

## AUTOCLAVED AERATED CONCRETE

### ATC - Thin Bed Mortar Adhesive

#### DESCRIPTION

Aertec supplies thin bed mortar, specifically formulated to work with Aertec supplied Autoclaved Aerated Concrete blocks (AAC). Aertec thin bed mortar caters for the unique properties of AAC blocks. Aertec AAC blocks may only be laid using Aertec supplied thin bed mortar as the prescribed system.

**Note:** a slip joint must be created between the surface bed and the first course of AAC blocks (slab on grade) by laying conventional mortar 1:3 (Cement : Sand). The first course acts as a level guide for subsequent courses when using the Aertec thin bed mortar system. **See Aertec - Building Guidelines for more information.**

#### MIXING

Add 3 parts Thin Bed Mortar powder to 1 part water (3:1) in a suitable mixing vessel. e.g. 25kg powder to 8-8.33L water. Thoroughly mix using a low speed helical mixer until a homogeneous, lump free mixture is obtained. The prepared mixture should be used within 1 hour. The consistency of the mixed thin bed mortar should be such that it flows easy through the teeth of the notched trowel leaving the shape of the teeth in the mortar bed. Thin bed mortar waste or droppings must not be used due to contamination. **DO NOT** add more water should the mortar start setting in the mixing vessel, as it will negatively effect the performance of the mortar. **DO NOT** add sand or any other material to the mix.

#### THEORETICAL SPREAD / COVERAGE RATES

100mm thick	2 kg /m <sup>2</sup>
150mm thick	3 kg/m <sup>2</sup>
200mm thick	4 kg/m <sup>2</sup>

**\*\*NOTE\*\***

25kg thin bed mortar bag for 100mm thick block = 12.50m<sup>2</sup>

25kg thin bed mortar bag for 150mm thick block = 8.33m<sup>2</sup>

25kg thin bed mortar bag for 200mm thick block = 6.25m<sup>2</sup>

#### TYPICAL PROPERTIES

Compressive Strength	≥ 10 MPa Category M10
Tensile Strength	min. 0.25 MPa
Reaction to Fire	Class A1
Water Absorption	2kg/m <sup>2</sup> 0.5 minutes
Thermal Conductivity	0.6 W/mK λ 10 dry
Packaging	25 kg bag

**\*\*NOTE\*\*** Compressive Strength and tensile strength is based on 28 day results.

Aertec ATC - Thin Bed Mortar is manufactured in accordance with EN 998-2

#### APPLICATION

**First course** - AAC blocks are to be laid on a convention mortar bed 10-30mm thick. When laying blocks for the first course, all vertical joints require thin bed mortar. Thin bed mortar is then applied to all joints on subsequent courses. The first course is the leveling course for subsequent courses.

**Surface preparation** - Ensure the surface is clean from any dust and debris prior to laying the AAC blocks and thin bed mortar. Thin bed mortar is applied to the horizontal and vertical joints, using a notched trowel (comb like) between 2-3mm thick, ensuring all joints are completely covered. Wipe the mortar smooth using a damp sponge to create a smooth finish. The blocks are placed and bedded into position by using a rubber mallet ensuring there are no gaps between blocks. Horizontal and vertical checks must be conducted using a spirit level.

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#### APPLICATION CONTINUED

Ensure profiles and string lines are used for accuracy and efficiency. Any excess mortar that has dried on the blocks can be removed by sanding. Patching of chasings must be done using thin bed mortar. Reinforcing fibre mesh must be placed over the patched area where the chasing width is  $\geq 40\text{mm}$  wide. See **Aertec building guidelines for more detailed info.**

#### SETTING TIMES

Pot life	+ - 1 hour
Initial set	20 minutes
Final set	12 hours
Full cure	28 days
Correction Time	5 minutes

**\*\*NOTE\*\*** Correction Time relates to blocks that need re-positioning i.e completely removed. This needs to be done within 5 minutes or the mortar must be removed from the block and fresh mortar must be applied to the block. Pot life and setting times stated above are dependent on weather conditions i.e variation in temperature, wind, direct sunlight, etc.

Allow 24 hours after block installation before applying render.

#### STORAGE

Thin bed mortar must be protected from water and moisture, stored in a cool dry place. Bags must not be left open. If stored at high temperatures and/or high humidity conditions, the shelf life may be reduced.

#### PACKAGING

Thin bed mortar is supplied in 25 kg bags  
There are 40 x 25kg bags on a pallet = 1.0 T  
Pallet size is 1m x 1m x 1.2m

#### OTHER MATERIALS

Aertec ATC - Thin Bed Mortar is a cementitious product and is therefore compatible with all cement based masonry products eg. conventional plaster, skim plasters, waterproofing and paint.

#### CONFORMITY

Aertec ATC - Thin Bed Mortar is manufactured in accordance with EN 998-2 standard.

Blocks can only be built using Aertec supplied Thin Bed Mortar which has been specifically designed for the use with Aertec supplied AAC blocks.

#### PRODUCT GUARANTEE AND LIABILITY

Aertec SA (Pty) Ltd warrants that Aertec TBM Adhesive is manufactured according to specific product specifications. Aertec SA (Pty) Ltd has no control over the on site preparation and physical application of the product, Aertec neither implies nor expresses any guarantee nor accepts any liability on the part of this product. Liability is limited to the replacement of defective material, however Aertec must be afforded the opportunity to investigate such defect. All Aertec's liability will be null and void in the event of Aertec TBM Adhesive being contaminated or adulterated in any way or form other than recommended by Aertec.

#### HEALTH & SAFETY

- Wear gloves at all times and avoid contact with skin
- Avoid inhalation of dust during mixing by wearing a dust mask
- Eye protection to be worn at all times
- In the event of contact with the skin, immediately wash the affected area with water
- In the event of splashing into the eyes, rinse well continuously with fresh water.
- Seek medical advice if any irritation persists.