



Standard Specification for Hydrated Lime for Use in Asphaltic-Concrete Mixtures¹

This standard is issued under the fixed designation C 1097; 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 specification covers high calcium, dolomitic and magnesian-hydrated lime for use in asphaltic/concrete mixtures.

NOTE 1—Hydrated lime, either calcitic, dolomitic, or magnesian, improves bonding of bitumen and aggregates which reduces susceptibility to moisture damage, reduces age hardening by chemically stabilizing polar compounds found in asphalts, and increases initial stiffness of asphalt mixtures.

NOTE 2—No attempt is made to present requirements for any by-product lime.

1.2 *This standard does not purport to address the safety concerns 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:

C 25 Test Methods of Chemical Analysis of Limestone, Quicklime, and Hydrated Lime²

C 50 Practice for Sampling, Inspection, Packing, and Marking Lime and Limestone Products²

C 51 Terminology Relating to Lime and Limestone (As Used by the Industry)²

C 110 Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone²

¹ This specification is under the jurisdiction of ASTM Committee C-7 on Lime and is the direct responsibility of Subcommittee C07.03 on Industrial Uses.

Current edition approved Aug. 15, 1995. Published October 1995. Originally published as C 1097 – 90. Last previous edition C 1097 – 90.

² *Annual Book of ASTM Standards*, Vol 04.01.

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by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn.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.

This standard is copyrighted by ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (http://www.astm.org).

3. Chemical Requirements

3.1 Unless otherwise specified, for definitions of terms used in this specification, refer to Terminology C 51.

3.2 Hydrated lime for use in bituminous paving mixtures shall conform to the following chemical composition:

Calcium and Magnesium Oxides (on an LOI-free basis, minimum %)	90.0
Carbon Dioxide (taken at point of manufacture, maximum %)	5.0
Unhydrated Calcium and Magnesium Oxides (maximum %)	5.0
Free Moisture of Dry Hydrates (taken at point of manufacture, maximum %)	2.0

4. Physical Requirements

4.1 Hydrated lime, either dry or slurry form, shall not have more than 3.0 % retained on a No. 30 (590 microns) sieve and not more than 30 % retained on a No. 200 (74 microns) sieve.

5. Test Method

5.1 The chemical analysis of the hydrated lime shall be determined in accordance with Test Methods C 25.

5.2 The fineness of hydrated lime shall be determined in accordance with the residue test for hydrated lime and Test Methods C 110.

NOTE 3—Some hydrated limes may require a full 30-min wash time.

6. Sampling, Inspection, Packing and Marking

6.1 The sampling, inspection, rejection, retesting, packing, and marking shall be done in accordance with Practice C 50.

7. Keywords

7.1 Asphaltic; concrete; hydrated; lime; mixtures