

# STANDARD PDCA P5-04



## BENCHMARK SAMPLE PROCEDURES FOR PAINT AND OTHER DECORATIVE COATING SYSTEMS

### 1. Scope

- 1.1. The purpose of this standard is to provide a guideline to achieve approved benchmark samples of complete paint and coating systems for painting and decorating jobs.
- 1.2. This standard provides a protocol to establish an approved level of achievable quality for a specific paint and coating system.
- 1.3. It is intended that this standard be used where the scope of the project is such that it is advisable to establish achievable levels of quality before beginning the job.
- 1.4. This standard includes the surface preparation of typical areas of a project site in accordance with the applicable project specifications or contract documents.

### 2. Significance and Use

- 2.1. This standard consists of the procedures and criteria whereby a Benchmark Sample for paint, coating and/or other decorative systems will be prepared and presented by the Painting and Decorating Contractor for approval by the Contracting Entity.
- 2.2. Approved Benchmark Samples are established utilizing full scale, on-site surface areas. These shall be

prepared using the complete specified or approved paint, coating and/or decorative system. The sample is to include surface preparation, and the application of the primer, intermediate, finish coat and touch-up materials.

### 3. Reference Standards and Documents

- 3.1. ASTM, D16 (06.01), Standard Terminology for Paint, Related Coatings, Materials and Applications.
- 3.2. ASTM, E12 Standard on Color and Appearance.
- 3.3. AIA, Document A 201- General Conditions of the Contract for Construction, 1997.
- 3.4. AIA Document A 401- Standard Form of Agreement between Contractor and Subcontractor, 1997.
- 3.5. PDCA, Painting and Decorating Craftsman's Manual and Textbook, 1995, 8<sup>th</sup> edition.
- 3.6. PDCA, Standard P9-04, Definition of Trade Terms
- 3.7. Webster's New World Collegiate Dictionary, 4<sup>th</sup> Edition, 2002.

## PDCA P5-04

- 3.8. Painting and Decorating Encyclopedia, William Brushwell, Published by Goodheart-Wilcox.
- 3.9. Paint Handbook, edited by Guy E. Weismantel, McGraw-Hill Ryerson, Ltd. January 1981.
- 3.10. PDCA, Standard P1-04, Touch- Up Painting and Damage Repair- Financial Responsibility.
- 3.11. MPI, The Master Painter's Glossary- Painting and Decorating Terminology, 1997 & 2004.
- 3.12. The latest revision of the referenced standards shall govern.
- 3.13. If there is a conflict between any of the references and this standard, the requirements of this standard shall prevail.

### 4. Definitions

- 4.1. **BENCHMARK SAMPLE:** A sample that serves as a standard by which other work may be measured or judged. [PDCA, P9-04]
- 4.2. **CONTRACTING ENTITY:** The general contractor, owner of the property, construction manager, developer or other entity legally responsible for the agreement, or authorized agent of any of the above. [PDCA, P9-04]
- 4.3. **FINISH:** An entire paint or coating system; the texture, color and sheen of a surface. [Craftsman's]
- 4.4. **FINISHED LIGHTING:** Finished lighting conditions are described as

those in place when the project is finished. This includes, but is not limited to, design lighting (*e.g.*, wall washers, spots, floods, etc.) and natural lighting (*e.g.*, skylights, clear view windows, window walls, window treatments, etc.). [PDCA, P9-04]

- 4.5. **HIDING (Power):** The degree or ability of an opaque coating, applied in a uniform film, to cover, mask or obscure the substrate to which it is applied, or the colors underneath. Hiding power is provided by the paint's pigment. [MPI]
- 4.6. **LATENT DAMAGE OR DEFECTS:** Damage to surfaces by causes beyond the control of the Painting and Decorating Contractor after the Painting and Decorating Contractor's work has been completed. Examples of such include, but are not limited to, building settlement, cracks, water damage, earthquake damage, nail and/or screw pops or expansion and/or contraction of substrate. [PDCA, P9-04]
- 4.7. **PAINTING AND DECORATING CONTRACTOR:** The individual or company contracted to apply paints, coatings, wallcoverings and other decorating finishes. [PDCA, P9-04]
- 4.8. **PROPERLY PAINTED SURFACE:** A properly painted surface is uniform in appearance, color, texture, hiding and sheen. It is also free of foreign material, lumps, skins, runs, sags, holidays, misses, or insufficient coverage. It is a surface free of drips, splatters, spills or overspray which were caused by the

## PDCA P5-04

Painting and Decorating Contractor's workforce.

In order to determine whether a surface has been "properly painted" it shall be examined without magnification at a distance of thirty-nine (39) inches or one (1) meter or more, under finished lighting conditions and from a normal viewing position. [PDCA, P1-04]

**4.9. STANDARD:** Something established for use as a rule or basis of comparison in measuring or judging capacity, quantity, content, extent, value, quality, etc. The type, model or example commonly or generally accepted or adhered to; criterion set for usages or practices. [Webster's]

**4.10. SUBSTRATE:** A variant of substratum. In painting, any surface to be painted, including wood, concrete, masonry, steel, other metals, and various other materials or previous paints. A substrate can, therefore, be bare or covered. A previously unpainted surface sometimes is called the "original substrate". [MPI]

**4.11. SURFACE:** 1) The substrate to which paints, coatings, or wallcoverings are applied. 2) The finish obtained after the coating work has been completed. [Craftsman's]

**4.12. TEXTURE:** Texture as used in a "properly painted surface" (means) the texture of the paint or coating system. [PDCA, P9-04]

**4.13. TOUCH-UP:** The correction of deficiencies in the specified work to achieve a properly painted surface as

described in 4.8 herein. "Damage caused by others" or "latent damage," at times incorrectly referred to as touch-up are described in 4.6 and 4.11 of PDCA Standard P1-04, Touch-Up Painting and Damage Repair: Financial Responsibility. The correction of "Damage Caused by others" and "Latent damage" is separate from touch-up and handled in accordance with the above mentioned PDCA, Standard P1-04, Touch-Up and Damage Repair: Financial Responsibility.

## 5. Standard Specification

### 5.1. Procedure

**5.1.1.** The Contracting Entity and the Painting and Decorating Contractor shall select and designate sample sites to meet the criteria of this standard.

**5.1.1.1.** The Contracting Entity and the Painting and Decorating Contractor shall agree to a time schedule to prepare and approve Benchmark Samples. Samples shall be prepared only after permanent lighting, heating, venting and air conditioning equipment have been installed and activated.

**5.1.1.2.** The condition of the surface to be used as the sample area must be approved by the Contracting Entity prior to the preparation of the Benchmark Sample by the Painting and Decorating Contractor.

## PDCA P5-04

- 5.1.1.3.** After receiving approval from the Contracting Entity to proceed, the Painting and Decorating Contractor shall prepare and apply the complete coating system as specified in the contract documents to produce the Benchmark Samples.
- 5.1.1.4.** The Painting and Decorating Contractor will produce a “properly painted surface.”
- 5.1.2.** The recommended Benchmark Sample area should be approximately 100 square feet. Small areas, such as doors, handrails and trim, may have a more practical square footage arrangement, as agreed by the parties involved. The specific number, placement and size of samples will be clearly defined in the bid documents.
- 5.1.2.1.** The substrate type and application method used to produce the Benchmark Sample must be representative of the specified application method(s) for the substrate.
- 5.1.2.2.** The Benchmark Sample shall leave exposed a sampling of the approved substrate, before and after any specified surface preparation for the system. In addition, there should be left a separate and individual sampling of each designated and subsequently applied coating and any intercoat surface preparation.
- 5.1.3.** If the Benchmark Sample is impossible or impractical to achieve, then an alternate shall be agreed upon in writing by the Painting and Decorating Contractor and the Contracting Entity.
- 5.1.4.** A separate Benchmark Sample area may be prepared for approval for each substrate and each coating system as required by the contract documents or as agreed by the Contracting Entity and the Painting and Decorating Contractor. The specific number and placement of samples will be clearly defined in the bid documents.
- 5.1.5.** Production work may proceed as soon as approval of the Benchmark Sample is received by the Painting and Decorating Contractor from the Contracting Entity. Approval or rejection must be issued according to the time schedule agreed upon as outlined in section 5.1.1.1 above.
- 5.1.5.1.** Approval of Benchmark Samples shall be granted by the Contracting Entity after the sample areas have been prepared and coated in accordance with the contract documents and this standard.
- 5.1.5.2.** Approval of the Benchmark Sample shall be documented in writing by the Contracting Entity and delivered to the Painting and Decorating Contractor.
- 5.1.6.** After final approval, the sample surface area shall be secured and

## PDCA P5-04

clearly identified with signage reading: “BENCHMARK SAMPLE! DO NOT PAINT, DEFACE, CHANGE OR ALTER IN ANY WAY WITHOUT MUTUAL CONSENT OF CONTRACTING ENTITY AND THE PAINTING AND DECORATING CONTRACTOR.”

**5.1.7.** Sample touch-ups may be applied to approved sample surfaces. The area of touch-up shall be clearly identified, approved and retained as part of the Benchmark Sample.

**5.2. BENCHMARK SAMPLE PROCEDURE:** The Painting and Decorating Contractor shall prepare and paint a sample in accordance with the contract documents and as prescribed in this standard.

**5.3.** The Contracting Entity or its designated representatives shall approve Benchmark Sample areas after confirming complete compliance with the contract documents and in accordance with this standard.

### 6. Comments

**6.1.** This standard outlines procedures for onsite determination and approval of achievable quality from specified paint and coating systems.

**6.2.** This standard clarifies areas of authority and responsibilities. Improved communication reduces misunderstandings.

**6.3.** This standard is a nationally recognized consensus document for the Painting and Decorating industry’s work practices.

### 7. Disclaimer of Liability

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