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CONCRETE UNIT MASONRY

ASTM has recently changed, updated, and upgraded specifications for Concrete Masonry Units. Copies of these changes are available thru your local supplier, The National Concrete Masonry Association, or ASTM, 1916 Race Street, Philadelphia, Pa. 19103.

ASTM C90-70, the current edition, replaces C90-66T. Changes have been made in Grade classification, Linear shrinkage and Moisture Content are presented in one table, and based on average relative humidity at point of use.

ASTM C 145-71, the current edition, replaces C 145-70. This Spec covers Solid load-bearing Concrete Masonry Units. And again moisture content, linear shrinkage, strength and absorption should be particularly reviewed.

ASTM C 129-71, current edition, replaces C129-70. Hollow Non-Load-Bearing Concrete Masonry Units are covered by this spec. And as in the previous two moisture content, linear shrinkage and strength should be reviewed.

ASTM C 140-70, standard Methods of Sampling and Testing Concrete Masonry Units, current edition, replaces C140-66T. These methods cover the sampling and testing of concrete masonry units for compressive strength, absorption, weight, moisture content, and dimensions.

ASTM C 426-70, current edition of Standard Method of test for Drying Shrinkage of Concrete Block, replaces C426-66T. This method of test covers a routine standardized procedure for determining the drying shrinkage of concrete block.

Concrete masonry units should be made from portland cement and suitable aggregate, and be cured at the point of manufacture. The cement used should conform to the requirements for Portland Cement ASTM C-150. Aggregates can be either a heavy weight or light weight depending upon unit, and free from matter that will cause staining, create surface irregularities, or be harmful to concrete. The heavy weight aggregates should conform to ASTM C-33. If light weight aggregate is to be used it should conform to ASTM-C330 which covers most expanded slag or shale.

The units themselves should be within a maximum allowable tolerance of + 1/8". Actual over-all dimensions of all units should not exceed nominal (modular) dimensions less the thickness of a 3/8" mortar joint. In addition vertical surfaces should be free from warps, uniformly sound, without cracks, breaks, or other defects which would interfere with proper setting or impair the strength. All should be of a similar composition, unless otherwise approved.

Maximum water absorption and moisture content permitted for units at time of delivery to the job site or point of use is determined by the type and grade of unit specified. In any case the method of test is ASTM C 140-70.

Handling and storage are as equally important as the properties of the block themselves. Units should be handled in such a manner as to prevent breakage. Care should be taken during loading, unloading and piling to adequately protect the exposed surfaces from damage. Units should be stored on pallets or other approved manner which will prevent contact with the soil. Upon delivery to the job site Concrete Units should be placed under cover or otherwise adequately protected from the weather until used.