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American National Standard

**Electrical and Electronic Silicone and Silicone Braided
Insulated, Hook-Up Wire, Types S (600 V), ZHS (600 V), SS
(1000 V), ZHSS (1000 V), and SSB Braided (1000 V)**

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FOREWORD

This standard publication was developed by the NEMA High Performance Wire and Cable Section. It was developed to assure that these types of hook-up wire can be procured and that they will meet requirements associated with high reliability commercial electrical and electronic equipment in which it is used. Compliance with provisions of this Standards Publication is strictly voluntary and any certification of compliance is left to the discretion of the buyer and seller.

In the preparation of this standards publication, input of users and other interested parties has been sought and evaluated. Inquiries, comments, and proposed or recommended revisions should be submitted to the High Performance Wire and Cable Product Section by contacting the:

Senior Technical Director, Operations
National Electrical Manufacturers Association
1300 North 17th Street, Suite 900
Rosslyn, Virginia 22209

This standards publication was designed as a non-government standard for replacement of MIL-W-16878 Silicone Rubber Insulated Wire Slash Sheets (/7, /8, /29 through /32).

This standards publication was developed by the High Performance Wire and Cable Section of NEMA. 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:

AFC Cable Systems	New Bedford, MA
Apical Division, Kaneka North America	Pasadena, TX
Belden Inc.	St. Louis, MO
Berk-Tek a Nexans Company	Elm City, NC
Cable USA LLC.	Naples, FL
Champlain Cable Corporation	Colchester, VT
Coleman Cable Inc.	Waukegan, IL
Comtran Cable LLC	Attleboro, MA
Electrolock, Inc.	Hiram, OH
Freeport McMoRan Copper & Gold	Phoenix, AZ
General Cable	Highland Heights, KY

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Harbour Industries LLC.	Shelburne, VT
IWG High Performance Conductors	Inman, SC
Lockheed Martin MS2	Morestown, NJ
Marine Tech Wire and Cable, Inc.	York, PA
Nexans AmerCable	El Dorado, AR
Quirk Wire Company, Inc.	West Brookfield, MA
Radix Wire Company	Euclid, OH
RSCC Aerospace and Defense	East Granby, CT
SEA Wire and Cable, Inc.	Madison, AL
Southwire Company	Carrollton, GA
The Monroe Cable Company, Inc.	Middletown, NY
The Okonite Company	Ramsey, NJ
TE Connectivity	Menlo Park, CA
Wiremasters, Inc.	Columbia, TN

Section 1 GENERAL

1.1 SCOPE

This standard publication covers specific requirements for silicone rubber insulated stranded wire, designed for the internal wiring of high reliability electrical and electronic equipment. This standards publication addresses 600 V (Type S, ZHS) and 1000 V (Type SS, ZHSS and SSB) wire and permits continuous conductor temperature ratings of -55°C to +150°C with tin-coated copper or -55 °C to + 200 °C with silver-coated copper. These types of hook-up wire are used when the following requirements are called for:

- High temperature resistance
- Low temperature resistance
- Good flexibility and flex life
- Solder iron resistance for easier solder terminations without potential damage
- Type ZHS, and ZHSS are used for applications requiring low smoke and zero halogen requirements

1.2 REFERENCED STANDARDS AND SPECIFICATIONS

The following normative documents contain provisions, which through reference in this text constitute provisions of this standards publication. By reference herein these publications are adopted, in whole or in part as indicated, in this standards publication.

American Society for Testing and Materials (ASTM)

100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

B 286	<i>Copper Conductors for Use in Hook-up Wire for Electronics</i>
B 298	<i>Silver Coated Soft or Annealed Copper Wire</i>
D 3032	<i>Methods of Testing Hook-Up Wire Insulation</i>
B 3	<i>Soft or Annealed Copper Wire</i>
B 33	<i>Tinned Soft or Annealed Copper Wire</i>

American Society for Quality Control

611 E. Wisconsin Ave.
Milwaukee, WI 53202

ANSI/ASQC Z1.4	<i>Sampling Procedures and Tables for Inspection by Attributes</i>
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