

MIL-I-3190/3A
4 September 1987
 SUPERSEDING
 MIL-I-3190/3
 30 May 1986

MILITARY SPECIFICATION SHEET

INSULATION SLEEVING, ELECTRICAL, FLEXIBLE, COATED, CLASS 155, TYPE A, CATEGORY a

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the insulation sleeving described herein shall consist of this document and the latest issue of MIL-I-3190.

The sleeving shall be of the following classification:

Class 155, type A, category a.

REQUIREMENTS:

The insulation sleeving shall be in accordance with tables I, II, and III.

TABLE I. Performance requirements.

Property	Conditioning prior to test	Test	Unit	Value required
Dielectric breakdown				
Straight	96/23/50	4.7.2.2	Volts (minimum average)	7,000
Straight	96/23/50	4.7.2.2	Volts (minimum individual)	5,000
* Straight	96/23/96	4.7.2.2	Percent of average value obtained on test after condition 96/23/50 (minimum)	30
* Straight	At temperature of 155°C	4.7.2.2	Volts (minimum average)	2,500
90 degree bend	2/155	4.7.2.3	Volts (minimum average)	5,500

AMSC N/A

DISTRIBUTION STATEMENT A Approved for public release; distribution unlimited

FSC 5970

MIL-I-3190/3A

TABLE I. Performance requirements - Continued

Property	Conditioning prior to test	Test	Unit	Value required
Resistance to potting temperature	15 minutes at 225°C	4.7.3	Observation	Shall not flow, blister, or soften
Flammability	96/23/50	4.7.5.2 method B	Seconds to burn 1 inch 1/ for each individual specimen (minimum)	45
Oil and solvent resistance: Swelling oil	96 hours immersion at 23°C	4.7.6.2	Observation	Shall not disintegrate, peel or crack
			Percent increase in outside diameter (maximum average)	5
Xylol and paraffin oil (1:1)	24 hours immersion at 23°C	4.7.6.2	Observation	Shall not disintegrate, peel or crack
			Percent increase in outside diameter (maximum average)	15
* Hydrolytic stability	336 hours over water at 70°C	4.7.7	Volts (minimum average) Observation	1,500 volts No disintegration, reversion or tackiness
Thermal endurance	See 4.7.9	4.7.9	Temp. index (°C) at 15000 hours (minimum)	155
* Thermal stability	96/200	4.7.10	Volts (minimum average)	4,500

1/ Specimens which burn less than 1 inch meet flame resistance requirements.

MIL-I-3190/3A

TABLE II. Qualification inspection requirements.

Examination or test	Requirement	Test	Minimum number of tests for each size and for each condition as specified in table I
Visual examination	3.3, 3.6	4.6	10
Dimensions	3.4	4.7	10
Dielectric breakdown: Straight - 96/23/50, 96/23/96 and at temperature	Table I	4.7.2.2	10
90 degree bend	Table I	4.7.2.3	5
Resistance to potting temperature	Table I	4.7.3	3
Flammability	Table I	4.7.5.2 method B	5
Oil and solvent resistance: Swelling oil	Table I	4.7.6.2	3
Xylol and paraffin oil (1:1)	Table I	4.7.6.2	3
Hydrolytic stability	Table I	4.7.7	5
Thermal endurance	Table I	4.7.9	See 4.7.9

TABLE III. Quality conformance inspection requirements.

Examination or test	Requirement	Test	Conditioning prior to test	Minimum number of tests per sample unit
Visual examination	3.3, 3.6	4.6	96/23/50	As required per sampling
Dimensions	3.4	4.7	96/23/50	As required per sampling
Dielectric breakdown: Straight	Table I	4.7.2.2	96/23/50	10
			96/23/96	10
Flammability	Table I	4.7.5.2 method B	96/23/50	5
Solvent resistance: Xylol and paraf- fin oil (1:1)	Table I	4.7.6.2	24 hours immersion at 23°C	3
Thermal stability	Table I	4.7.10	96/200	5

MIL-I-3190/3A

Intended use. The temperature index for this class of sleeving is 155°C. This material is intended for applications in electrical equipment requiring primary insulation having good flexibility, high moisture resistance and providing adequate mechanical protection. The sleeving may be used where additional protection against environmental conditions or protection in localized areas is desired. It is to be noted that certain acrylics and polyesters show poor physical reaction to high solvent concentrations and their applications in such situations should be investigated.

Changes from previous issue. The margins of this specification are marked with asterisks to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:

Army - ER
Navy - SH
Air Force - 20

Preparing activity:

Navy - SH
(Project 5970-1009-02)

Review activities:

Army - AR, AV, EA, MI
Navy - EC
Air Force - 85, 99, 80
DLA - GS

User activities:

Army - ME
Navy - MC, OS