



Gas Beton, Ytong and Aerated Autoclaved Concrete (AAC) Block TDS 140

GAS BETON, YTONG AND AERATED AUTOCLAVED CONCRETE (AAC) BLOCKS:

These refer to lightweight concrete made by generating gas in a cement mix so that the cement foams and then hardens in a mold with tiny air bubbles entrapped. The resulting material is cast and then cut into slabs or blocks similar to conventional cement blocks, but extremely lightweight. Although, these materials do not have great compressive strength, it can be used for many applications. Lightweight concrete blocks are commonly used for back-up walls and interior partitions. These blocks are typically bonded and stacked together with an ANSI A118.15 (e.g. 254 Platinum, 254 Platinum Plus™ or MULTIMAX™ LITE) thin set mortar. The final surface is generally skim coated or parged with the same mortar to create a flush and plumb wall. The cell structure is similar to a sponge made of a portland cement paste with tiny entrapped air bubbles. Density is approximately 40 - 50 lb/ft³ (500 - 600 kg/cm³).

Advantages these blocks include:

- 30% lighter weight than typical concrete masonry units
- Less strain for the workers
- Higher fire ratings
- Reduction in overall dead load for buildings
- Improved insulating value which equals energy savings

Due to its makeup, these materials can have a more friable surface (when compared to conventional concrete masonry units). Therefore, typical portland cement mortars and non-modified thin set mortars do not bond well to these surfaces. Slight shrinkage in a cement mortar or thin set mortar can tear the weak surface of lightweight concrete and result in delamination of any stucco, mortar application, or thin set mortar.

A LATICRETE latex fortified stucco, plaster (e.g. stucco or plaster fortified with 3701 Mortar Admix) or thin-set mortar (e.g. 254 Platinum, 254 Platinum Plus or MULTIMAX LITE) can be applied to lightweight concrete surfaces because the shrinkage strain does not cause a tearing of the surface.

Method for installing tile and stone:

Ensure that the blocks are suitable for the application (e.g. exterior use), and are structurally sound, well cured and dry. Structures which will receive ceramic tile must meet the maximum allowable deflection standard of L/360 under total anticipated load. Structures which will receive stone must meet the maximum allowable deflection standard of L/480 under total anticipated loads.

1. Apply a latex thin set mortar skim / parge coat to the cured blocks:
 - a. 254 Platinum
 - b. 254 Platinum Plus
 - c. MULTIMAX LITE
2. Apply a waterproofing membrane if appropriate for the application (e.g. exterior use or an interior wet area):
 - a. HYDRO BAN® Cementitious Waterproofing
 - b. HYDRO BAN XP
 - c. HYDRO BAN
 - d. 9235 Waterproofing Membrane
3. Install the tile or stone with a latex thin set mortar:
 - a. 254 Platinum
 - b. 254 Platinum Plus

c. MULTIMAX LITE

4. Grout the tiles or stones with:

- a. SPECTRALOCK® PRO Premium Grout*
- b. SPECTRALOCK PRO Premium Translucent Grout (for glass tile)
- c. SPECTRALOCK PRO Grout (for interior applications only)
- d. PERMACOLOR® Select^
- e. PERMACOLOR Grout
- f. SPECTRALOCK 1

5. Insert expansion joints as designed by the project architect in accord with Tile Council of North America (TCNA) detail EJ171.

- a. LATASIL™

Consult all individual LATICRETE product data sheets for specific installation instructions and information.

* United States Patent No.: 6,881,768 (and other Patents)

^ United States Patent No.: 6,784,229 (and other Patents)

Technical Data Sheets are subject to change without notice. For latest revision, check our website at www.laticrete.com
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