



# Standard Specification for Stainless Steel Needle Tubing<sup>1</sup>

This standard is issued under the fixed designation A 908; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the Department of Defense.*

<sup>ε1</sup> NOTE—The units statement in 1.3 was corrected editorially in October 2008.

## 1. Scope

1.1 This specification covers austenitic, stainless steel, needle tubing in hard-drawn tempers for industrial applications.

1.2 In general, needle tubing describes small-diameter tubing with outside diameters (ODs) in the range of 0.008 to 0.203 in. (0.2 to 5.2 mm) with nominal wall thicknesses in the range of 0.002 to 0.015 in. (0.05 to 0.4 mm). Needle tubing gages are normally 6 through 33.

1.3 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

## 2. Referenced Documents

2.1 ASTM Standards:<sup>2</sup>

A 450/A 450M Specification for General Requirements for Carbon, Ferritic Alloy, and Austenitic Alloy Steel Tubes—1016/A 1016M Specification for General Requirements for Ferritic Alloy Steel, Austenitic Alloy Steel, and Stainless Steel Tubes

## 3. Ordering Information

3.1 Orders for material in accordance with this specification should include the following, as required, to describe the material adequately:

3.1.1 Quantity (feet, metres, or number of lengths),

3.1.2 Gauge or size (outside diameter and minimum wall thickness),

3.1.3 Length (specific or random), and

3.1.4 Test report required (see the section on certification in Specification A 450/A 1016/A 1016M/A 450M).

## 4. Process

4.1 An electric furnace or other similar primary melting process with or without degassing or refining may be used.

TABLE 1 Chemical Requirements

Carbon	0.08 max
Manganese	2.00 max
Phosphorous	0.040 max
Sulfur	0.030 max
Silicon	0.75 max
Chromium	18.0–20.0
Nickel	8.0–11.0

<sup>†</sup> This specification is under the jurisdiction of ASTM Committee A-1 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.10 on Steel Tubing.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.