NEMA Standards Publication

NEMA HP 6-2007

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)

National Electrical Manufacturers Association

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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:

Vice-President, Technical Services
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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 02745-1214
AmerCable	El Dorado, AR 71730-6600
American Insulated Wire Corporation	Pawtucket, RI 02861
Belden CDT, Inc.	St. Louis, MO 63105
Berk-Tek a Nexans Company	Erin City, NC 27822
Cable USA, Inc.	Naples, FL 34104
Coleman Cable Inc.	Waukegan, IL 60085
Draka Comteq USA Inc.	Franklin, MA 02038
Fisk Alloy Conductors, Inc.	Hawthorne, NJ 07507
General Cable	Highland Heights, KY 41076-9753
Harbour Industries, Inc.	Shelburne, VT 05482
Judd Wire, Inc.	Turners Falls, MA 01376-2699
Kaneka High-Tech Materials Inc.	Pasadena, TX 77507
Leoni Wire, Inc.	Chicopee, MA 01022
Leviton Manufacturing Co., Inc.	Gardena, CA 90247
Phelps Dodge High Performance Conductors	Inman, SC 29349
Quirk Wire Company, Inc.	West Brookfield, MA 01585
Radix Wire Company	Euclid, OH 44132
Rea Magnet Wire Company, Inc.	Fort Wayne, IN 46803
Rockbestos-Surprenant Cable Corporation	East Granby, CT 06026
Southwire Company	Carrollton, GA 30117
Specialty Cable Corporation	Wallingford, CT 06492
The Monroe Cable Company, Inc.	Middletown, NY 10941
The Okonite Company	Ramsey, NJ 07446-1157
Tyco Electronics/Raychem Wire & Cable	Menlo Park, CA 94025-1164

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Section 1
GENERAL

1.1 SCOPE

This Standard Publication covers specific requirements for Silicone Rubber insulated stranded wir designed to 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 -55ºC to +150ºC (tin-copper) or +200ºC (silver-coated) with either tin-coated or silver-coated conductors. 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 Bar Harbor Drive
West Conshohocken, PA 19428-2959

B 3-01	*Soft or Annealed Copper Wire*
B 33-00	*Tinned Soft or Annealed Copper Wire*
B 286-02	*Copper Conductors for Use in Hook-up Wire for Electronics*
B 298-99	*Silver-Coated Soft or Annealed Copper Wire*
D 3032-98	*Methods of Testing Hook-Up Wire Insulation*

American Society for Quality Control
611 E. Wisconsin Ave.
Milwaukee, WI 53202

ANSI/ASQC Z1.4	*Sampling Procedures and Tables for Inspection by Attributes*

DODISS-Customer Service
Bldg. 4D
700 Robbins Ave.
Philadelphia, PA 19111-5094

Fed Std 228	*Methods of Testing Cable and Wire, Insulated*