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 A118.4 (e.g. LATICRETE® 254 Platinum) 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/ft^3 (500 - 600 kg/cm^3).

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 LATICRETE 8510 Latex or LATICRETE 3701 Mortar Admix) or thin-set mortar (e.g. LATICRETE® 254 Platinum or LATICRETE 4237 Latex Additive mixed with LATICRETE 211 Powder) 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 structutally sound, well cured and dry. Stuctures that will receive ceramic tile must meet the maximum allowable deflection standard of L/360 under total anticapted load. Stuctures that will receive stone must meet the maximum allowable deflection standard of L/480 under total anticapted load.

1. Apply a latex thin set mortar skim / parge coat to the cured blocks:
    a. LATICRETE 254 Platinum
    b. LATICRETE 211 Powder mixed with LATICRETE 4237 Latex Additive

2. Apply a waterproofing membrane if appropriate for the application (e.g. exterior use or an interior wet area):
    a. LATICRETE Hydro Ban™
    b. LATICRETE 9235 Waterproofing Membrane

3. Install the tile or stone with a latex thin set mortar:
    a. LATICRETE 254 Platinum
    b. LATICRETE 211 Powder mixed with LATICRETE 4237 Latex Additive

4. Grout the tiles or stones with:
    a. LATICRETE® SpectraLOCK® PRO Premium Grout*
    b. LATICRETE SpectraLOCK PRO Grout (for interior applications only)
    c. LATICRETE PermaColor™ Grout

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

    a. LATICRETE Latasil™

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

* United States Patent No.: 6881768 (and other Patents)

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