



Designation: C946 – 18

Standard Practice for Construction of Dry-Stacked, Surface-Bonded Walls¹

This standard is issued under the fixed designation C946; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This practice covers material, workmanship, and construction procedures for applying surface bonded mortar to both sides of dry stacked concrete masonry units. It does not include grout, reinforcing, anchorage, or control joints since their use is essentially the same as conventional concrete masonry construction, unless specifically mentioned in this practice.

NOTE 1—Design and construction procedures for conventional concrete masonry construction are found in Building Code Requirements for Masonry Structures (TMS 402-16) and Specification for Masonry Structures (TMS 602-16).

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

- C55 Specification for Concrete Building Brick
- C90 Specification for Loadbearing Concrete Masonry Units
- C129 Specification for Nonloadbearing Concrete Masonry Units

¹ This practice is under the jurisdiction of ASTM Committee C12 on Mortars and Grouts for Unit Masonry and is the direct responsibility of Subcommittee C12.06 on Surface Bonding.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

- C270 Specification for Mortar for Unit Masonry
- C887 Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar

2.2 *Other Documents:*

- TMS 402-16 The Masonry Society, Building Code Requirements for Masonry Structures³
- TMS 602-16 The Masonry Society, Specification for Masonry Structures³
- TEK 10-2C National Concrete Masonry Association, Control Joints for Concrete Masonry Walls—Empirical Method⁴
- Standard Practice for Bracing Masonry Walls Under Construction, Masonry Contractors Association of America, 2012⁵

3. Storage

3.1 Deliver and store surface bonding mortar in original containers off the ground to prevent contact with water. Protect from rain with suitable covering.

3.2 Store concrete masonry units off the ground to prevent contamination by mud, dust, and materials likely to cause staining or other defects, and protect from rain.

4. Materials and Manufacture

4.1 Concrete masonry units shall be clean and shall meet the requirements of either Specifications C55, C90, or C129. The surface to receive surface bonding mortar shall be free of paint, oil, efflorescence, or foreign materials that interfere with bonding.

4.2 Surface bonding mortar shall meet the requirements of Specification C887. If the dry mix contains hard lumps, it shall not be used.

4.3 Leveling course shall be bedded with a mortar meeting either Specification C270 or Specification C887.

4.4 Shims shall be corrosion-resistant metal or plastic with a minimum compressive strength of 2000 psi (13.8 MPa), or steel protected from corrosion by a coating of zinc at least 0.8

³ Available from The Masonry Society, www.masonrysociety.org

⁴ Available from the National Concrete Masonry Assn. (NCMA), 13750 Sunrise Valley Drive, Herndon, VA 20171, <http://www.ncma.org>.

⁵ Available from Masonry Contractors Association of America (MCAA), 1481 Merchant Drive, Algonquin, IL 60102, <http://www.masoncontractors.org>.