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*American National Standard for
Aerospace and Industrial Electrical Cable*

Secretariat:

National Electrical Manufacturers Association

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American National Standards Institute, Inc.

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Foreword

This Standard was developed by the High-Performance Wire and Cable section of NEMA as a non-governmental Standard replacement for MIL-DTL-27500 electrical cable, widely used in aerospace and other industries. Cable built and marked to this Standard, regardless of the revision level, must be done by a source that has been qualified to produce the product types and is listed in the QPL-27500-SIS database. See <http://www.navair.navy.mil/qpl/qplsis>.

This Standard contains:

- a. Reference Standards (section 1)
- b. Identification methods (section 2) and requirements (sections 3.4, 3.10)
- c. Construction details (sections 2, 3)
- d. Material requirements (section 2)
- e. Conductors
- f. Primary wire
- g. Shields
- h. Jackets
- i. Functional requirements (section 3.9)
- j. Color/size/weight/lengths/markings
- k. Test methods for the above requirements (section 4)
- l. Inspection/QC/process control procedures/Qualification (section 4)
- m. Packaging (section 5)
- n. Notes/ ordering data (section 6)
- o. Qualification and retention of qualification requirements
- p. Cable design guidelines (appendix A)
- q. Supersessions and replacements (appendix B)

The requirements contained herein are consensus requirements that have been developed over the past three decades by knowledgeable engineers in the aerospace industry.

Suggestions for the improvement of this Standard are welcome. They should be sent to the National Electrical Manufacturers Association, 1300 N. 17th Street, Suite 900, Rosslyn, VA 22209.

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Section 1 General

1.1 Scope

This Standard contains requirements for finished cables. Component wires are covered by other referenced Standards. These cables are intended for signal and low-voltage power applications with defined environment or temperature conditions found in commercial aircraft, military aircraft, and high-performance vehicles.

Naval Air Systems Command (NAVAIR) approval is required to manufacture these cables.