



Standard Specification for Latex Agents for Bonding Fresh To Hardened Concrete¹

This standard is issued under the fixed designation C 1059; 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 reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers latex bonding agents, suitable for brush, broom, or spray application, to bond fresh concrete to hardened concrete.

1.2 These bonding agents are intended for bonding new concrete to old concrete such as interior surfaces, floors, roadways, bridge decks, ramps, runways, walks, and curbs.

1.3 The values stated in either inch-pound units or SI units shall be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system may not be exact equivalents, therefore, each system must be used independently of the other without combining values in any way.

2. Referenced Documents

2.1 *ASTM Standards:*

C 1042 Test Method for Bond Strength of Latex Systems Used With Concrete²

3. Classification and Use

3.1 This specification provides for the classification of the latex bonding agents in accordance with use.

3.1.1 *Type I (Redispersable)*, is restricted for use in interior work not subject to water immersion or high humidity.

3.1.2 *Type II (Non-redispersable)*, may be used for areas subject to high humidity or immersion in water and is suitable for use in other areas.

4. Ordering Information

4.1 Purchase orders for these materials shall identify:

4.1.1 The number of this specification and the required type, and

4.1.2 Supplementary requirements if necessary.

5. Physical Properties

5.1 The material shall conform to the requirements of Table 1 when tested in accordance with Test Method C 1042.

6. Sampling

6.1 For sampling of bulk quantities, a batch or lot shall be considered a unit of manufacture as prepared for shipment or may consist of a blend of two or more production runs of material. A composite sample shall be taken and it shall provide a volume of at least 1 gal [4 L].

6.2 When the bonding agent to be sampled is in containers, the sample shall be obtained by taking a portion out of the containers that is equal in number to the next integer larger than the cube root of the total number of containers in the lot. Grab samples shall be taken from each container and they shall have a volume of at least ½ pt. [0.25 L].

6.3 All the sample containers shall be sealed to prevent leakage or dilution and shall be properly marked for identification and correlation.

7. Rejection

7.1 The purchaser has the right to reject the bonding agent if it fails to meet the bond strength requirement, appears curdled or otherwise nonuniform, or if it has a rank odor.

8. Packaging and Package Marking

8.1 The proprietary name and type of the organic bonding agent and the net quantity in gallons or litres shall be plainly marked on the containers in which the material is delivered. Similar information shall be provided in the shipping advices accompanying packaged or bulk shipments of admixtures.

9. Keywords

9.1 adhesives; bonding agents; latex

¹ This specification is under the jurisdiction of ASTM Committee C-9 on Concrete and Concrete Aggregates and is the direct responsibility of Subcommittee C09.25 on Organic Materials for Bonding, Patching, and Sealing.

Current edition approved Feb. 10, 1999. Published May 1999. Originally published as C 1059 – 86. Last previous edition C 1059 – 91.

² *Annual Book of ASTM Standards*, Vol 04.02.

TABLE 1 Physical Property Requirements of Latex Bonding Agents

Latex	Bond Strength min, psi [MPa]
Type I	400 [2.8] dry
Type II	1250 [8.6] after immersion

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 100 Barr Harbor Drive, West Conshohocken, PA 19428.