



Standard Terminology Relating to Uninsulated Metallic Electrical Conductors¹

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INTRODUCTION

These terminologies relate only to interpretations as applied to uninsulated metallic electrical conductors in specifications under the jurisdiction of ASTM Committee B-1 on Wires for Electrical Conductors, and do not necessarily correspond to the definitions used in other fields.

1. Scope

1.1 This terminology standard defines abbreviations and terms specific to uninsulated electrical conductors. For terms relating to superconductors, see Terminology B 713.

2. Referenced Documents

- 2.1 *ASTM Standards:*
B 713 Terminology Relating to Superconductors²

3. Abbreviations AAC—aluminum conductor.

AACSR—aluminum alloy conductor, steel reinforced.
ACAR—aluminum conductor, aluminum alloy reinforced.
ACSR—aluminum conductor, steel reinforced.
AW—aluminum clad steel wire.
AZ—aluminum coated (aluminized) steel wire.
COMP—compact construction.
GA—zinc coated (galvanized) steel wire, coating class A.
GB—zinc coated (galvanized) steel wire, coating class B.
GC—zinc coated (galvanized) steel wire, coating class C.
HS—zinc coated (galvanized) high strength steel wire.
MA—zinc-5 % aluminum-mischmetal alloy coated steel wire, coating class A.
MB—zinc-5 % aluminum-mischmetal alloy coated steel wire, coating class B.
MC—zinc-5 % aluminum-mischmetal alloy coated steel wire, coating class C.
MS—zinc-5 % aluminum-mischmetal alloy coated high strength steel wire.
SD—self dampening construction.
SIW—single input wire construction.
TW—trapezoidal shaped wire.
Zn-5Al-MM—zinc-5 % aluminum-mischmetal alloy coating.

4. Terminology

4.1 Definitions:

aeolian vibration—resonant vibration of a conductor caused by the alternate shedding of wind-induced vortices from opposite sides of the conductor. (Frequency is usually less than 200 Hz and amplitude rarely exceeds one conductor diameter.)
annealed wire—see **soft wire**.
area density—mass per unit area.
bare conductor—a conductor having no nonmetallic covering.
brazing—the joining of ends of two wires, rods, or groups of wires with a nonferrous filler metal at temperatures above 800°F [427°C].
breaking strength—the maximum load that a conductor attains when tested in tension to rupture.
bunch-stranded conductor—a conductor composed of wires twisted together with a given length and direction of lay in such manner that the respective wires at successive cross sections along the length of the conductor do not necessarily form a symmetrical geometric pattern, nor necessarily occupy the same positions relative to each other.
circular mil (cmil)—a unit of area equal to the area of a circle one mil (0.001 in., 0.0254 mm) in diameter. The area of a circle in circular mils is equal to the square of the diameter in mils [area(cmils) = diameter(mils)²], 1 cmil = 7.854 × 10⁻⁷ in.² [5.067 × 10⁻¹⁰ m²].
clad wire—wire comprised of a given metal covered with a relatively thick application of a different metal.
coated wire—wire comprised of a given metal covered with a relatively thin application of a different metal.
cold-drawing—reducing the cross section by pulling through a die or dies, at a temperature lower than the recrystallization temperature.
combination stranded conductor—a conductor constructed with wires of different diameters with such differences occurring either within a single layer or from layer to layer.
compact stranded conductor—a unidirectional or unilay or

¹ This terminology is under the jurisdiction of ASTM Committee B-1 on Electrical Conductors and is the direct responsibility of Subcommittee B01.01 on Editorial and Records.

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² *Annual Book of ASTM Standards*, Vol 02.03.