



**NSF International**  
Special Engineered Specification  
NSF SE 13004

Rehabilitation for small  
Diameter Pipelines





**NSF SE**  
**SPECIFICATIONS FOR A SPECIAL ENGINEERED (SE)**  
**PRODUCT**

**Rehabilitation of Small Diameter Pipelines**

**1. Purpose:**

This specification defines the product specific requirements for testing, marking, in-plant quality control (QC) for Cured-In-Place Pipe (CIPP) Systems which fall outside the scope of the current ASTM F1216.

**2. Scope of Specification:**

This specification covers the required initial testing, marking, in-plant QC and annual testing requirements for CIPP products used for the reconstruction of pipelines and conduits (2" to less than 4" diameter) which are for use with plastic, concrete, clay, ductile iron, cast iron, and copper pipe.

**3. Application:**

CIPP products certified against the requirements of this specification are authorized for use in Drain, Waste, Vent, Sanitary and Storm Sewer Rehabilitation.

**4. Reference Documents:**

ASTM F1216 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube  
NSF/ANSI Standard 14 – Plastic Piping System Components and Related Materials

**5. Materials:**

5.1. – The CIPP system shall meet the structural properties of ASTM F1216 Table 1 as determined in accordance with Section 8.1.3.1-8.1.3.2.

**6. Testing Requirements:**

6.1 – CIPP products certified as meeting these requirements shall comply with the performance requirements identified in ASTM F1216 Section 8.2 – Gravity Pipe Leakage Test.

6.2 – Wall thickness shall be measured as specified in ASTM F1216 Section 8.6 - CIPP Wall Thickness.

Table 1 CIPP Partially Deteriorated Minimum Thickness (mm)

Diameter, in. (Inside Diameter of Original Pipe)	Partially Deteriorated Minimum Thickness (mm)
2.0	0.8
2.5	1.0
3.0	1.3
3.5	1.5



6.3 - CIPP products for pressure pipe applications shall comply with ASTM F1216 Section 8.3 - Pressure Pipe Testing.

6.4 – Short term flex must comply with section 8.1.3.1 of ASTM F1216.

6.5 – Tensile strength must comply with section 8.1.3.2 of ASTM F1216.

6.6 – Delamination must comply with section 8.4 of ASTM F1216.

**7. Product Marking:**

7.1 – Marking on the CIPP container shall include the following:

- The appropriate certification mark as identified in the online listings.
- The manufacturer’s name or trademark.
- And shall comply with NSF / ANSI Standard 14 Sections 8.1, 8.4, and 8.5.
- Shall list the SE # to the packaging

**8. In-plant Q.C. Requirements:**

<b>Conformance Criteria</b>	<b>Reference</b>
Double weight verification, density measurement, and hardening test performed once per lot.	Per manufacturer’s specifications
Leakage test, flexural strength, and flexural modulus performed four times annually.	ASTM F1216 (Sections 5.2 and 8.2)