



PROCESS
INDUSTRY
PRACTICES

April 2020

Hygienic Processes

**PIP CTCH1000
External Coating System Selection Criteria
for Hygienic Facilities**

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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.

This Practice is subject to revision at any time.

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Data Forms

CTCH1000-D001 – Documentation Requirement Sheet

CTCH1000-D002 – Coating Type Code Definition

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

CTCH1000-D10A – Method A Hygienic Process Cleaning Environment – External Coating System Selection Criteria (U.S. Customary Units)

CTCH1000-D10AM – Method A Hygienic Process Cleaning Environment – External Coating System Selection Criteria (SI Units)

CTCH1000-D10B – Method B Hygienic Process Cleaning Environment – External Coating System Selection Criteria (U.S. Customary Units)

CTCH1000-D10BM – Method B Hygienic Process Cleaning Environment – External Coating System Selection Criteria (SI Units)

CTCH1000-D10C – Method C Hygienic Process Cleaning Environment – External Coating System Selection Criteria (U.S. Customary Units)

CTCH1000-D10CM – Method C Hygienic Process Cleaning Environment – External Coating System Selection Criteria (SI Units)

CTCH1000-D10D – Method D Hygienic Process Cleaning Environment – External Coating System Selection Criteria (U.S. Customary Units)

CTCH1000-D10DM – Method D Hygienic Process Cleaning Environment – External Coating System Selection Criteria (SI Units)

CTCH1000-D100 – User Defined Hygienic Process Cleaning Environment – External Coating System Selection Criteria (U.S. Customary Units)

CTCH1000-D100M – User Defined Hygienic Process Cleaning Environment – External Coating System Selection Criteria (SI Units)

1. Scope

This Practice provides guidance for the selection of industrial coating systems utilized for substrates used in hygienic processes and facilities. This Practice describes the criteria for the selection of industrial coating systems for process areas, non-process areas structural steel, equipment, vessels, tanks, and piping that are exposed to a variety of cleaning methods.

This Practice does not include criteria for the selection of industrial coating systems for insulated items in cyclic temperature service, internal linings, underground substrates, maintenance coating, or color selection.

This Practice does not attempt to address all issues that are associated with direct product contact environments. Jurisdictional requirements should be followed.

This Practice is not intended to address coating systems for primary containment of product transport and/or storage. Users are to refer to other PIP hygienic process Practices for process equipment and piping.

2. References

Applicable parts of the following Practices and industry codes and standards 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 are used herein where appropriate.

2.1 Process Industry Practices (PIP)

- PIP CTCE1000 – *External Coating System Selection Criteria*
- PIP CTEG1000 – *Guidelines for Use of Coatings Practices*
- PIP CTSE1000 – *Application of External Coatings*
- PIP CTSH1000 – *Application of External Coatings in Hygienic Facilities*
- PIP CTSL1000 – *Application of Internal Linings*
- PIP CTSU1000 – *Application of Underground Coatings*

2.2 Industry Codes and Standards

- 3-A Sanitary Standards, Inc.
 - 3-A 27-07 - *Equipment for Packaging Dry Products*
- American National Standards Institute (ANSI)
 - ANSI Z535.1 – *Safety Colors*
 - ANSI/3-A - *General Requirements*
- American Society of Mechanical Engineers (ASME)
 - BPE – *Bioprocessing Equipment*
- American Society of Testing and Materials (ASTM) International
 - ASTM D6577 – *Standard Guide for Testing Industrial Protective Coatings*