN)	▲▲
ADHESION TO BUILDING MATERIALS SURFACE	▲▲
WIDE APPLICATION TEMPERATURE RANGE	▲▲▲
EFFECTIVITY OF PREPARATION	▲▲▲
EFFECTIVITY OF APPLICATION	▲▲▲
THERMAL BRIDGES ELIMINATION	▲▲▲
CLAEN TECHNOLOGY	▲▲▲

### LEGED DESCRIPTION

▲▲▲ high  
▲▲ increased  
▲ normal  
▼▼ decreased  
▼▼▼ low  
- no applied

\* IN COMPARISON TO TRADITIONAL CEMENT BASED MORTARS

### APPLICATION CONDITIONS

CAN TEMPERATURE	+10°C to +30°C
APPLICATION TEMPERATURE	-10°C to +30°C
SUBSTRATE TEMPERATURE	-10°C to +30°C
RECOMMENDED MINIMAL AIR RELATIVE HUMIDITY AT 23°C	45%

### APPLICATION METHOD

Check the safety instruction located at separate document MSDS or end of the document before applying the product

#### 1. SUBSTRATE PREPARATION

**TP TBM must be used for raising walls on accurately leveled foundations. In case of uneven surfaces, the first layer of the wall must be raised with the use of traditional mortar. Unlevel walls cannot be corrected in consequent layers.**

- Surfaces must be free of dust, debris and other materials that would impair the bond strength.

#### 2. PRODUCT PREPARATION

- Too cold can should be brought to permitted temperature for instance by keeping at warm water ( $\leq 30$  °C) or keeping at room temperature for min. 24 h before application.
- In order to apply the product correctly, make sure the can temperature and the applicator temperature are the same..
- Make sure the can temperature meets the requirements specified on the container.

#### 3. MORTAR APPLICATION

- Put the safety gloves on
- Shake the can vigorously (ca. 30 sec. keeping the can upside down) in order to mix the ingredients properly.

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## TECHNICAL DATA SHEET

- Screw can onto gun applicator.
- Working position is always upside down position (position with valve down).
- Apply the mortar along the brick/ block forming bead with required diameter 3-6 cm
- keeping 5 – 6 cm distance from the side edge of the block/ brick.
- Adjust application speed by controlling gun's trigger in order to maintain required bead diameter. Keep the gun nozzle in the already applied mortar mass – abt. 1 cm above the block/ brick surface.
- Number of required beads depends on width of used blocks/ bricks. Guidelines shown in the table below

Calibrated Ceramic Bricks	Beads applied horizontally only
[mm]	No. of beads
Up to: 140	1
From: 170	2

Aerated Cellular Concrete	Beads applied horizontally only
[mm]	No. of beads
240	2
440	4

- Blocks/ bricks should be put on applied mortar up to 3 minutes from it's application (within advised 'open time'). For best results put the block/ brick 1 minute after mortar application.
- Adjust the bead length to the work pace. The recommended length of a single bead should not exceed 2 meters. This allows for performing all the necessary steps before laying the blocks or bricks within the adhesive open time.
- Layed block/ brick should be pressed slightly in order to obtain thin slit evenly spread on the block/ brick surface.
- We recommend that you perform a test arrangement (without the use of mortar) of the bricks before the job in order to check if the materials are level and match each other. Elements, which do not fulfill the requirements must not be used for the actual wall.
- Cellular concrete blocks can be grinded in order to even layer surface. Concrete blocks layed with the use of TP TBM can be horizontally corrected by up to 5mm without detaching them from the wall.
- Calibrated ceramic bricks correction is not possible.
- Blocks or bricks cannot be removed from the wall and mounted back without the use of TP TBM.
- Use appropriate tools (level, rubber hammer) to level every block or brick layed.
- To eliminate thermal bridges and increase walls durability and resistance, mortar should be applied also on vertical surfaces of the blocks/ bricks.
- In the corners and lintels, mortar to be applied as advised above, considering instructions provided by brick's producers
- Full load-bearing after 24 hours.
- Wall can be plastered 24 h after finishing of bricklaying

#### 4. FINISHING WORKS

- When a break in application is longer than 5 minutes, the gun should be blocked and nozzle should be cleaned with cleaner. After the job, clean Gun thoroughly with CLEANER (according to instruction) to prevent mortar from hardening in gun.
- It is recommended to keep the gun attached to the can. Empty can should be replaced with a full one.
- Excess of mortar remove mechanically after curing. Uncured mortar may be removed by Cleaner



## TECHNICAL DATA SHEET

### 5. ADDITIONAL REMARKS

- The mortar is designed for usage with calibrated bricks with flatness surface tolerance no higher than +/-3mm only.
- Lower than recommended application temperature results in yield decreasing and extension of the mortar drying time.
- mortar can be used up to one week after initial application
- The mortar has no adhesion to material such as: polyethylene, polypropylene, Teflon, polyamide, silicon.
- Quality and technical state of gun applicator influences final product parameters.

### TECHNICAL SPECIFICATION<sup>1)</sup>

	JEDNOSTKA	PARAMETR		STANDARD
STANDARD CONDITIONS		+23°C/50%RH <sup>2)</sup>		
CAN CAPACITY	[ml]	1000		
CONTENT	[ml]	750		
YIELD EFFICIENCY (bead size 2,5-3 cm)	[rm]	50- 60		
OPEN TIME	[min]	≤ 3		
FULL LOADING TIME	[h]	24		
THERMAL RESISTANCE	[°C]	-60 do +100		
THERMAL CONDUCTIVITY (λ)	[W/m*K]	0,036		EN 12667:2002
		WALL MADE OF CERAMIC BLOCKS	WALL MADE OF AERATED CELLULAR CONCRETE	
WALL COMPRESSION STRENGTH (formula)	MPa	$f_k = 0,50 * f_b^{0.7^*)}$	$f_k = 0,70 * f_b^{0.85^*}$	EN 1052-1:2001
BENDING STRENGTH IN CASE OF DESTRUCTION AT PARALEL PLANE TO CANTIVER SLITS	MPa	$f_{xk1} = 0,15$	$f_{xk1} = 0,30$	EN 1052-2:2001
BENDING STRENGTH IN CASE OF DESTRUCTION AT PERPENDICULAR PLANE TO CANTIVER SLITS	MPa	$f_{xk2} = 0,10$	$f_{xk2} = 0,20$	
SHEAR STRENGTH	MPa	$f_{vok} = 0,08$	$f_{vok} = 0,10$	EN 1052-3:2001
TENSIL STRENGTH PERPENDICULAR TO SLITS AFTER 24 h	MPa	0,13	0,24	EN 1607:1999
COLOR		Light Gray		

- 1) All presented data are based on laboratory tests measured according to internal standards of producer and strongly depends on curing conditions (can temperature, ambience temperature, substrate temperature, quality of gun applicator, skills and experience of person who is applying)
- 2) according to EN ISO 291:2008
- \*)  $f_b$ - normalized brick compression strength based on classification of compression strength (MPa)



## TECHNICAL DATA SHEET

### CONSUMPTION OF BRICKLAYING

No. of the beads	Coverage of the wall build with TP Thin Bed Mortar [m <sup>2</sup> ]
1	10
2	5

### TRANSPORTATION , STORAGE

#### TRANSPORT:

TRANSPORT TEMPERATURE	Period of possible transportation of mortar [days]
< -20°C	4
-19 °C do -10°C	7
-9°C do 0°C	10

#### STORAGE:

Shelf life 15 months from production date under terms of proper storage at upright position with valve up in dry place at temperature range +5°C do +30°C. Temperatures which exceed out of permitted range make shorter warranty time and influence negatively for product characteristics. It is possible to store the product even at -5 °C but no longer then by 7 days (excluding transportation). It is forbidden to keep containers at temperature close to 50 °C or higher and close to open fire – it can cause explosion. Storage of product at other position than upright one with valve up can cause blocking of valve. It is forbidden to squash or puncture the container even after full emptying the container.

With the publication of this Technical Information Sheet, previous editions are no longer valid.

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