



Standard Specification for Industrial Woven Wire Cloth¹

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^{€1} NOTE—Table 6 was corrected editorially in December 2003.

INTRODUCTION

Industrial wire cloth can be produced in many thousands of combinations of size and shape of opening, wire diameter, type of weave, and metal. This specification covers woven wire cloth for industrial use, including the separation of particles. Its purpose is to introduce standard terms and definitions, to note the normal range of specifications woven, and to establish tolerances and requirements. This specification excludes sieve cloth from its scope, since this is covered under Specification E 11. If a user has a specific application for industrial wire cloth that is not within the scope of this specification, it is recommended that the wire cloth supplier be consulted.

1. Scope

1.1 This specification covers industrial woven wire fabric, referred to as wire cloth, for general use including the separation of particles. Wire cloth can be made of any primary metal or metal alloy wire that is suitable for weaving. This specification does not apply to the following special types of wire cloth: filter cloth or dutch weave (see Appendix X1), fourdrinier and cylinder cloth, galvanized hardware cloth, insect wire screening, spiral weave wire cloth, testing sieve cloth, or welded wire cloth.

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

2. Referenced Documents

2.1 ASTM Standards:

A 510 Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel²

A 555/A 555M Specification for General Requirements for Stainless Steel Wire and Wire Rods²

E 11 Specification for Wire-Cloth Sieves for Testing Purposes³

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *aperture, n*—the dimensions defining an opening in a screening surface (see also *width opening*).

3.1.2 *bolting cloth, n*—a specific group of commonly used mesh and wire diameter combinations. They are covered within this specification.

3.1.3 *coatings, n*—the wire used for weaving wire cloth can be coated, plated, or in some other way finished prior to weaving, or wire cloth can be specified coated after weaving. Consult with a supplier as to the applicability of this specification. Examples of possible coatings include, but are not limited to, metallic plated, such as, copper, nickel, tin, etc., painted, or epoxy-coated or galvanized-steel wire cloth that has been coated with zinc either before or after weaving.

3.1.4 Types of Crimps:

3.1.4.1 *crimp, n*—the corrugation in the warp or shute wire, or both. The crimp in the wires is formed either during the weaving process, or with a crimping machine prior to weaving. If formed during the weaving process, the tension existing between the warp and shute wires fundamentally determines the respective amount or depth of crimp, which locks the wires in place and in part establishes the firmness of the wire cloth.

3.1.4.2 *double crimp, adj*—wire cloth woven with approximately equal corrugations in both the warp and shute wires to lock the wires in position (see Fig. 1).

3.1.4.3 *flat top, adj*—wire cloth with deep crimps, as in lock crimp, except that all crimps are on the underside of the cloth, leaving the top surface all in one plane. Sometimes designated smooth top (see Fig. 2).

¹ This specification is under the jurisdiction of ASTM Committee E-29 on Particle and Spray Characterization and is the direct responsibility of E29.01 on Sieves, Sieving Methods, and Screening Media.

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² Annual Book of ASTM Standards, Vol 01.03.

³ Annual Book of ASTM Standards, Vol 14.02.

