



ANSI C80.5-2015

American National
Standard for
Electrical Rigid
Metal Conduit—
Aluminum
(ERMC-A)





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*American National Standard for
Electrical Rigid Metal Conduit—Aluminum (ERMC-A)*

Secretariat:

National Electrical Manufacturers Association

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American National Standards Institute, Inc.

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Foreword (This foreword is not part of American National Standard C80.5-2015.)

This standard was developed by the Accredited Standards Committee on Raceways for Electrical Wiring Systems, C80. The objective of the committee is to produce a comprehensive specification that would establish uniform dimensions and standard construction requirements for electrical rigid steel conduit, steel electrical metallic tubing, electrical intermediate metal conduit, and electrical aluminum rigid conduit raceway products and their associated components.

The standard was originally approved in 1950 and revised in 1953, 1959, 1963, 1966, 1977, 1983, 1990, 1994, 2005, and 2015.

Suggestions for improvement of this standard will be welcome. They should be sent to the National Electrical Manufacturers Association, 1300 North 17th Street, Suite 900, Rosslyn, Virginia 22209.

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Raceways for Electrical Wiring Systems, C80. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the C80 Committee comprised the following members:

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J. G. Solis, Secretary

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Wheatland Tube Company
International Association of Electrical Inspectors
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National Electrical Contractors Association
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1 Scope

This standard covers the requirements for porthole-extruded aluminum-alloy conduit for use as a raceway for the wires or cables of an electrical system. The finished conduit is produced in nominal 10-ft. (3.05-m) lengths, threaded on each end with one coupling attached.

This standard also covers aluminum conduit couplings, elbows, nipples, and conduit lengths other than 10 ft (3.05 m).

Properly assembled systems of conduit, couplings, elbows, and nipples manufactured in accordance with this standard, and other identified fittings, provide for the electrical continuity required of an equipment grounding conductor.

2 Normative References

The following standard contains provisions that, through reference in this text, constitute requirements of this American National Standard. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

ANSI/ASME B1.20.1 *Pipe Threads, General Purpose (Inch)*

UL 6A *Electrical Rigid Metal Conduit – Aluminum, Red Brass and Stainless Steel*

3 Definitions

- 3.1 **Electrical rigid metal conduit—aluminum (ERMC-A):** A threadable aluminum raceway of circular cross-section designed for the physical protection and routing of wire conductors and cables and for use as an equipment grounding conductor
- 3.2 **Threaded coupling:** An internally threaded aluminum cylinder for joining together the components of an ERMC-A system
- 3.3 **Elbow:** A manufactured curved section of ERMC-A threaded on each end
- 3.4 **Nipple:** A straight length of ERMC-A not more than two ft (0.61 m) long and threaded on each end
- 3.5 **Straight conduit:** A straight length of ERMC-A without a coupling
- 3.6 **Finished conduit:** A straight length of ERMC-A with one coupling attached