



Standard Specification for Bonding Compounds for Interior Gypsum Plastering¹

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1. Scope

1.1 This specification covers minimum requirements for bonding compounds for adhering interior gypsum plaster to structurally sound surfaces.

1.2 This specification also covers test methods for determining performance requirements and physical properties.

1.3 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.

1.4 The following safety hazards caveat pertains only to the test methods described in this specification: *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards*:²

C11 Terminology Relating to Gypsum and Related Building Materials and Systems

C28/C28M Specification for Gypsum Plasters

C472 Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete

C511 Specification for Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes

3. Terminology

3.1 *Definitions*—For definitions relating to gypsum and related building materials and systems, see Terminology **C11**.

¹ This specification is under the jurisdiction of ASTM Committee **C11** on Gypsum and Related Building Materials and Systems and is the direct responsibility of Subcommittee **C11.02** on Specifications and Test Methods for Accessories and Related Products.

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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.

4. Physical Properties

4.1 *General*—The bonding compound shall be a film forming, non-oxidizing, non-toxic, non-flammable composition suitable for application by brush, roller, and spray. The compound shall be tinted to show, by visual inspection, where it has been applied. The tinting material shall not show through the material being bonded. The surfaces to which bonding compounds are applied shall be relatively smooth, clean, and dry. Surface coatings shall be removed if their nature indicates an unsatisfactory condition. Surfaces shall be prepared in accordance with the manufacturer's directions.

4.2 *Consistency*—The bonding compound shall be of a homogeneous nature with no settling of the solids. The compound shall be free of foreign matter, and when applied in accordance with the manufacturer's directions, shall cover evenly.

4.3 *Film Characteristics*—A dry film of the bonding compound shall be uniform and smooth and shall remain flexible. The film shall not be noticeably affected by mild acid or alkali.

5. Performance Requirements

5.1 *Bonding Capability*—A dry film of bonding compound shall be capable of bonding gypsum plaster immediately after drying and 10 days after drying when tested as specified in Section **12**.

5.2 *Degradation*—Bonding compound that separates shall be able to be re-mixed to a uniform consistency when tested as specified in Section **10**.

5.3 *High Temperature Stability*—The bond strength shall be not less than 20 psi (138 kPa) when tested as specified in Section **9**.

5.4 *Freeze-Thaw Stability*—The bond strength shall be not less than 20 psi (138 kPa) when tested as specified in Section **11**.

5.5 *Bond Strength*—Bond strength of a fresh sample or a 30-day-old sample shall be not less than 20 psi (138 kPa) when tested as specified in Section **12**.

6. Sampling

6.1 Take a sample of not less than 1 kg from each shipment or consignment for analysis and tests. Except in special cases, take the sample from not less than three separate containers,