



PROCESS  
INDUSTRY  
PRACTICES

TECHNICAL REVISION  
July 2019

**Coatings**

**PIP CTSC1000**  
**Application of Coatings to Concrete**

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## PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

In an effort to minimize the cost of process industry facilities, this Practice has been prepared from the technical requirements in the existing standards of major industrial users, contractors, or standards organizations. By harmonizing these technical requirements into a single set of Practices, administrative, application, and engineering costs to both the purchaser and the manufacturer should be reduced. While this Practice is expected to incorporate the majority of requirements of most users, individual applications may involve requirements that will be appended to and take precedence over this Practice. Determinations concerning fitness for purpose and particular matters or application of the Practice to particular project or engineering situations should not be made solely on information contained in these materials. The use of trade names from time to time should not be viewed as an expression of preference but rather recognized as normal usage in the trade. Other brands having the same specifications are equally correct and may be substituted for those named. All Practices or guidelines are intended to be consistent with applicable laws and regulations including OSHA requirements. To the extent these Practices or guidelines should conflict with OSHA or other applicable laws or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by the Practice.

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### **PUBLISHING HISTORY**

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# PIP CTSC1000

## Application of Coatings to Concrete

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CTSC1000-D002: Selection Criteria Sheet -  
Concrete Coatings Selection Criteria

CTSC1000-D003: Selection Criteria Sheet -  
Concrete Coatings Selection Criteria  
Purchaser Defined

CTSC1000-D011: Concrete Coating Systems:  
Coating System #1 - Two-Coat Epoxy System

CTSC1000-D012: Concrete Coating Systems:  
Coating System #2 - One Coat Non-Skid  
Epoxy System

CTSC1000-D013: Concrete Coating Systems:  
Coating System #3 - One Coat Coal Tar Epoxy  
System

CTSC1000-D014: Concrete Coating Systems:  
Coating System #4 - Epoxy System for  
Potable Water

CTSC1000-D015: User-Defined Coating  
System

CTSC1000-F: Daily Inspection Report -  
Application of Coatings to Concrete

CTSC1000-T: Inspection and Testing  
Requirements Sheet - Application of Coatings  
to Concrete

### Data Forms

*The following data forms shall be part of this Practice only if indicated on the purchaser's completed Documentation Requirements Sheet.*

CTSC1000-D001: Documentation  
Requirements Sheet

## 1. Scope

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This Practice provides requirements to contractors for the application of coatings to concrete. This Practice describes the minimum requirements for surface preparation, coatings application, and coatings selection for concrete surfaces.

## 2. References

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Applicable parts of the following industry codes and standards, and references shall be considered an integral part of this Practice. The edition in effect on the date of contract award shall be used, except as otherwise noted. Short titles will be used herein where appropriate.

### 2.1 Industry Codes and Standards

- American Society for Testing and Materials (ASTM)
  - ASTM D 4262 – *Standard Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces*
  - ASTM D 4263 – *Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method*
  - ASTM D 4285 – *Standard Test Method for Indicating Oil or Water in Compressed Air*
  - ASTM D 7234 – *Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers*
  - ASTM E 337 – *Standard Test Method for Measuring Humidity with a Psychrometer*
- Society of Protective Coating (SSPC)
  - SSPA-PA Guide 10 – Guide to Safety and Health Requirements*
  - SSPC-SP13/NACE No. 6 – *Surface Preparation of Concrete*
  - SSPC PA-1 – *Shop, Field, and Maintenance Painting of Steel*

### 2.2 Other References

- National Institute of Occupational Safety and Health (NIOSH)
  - NIOSH Publication No. 92-102 – *NIOSH Alert: Request for Assistance in Preventing Silicosis and Deaths from Sandblasting*
- NSF International (NSF)
  - NSF/ANSI Standard 61 – *Drinking Water System Components – Health Effects*

## 3. Definitions

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*laitance*: Milky white deposit on new concrete caused by leaching out of salts or free alkalis

*owner*: Party who owns the facility wherein the coatings will be used

*purchaser*: Party who awards the contract to the supplier. The purchaser may be the owner or the owner's authorized agent.