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American National Standard

**Standard for Uninsulated Conductors
Used in Electrical and Electronic Applications**

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National Electrical Manufacturers Association

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FOREWORD

This standard publication was developed by the NEMA High Performance Wire and Cable Section as an alternative non-government standard to MIL-DTL-29606. This publications assures that all included conductors, both metric and English (inch/pound) sizes will meet the current requirements associated with high-reliability aerospace electrical and electronic equipment. This standard was adapted from, and harmonizes the following specifications: MIL-DTL-29606, ISO 2635, PREN 2083, and BSI 231. In addition, it also utilizes many of the ASTM conductor standards for reference purposes.

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This standards publication was developed by the NEMA High Performance Wire and Cable Section. Section approval of the standard does not necessarily imply that all section members voted for its approval or participated in its development. At the time it was approved, the Section was composed of the following members:

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Section 1 GENERAL

1.1 SCOPE

This standard covers the following uninsulated conductors:

- Single end (solid) and stranded;
- coated and uncoated copper;
- coated copper alloy;
- coated copper-clad steel;
- aluminum conductors; and,
- thermocouple extension conductors.

These conductors are used primarily in insulated wires for aerospace, electrical, electronic and other high performance applications.

Both metric and English (inch/pound) conductors are included in this standard. Where alternative units are shown in parenthesis, English (inch/pound) units shall be normative.

1.2 REFERENCED STANDARDS

American National Standards Institute (ANSI)

11 West 42nd Street
New York, NY 10036

ANSI ASQC Z1.4	<i>Sampling Procedures and Tables for Inspection by Attributes</i>
ANSI/J-STD-002	<i>Solderability Tests for Component Leads Terminations Lugs Terminals and Wires</i>
ANSI MC 96.1	<i>Temperature Measurement Thermocouples</i>
ANSI/NCSL Z540-1	<i>Calibration Laboratories and Measuring and Test Equipment—General Requirements</i>

American Society for Testing and Materials (ASTM)

100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

B230	<i>Aluminum 1350-H19 Wire for Electrical Purposes</i>
B230M	<i>Aluminum 1350-H19 Wire for Electrical Purposes (Metric)</i>
B263	<i>Determination of Cross-Sectional Area of Stranded Conductors</i>
B286	<i>Copper Conductors for Use in Hook-up Wire for Electronic Equipment</i>
B298	<i>Silver-Coated Soft or Annealed Copper Wire</i>
B3	<i>Soft or Annealed Copper Wire</i>
B33	<i>Tinned Soft or Annealed Copper Wire</i>
B355	<i>Nickel-Coated Soft or Annealed Copper Wire</i>
B452	<i>Copper Clad Steel Wire for Electronic Applications</i>
B501	<i>Silver-Coated Copper-clad Steel Wire for Electronic Applications</i>
B559	<i>Nickel-Coated Copper-clad Steel Wire for Electronic Applications</i>
B961	<i>Silver-Coated Copper and Copper Alloy Stranded Conductors for Electronic Space application.</i>
B965	<i>Tin-Coated Annealed Copper Wire Intended for Electrical and Electronic Application for Solderability</i>