



Standard Specification for Machine and Coil Chain¹

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1. Scope*

1.1 This specification covers welded carbon steel machine chain and coil chain. Although these chains are not intended for pocket wheel use, they can be used for pocket and sprocket wheel use. This chain shall never be used for overhead lifting applications.

1.2 There are two classes each of machine and coil chain:

1.2.1 *Class MS*—Machine, straight-link steel chain,

1.2.2 *Class MT*—Machine, twist-link steel chain,

1.2.3 *Class CS*—Coil, straight-link chain, and

1.2.4 *Class CT*—Coil, twist-link steel chain.

1.3 The values stated in either inch-pound units or SI units shall be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system may not be exact equivalents; therefore, each system must be used independently of the other, without combining values in any way.

2. Referenced Documents

2.1 ASTM Standards:

A 751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products²

E 30 Test Methods for Chemical Analysis of Steel, Cast Iron, Open-Hearth Iron, and Wrought Iron³

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *breaking force, minimum*—the minimum force in pounds or newtons at which the chain, during manufacture, has been found by representative testing to break when a constantly increasing force is applied in direct tension. This test is a manufacturer's attribute acceptance test and shall not be used as criteria for service.

3.1.2 *lot*—for the purpose of acceptance testing, a lot shall consist of 3000 ft [1000 m], or fraction thereof, of the same grade and size chain. If a continuous length of chain exceeds 3000 ft [1000 m], it shall also be considered a lot.

3.1.3 *overhead lifting*—that process of lifting that would elevate a freely suspended load such that dropping the load would present a possibility of bodily injury or property damage.

3.1.4 *proof test*—a quality control tensile test applied to chain for the purpose of verifying weld and material quality. It is the minimum force in pounds or newtons which the chain has withstood at the time it left the producer, under a test in which a constantly increasing force has been applied in direct tension to a straight length of chain. Proof test loads are a manufacturing integrity test and shall not be used as criteria for service or design purposes.

3.1.5 *working load limit (WLL)*—the maximum combined static and dynamic load in pounds or kilograms that shall be applied in direct tension to an undamaged, straight length of chain.

4. Ordering Information

4.1 It shall be the responsibility of the purchaser to specify all requirements that are necessary for material ordered under this specification. Such requirements to be considered include, but are not limited to, the following:

4.1.1 ASTM Specification A 467 or A 467M and year of issue,

4.1.2 Trade size of chain,

4.1.3 Class of chain,

4.1.4 Quantity of chain in feet or metres,

4.1.5 Length of each piece, if required,

4.1.6 Finish, if required,

4.1.7 Certification of test(s), if required, and

4.1.8 Acceptance of inspection by purchaser, if required.

5. Manufacture

5.1 *Melting Process*—The steel shall be made by the open-hearth, electric-furnace, or basic-oxygen process.

5.2 *Welding Process*—Classes MS, MT, CS, and CT shall be electric welded.

6. Chemical Requirements

6.1 *Product Analysis*—The material used shall conform to the following chemical requirements:

Elements, max, %	Classes MS, MT, CS, and CT
Carbon	0.37
Phosphorus	0.048

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 A01.27 on Steel Chain.

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² *Annual Book of ASTM Standards*, Vol 01.03.

³ Discontinued. See 1994 *Annual Book of ASTM Standards*, Vol 03.05.

*A Summary of Changes section appears at the end of this standard.