



Designation: A857/A857M – 19

# Standard Specification for Steel Sheet Piling, Cold Formed, Light Gage<sup>1</sup>

This standard is issued under the fixed designation A857/A857M; 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 U.S. Department of Defense.*

## 1. Scope

1.1 This specification covers cold-formed, light gage carbon steel sheet piling of structural quality for use in the construction of shore walls, trench shoring, wingwalls, bulkheads, and like applications.

1.2 The nominal thickness of material furnished under this specification shall be 0.25 in. [6.4 mm] or less.

1.3 When the sheet piling is to be welded, it is presupposed that a welding procedure suitable for the grade of steel and intended use or service will be used. See Appendix X3 of Specification [A6/A6M](#) for information on weldability.

1.4 The values stated in either inch-pound units or SI units are to be regarded as the standard. Within the text, the SI units are shown in brackets. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from the two systems may result in nonconformance with the specification.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

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

- [A6/A6M](#) Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
- [A653/A653M](#) Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee [A01](#) on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee [A01.02](#) on Structural Steel for Bridges, Buildings, Rolling Stock and Ships.

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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.

[A1011/A1011M](#) Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength

[A1018/A1018M](#) Specification for Steel, Sheet and Strip, Heavy-Thickness Coils, Hot-Rolled, Carbon, Commercial, Drawing, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength

## 3. General Requirements for Delivery

3.1 Material furnished under this specification shall conform to the requirements of the current edition of Specification [A6/A6M](#), for the ordered material, unless a conflict exists in which case this specification shall prevail.

## 4. Materials and Manufacture

4.1 Sheet piling shall be produced using one of the following processes:

4.1.1 Decoiling coiled material and feeding it through a multi-stand roll-forming mill at ambient temperature, or

4.1.2 Forming cut lengths of material into piling on a press break.

## 5. Chemical Composition

5.1 The chemical composition of the steel on heat analysis shall conform to the requirements listed in [Table 1](#).

## 6. Tension Test

6.1 The source material or the sheet piling as provided in [6.2](#) and [6.3](#), as represented by the test specimens, shall conform to the tensile requirements for the grade specified as listed in [Table 2](#).

6.2 Sheet and strip source materials shall be tested in accordance with the requirements of Specifications [A1011/A1011M](#), [A653/A653M](#), or [A1018/A1018M](#). The test specimens shall be taken from the source material or from the sheet piling. If test specimens are obtained from the sheet piling, they are to be taken from a nondeformed area.

6.3 Plate source material shall be tested in accordance with the requirements of Specification [A6/A6M](#), except that the test specimen may be taken such that the longitudinal axis of the