

1. Scope

- 1.1. This standard establishes consistent procedures for the specification of block filling and the application of block filler prior to painting paint grade smooth face concrete masonry units.
- 1.2. The purpose of this standard is to prevent misunderstandings and conflicts when the application of block filler is required.

2. Significance and Use

- 2.1. An inadequately written specification can create confusion in both the bidding and execution of block filler work. Prior to specification, the specific appearance, performance and weatherresistance of the work to be block filled should be assessed, and specified in the bid documents for a project in accordance with the “levels of block filler” established by this standard.

3. Reference Standards and Publications

- 3.1. The Master Painters Glossary Version 4.0.
- 3.2. PCA Standard P5 Benchmark Sample Procedures for Paint and Other Decorative Coating Systems.

4. Definitions

- 4.1. Backrolling: A method where freshly applied paint (wet) is smoothed out with an undipped roller to even the appearance and improve uniformity. [MPI]
- 4.2. Block filler: A thick, medium to high solids heavily pigmented material used for application on concrete blocks for filling and smoothing the surface for subsequent finish coatings. [MPI]
- 4.3. Pin Hole: A minute hole in a paint film that resembles a pore or pin prick, often due to improper solvent release during drying or the trapping of air or gas in the film during setting. [MPI]
- 4.4. Porosity: A measure of the degree of voidage in an object expressed as a fraction of the total object's volume. The major consideration in the absorption of a paint, liquid, vapor, or gas by the surface. [MPI]
- 4.5. Pointing: The shaping of joints between bricks or blocks by using a shaping tool on the wet mortar. [MPI]
- 4.6. Profile depth: Average distance between the top of the “peaks” and the bottom of the “valleys” on the surface of a substrate. [MPI]
- 4.7. Void: Holidays or holes in a coating or surface. [MPI]

5. Standard Specification

- 5.1. The degree of block filler achieved should not be assessed until all specified paint coats have been applied, as finishing coat(s) will contribute to the degree of fill. It is recommended that a benchmark sample showing specified level of block fill on entire sample and finish coat(s) on a portion of the sample be prepared and approved according to PCA Standard P5 to demonstrate the result of block filling to the specified level.
- 5.2. The use of some materials and some block profiles cause air entrapment resulting in unavoidable pin holes. A void or discontinuity visible to the substrate is a system defect.
- 5.3. Levels of Block Filler
 - 5.3.1. Level 1 – Economy Fill: One coat applied with equipment specified by the coating manufacturer. This level reduces the quantity of paint required for succeeding paint coats. It reduces some irregularities in masonry profile depth. It is normal that voids will remain, depending on the porosity and profile depth of the block. The block filler shall be applied at the spreading rate recommended by the manufacturer. This level is normally used in spaces that are not occupied by the public and in stairways of high rise buildings.
 - 5.3.2. Level 2 – Standard Fill: One coat applied with equipment specified by the coating manufacturer. Backrolling will be performed as necessary to attempt to fill deep irregularities. Masonry profile depth will be slightly reduced. Joints will be visible as tooled. Number of voids will be minimized, but voids may remain depending on the porosity of the block. A maximum of ten voids per square foot of surface area shall be deemed to be acceptable. The block filler shall be applied at the spreading rate recommended by the manufacturer. This level is normally used in finished areas that are occupied by the public.
 - 5.3.3. Level 3 – Premium Fill: One or multiple coats of high performance block filler manufactured to be applied at a high dry film build. Block filler shall be backrolled to eliminate voids and reduce the majority of the masonry profile depth. This system, with an appropriate paint finishing system, produces a surface that is easier to clean to meet health regulations. Exterior use of this level of block filler, with an appropriate paint finishing system, will reduce water intrusion at exterior walls.
- 5.4. Specifications not specifically stating the level of block filler to be attained will be assumed to imply a Level 2 – Standard Fill.
- 5.5. The acceptability of the Level 2 Standard Fill surfaces shall be determined when viewed without magnification, at a distance of thirtynine (39) inches or one (1) meter or more, under finished lighting conditions and from a normal viewing position.
- 5.6. The acceptability of the Level 3 Premium Fill surfaces shall be determined when viewed with magnification of 5X.

6. Comments

- 6.1. Since the number of coats and application techniques required for block filling impact project paint costs, the painting specification should incorporate the appropriate level(s) of block filler as defined by this standard.

- 6.2. The masonry specification should properly define all cleaning and detailing of new masonry prior to block filler and painting work. This work is not the responsibility of the painting contractor and should not be incorporated into the painting specification.
- 6.3. The result of any particular level of block filler will vary due to the fact that concrete masonry units vary greatly in profile depth and porosity. If additional filling is required to achieve a consistent visual appearance due to uneven porosity of the block and is approved by the coating manufacturer, then the painting contractor is entitled to compensation for any additional costs incurred. The filling of holes is not the responsibility of the painting contractor and should be pointed up by others prior to the application of block filler.
- 6.4. Proper specification of masonry materials, such as requiring graded aggregates to minimize masonry porosity, is required to achieve the best appearance and performance of the block filler and paint system specified. This standard outlines procedures for on-site determination and approval of achievable quality from specified paint and coating systems applied to paint grade smooth face concrete masonry units.
- 6.5. This standard is a nationally recognized consensus document for the painting and decorating industry's work practices.

7. Disclaimer of Liability

- 7.1. PCA does not warrant or assume any legal liability or responsibility for the accuracy, completeness or usefulness of any of the information contained herein.