



Designation: A551/A551M – 08 (Reapproved 2013)

Standard Specification for Carbon Steel Tires for Railway and Rapid Transit Applications¹

This standard is issued under the fixed designation A551/A551M; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers seven classes of carbon steel tires for railway and rapid transit use.

1.1.1 *Class A*—For untreated driving tires for locomotives in passenger service.

1.1.2 *Class AHT*—For heat-treated driving tires for locomotives in passenger service.

1.1.3 *Class B*—For untreated driving tires for freight locomotives and tires for locomotive-truck, tender-truck, trailer and car wheels, and miscellaneous service.

1.1.4 *Class BHT*—For heat-treated driving tires for freight locomotives and tires for trailer wheels.

1.1.5 *Class C*—For untreated tires for switching locomotives.

1.1.6 *Class CHT*—For heat-treated driving tires and switching locomotives and tires for locomotive-trucks, tender-trucks, trailer and car wheels, and miscellaneous service.

1.1.7 *Class DHT*—For heat-treated driving tires for locomotives with light braking conditions, heavily loaded trailer tires, and rapid transit wheels where off-tread brakes are employed.

1.2 Supplementary requirements, including those in the general requirements of Specification [A788/A788M](#), are provided for use when additional testing or inspection is desired. These shall apply only when specified individually by the purchaser in the order.

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

1.4 Unless the order specifies the applicable “M” specification designation, the tires shall be furnished to the inch-pound units.

2. Referenced Documents

2.1 *ASTM Standards*:²

[A370 Test Methods and Definitions for Mechanical Testing of Steel Products](#)

[A788/A788M Specification for Steel Forgings, General Requirements](#)

2.2 *AAR Standard*:

[AAR M-107/M-208 Wheels, Carbon Steel](#)³

3. Ordering Information and General Requirements

3.1 Material supplied to this specification shall conform to the requirements of Specification [A788/A788M](#), which outlines ordering information, manufacturing requirements, testing and retesting methods and procedures, marking, certification, product analysis variations, and additional supplementary requirements.

3.1.1 If the requirements of this specification are in conflict with those of Specification [A788/A788M](#), then the requirements of this specification shall prevail.

3.2 In addition to the ordering requirements from Specification [A788/A788M](#), the following details should be supplied:

3.2.1 Full identification of tread and flange contour with dimensional drawings as required,

3.2.2 Inside diameter to be rough machined or finished,

3.2.3 Intended service, and

3.2.4 Chemical composition requirements, if different from those given in [Table 1](#).

4. Chemical Requirements

4.1 *Chemical Composition*—The steel shall conform to the requirements for chemical composition specified in [Table 1](#), unless otherwise required by the purchaser (see [3.2.4](#)).

¹ This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.06 on Steel Forgings and Billets.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from Association of American Railroads (AAR), 425 Third St., SW, Washington, DC 20024, <http://www.aar.org>.