



Standard Guide for Selection of Cleaning Techniques for Masonry, Concrete, and Stucco Surfaces¹

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1. Scope

1.1 This guide outlines procedures for the selection and assessment of cleaning techniques for removing soiling and staining from masonry, concrete, and stucco surfaces. Removal of paints, coatings, and graffiti may require measures beyond the scope of this guide. New construction is excluded from the scope of this guide.

1.2 This guide does not purport to address the causes of soiling or staining or to propose remedies for recurring soiling or staining.

1.3 Where work on surfaces of artistic, architectural, cultural, or historic significance is being considered, guidance from specialists should be sought.

1.4 This guide does not purport to address removal and replacement of prior repairs, repair of damaged surfaces, or other irregularities that contribute to the uneven or discolored appearance of masonry, concrete, and stucco surfaces.

1.5 *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:

C 43 Terminology of Structural Clay Products²

C 119 Terminology Relating to Dimension Stone³

D 4262 Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces⁴

E 631 Terminology of Building Constructions⁵

3. Terminology

3.1 *Definitions*—For definitions of terms used in this guide, see Terminology C 43, C 119, or E 631.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *coating*—clear or pigmented surface treatment applied for aesthetic improvement, enhanced durability, or other purpose.

3.2.2 *contaminant*—a foreign substance not intentionally introduced to a surface.

3.2.3 *muratic acid*—commercial grades of hydrochloric acid that often contain iron impurities.

3.2.4 *nebulized water spray*—cleaning with a mist of water from fine nozzles.

3.2.5 *poultice*—cleaning systems composed of one or more liquids mixed with powder to form a paste.

3.2.6 *soiling*—a deposit of finely divided particulate matter or other contaminants adhered to the surface.

3.2.7 *soiling crust*—accumulation of soiling into a hardened layer at the surface. Partial or complete detachment of the crust may damage the substrate.

3.2.8 *staining*—a contaminant that has penetrated the surface.

3.2.9 *surface*—the exposed face of masonry, concrete, or stucco.

4. Significance and Use

4.1 Cleaning of masonry, concrete, and stucco surfaces is undertaken for a variety of reasons including aesthetic improvement, removal of contaminants, maintenance, and surface preparation. This guide provides for selecting, testing, and evaluating cleaning techniques for removal of soiling and staining.

4.2 Cleaning systems may adversely affect both building materials being cleaned as well as other materials, mechanical, electrical, and other building systems, and building exterior, interior, and site features.

4.3 In some situations, it may be prudent to spot clean or to not clean.

4.4 It should be noted that, in some cases, cleaning may be inconsistent with the goals of historic preservation.

¹ This guide is under the jurisdiction of ASTM Committee E06 on Performance of Buildings and is the direct responsibility of Subcommittee E06.24 on Building Preservation and Rehabilitation Technology.

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² *Annual Book of ASTM Standards*, Vol 04.05.

³ *Annual Book of ASTM Standards*, Vol 04.07.

⁴ *Annual Book of ASTM Standards*, Vol 06.02.

⁵ *Annual Book of ASTM Standards*, Vol 04.11.

