SAE Aerospace
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AEROSPACE MATERIAL SPECIFICATION

SAE AMS-T-81914/7 | REV. A

Issued 1999-06
Cancelled 2011-03

Superseded by AS81914/7

Tubing, Plastic, Flexible, Convoluted, Fluorinated Ethylene Propylene, Integral Braid

FSC 5975

RATIONALE

This specification has been transfered from the SAE AMS Committee "P" to the SAE AE8-C1 Committee. This document was intended as a parts specification but was under the jurisdiction of a materials committee. Considering this is a parts specification this revision cancels the AMS-T-81914/7 material standard and supersedes with AS81914/7 parts standard. All part numbers will remain M81914/7 in accordance with SAE guidelines.

CANCELLATION NOTICE

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of March 2011 and has been superseded by AS81914/7. The requirements of the latest issue of AS81914/7 shall be fulfilled whenever reference is made to the cancelled AMS-T-81914/7. By this action, this document will remain listed in the Numerical Section of the Index of Aerospace Material Specifications, noting that it has been superseded by AS81914/7.

Cancelled specifications are available from SAE.

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http://www.sae.org/technical/standards/AMST81914/7A

NOTICE

This document has been taken directly from U.S. Military Specification MIL-T-81914/7(AS), Notice 2 and contains only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards. The initial release of this document is intended to replace MIL-T-81914/7(AS), Notice 2. Any part numbers established by the original specification remain unchanged.

The original Military Specification was adopted as an SAE standard under the provisions of the SAE Technical Standards Board (TSB) Rules and Regulations (TSB 001) pertaining to accelerated adoption of government specifications and standards. TSB rules provide for (a) the publication of portions of unrevised government specifications and standards without consensus voting at the SAE Committee level, and (b) the use of the existing government specification or standard format.

Under Department of Defense policies and procedures, any qualification requirements and associated qualified products lists are mandatory for DOD contracts. Any requirement relating to qualified products lists (QPL's) has not been adopted by SAE and is not part of this SAE technical document.

The complete requirements for procuring the sleeving described herein shall consist of this document and the issue in effect of MIL-T-81914(AS).

REQUIREMENTS:

Convolution type: Helical (see 3.3)

Construction details: Braided convoluted tubing shall consist of an outer FEP jacket, the braid, and an inner FEP core. Available sizes, dimensions and tolerances, are located on Table I. Lengths shall be as specified by the procuring activity.

Braid: The integral braid shall consist of two layers of nickel coated copper wire, 34 AWG, ASTM B355, Class 4 or equal. Each layer of braid shall have a minimum optical coverage of 85%.

Continuous operating temperature: -67°C (-88°F) to +200°C (392°F)

Color: Unless otherwise specified, the supplied color shall be black.

Physical properties: General physical requirement values along with associated test conditions are located in Table II.

Military part number: Consists of the basic number of this specification sheet and a dash number as shown below:

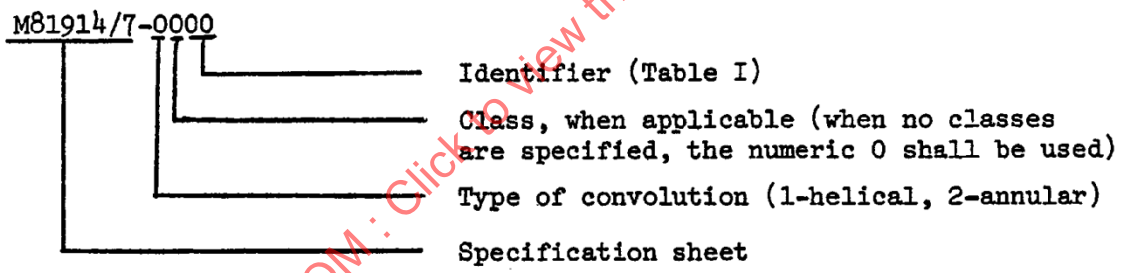

TABLE I
CONSTRUCTION DETAILS

Identifier	Max. Inside Dia.	Min. Inside Dia.	Max. Outer Dia.	Wall Thickness		Convolutions Per Inch ± 1/2	Weight per 100 Feet, Max.	Min. Bend Radius
				Core Min.	Jacket Max.			
**01	.188	.181	.39	.015	.018	6	10.8	.75
**02	.281	.273	.50	.015	.018	6	13.2	1.00
**03	.312	.303	.54	.015	.018	6	14.6	1.25
**04	.375	.364	.58	.015	.018	6	15.8	1.50
**05	.437	.425	.67	.015	.018	6	17.3	2.00
**06	.500	.485	.71	.015	.018	6	19.3	2.25
**07	.625	.608	.83	.015	.018	6	23.6	2.50
**08	.750	.730	.99	.015	.018	5	26.1	2.87
**09	.875	.850	1.20	.015	.018	5	31.3	3.25
**10	1.000	.975	1.30	.015	.018	5	36.4	3.62
**11	1.125	1.105	1.47	.015	.018	4	42.1	4.00
**12	1.250	1.210	1.61	.015	.018	4	47.9	4.25
**13	1.500	1.440	1.84	.015	.018	4	60.0	4.37
**14	1.750	1.690	2.09	.015	.018	4	75.0	4.62
**15	2.000	1.940	2.34	.015	.018	4	87.0	5.25

** - The asterisks shall be replaced by convolution type and class designation.

Note: Unless otherwise specified all dimensions are in inches.

TABLE II
PHYSICAL PROPERTIES

PROPERTY	REQUIREMENT	TEST METHOD
Construction details	In accordance with Table I	4.6.1
Stress in pounds @ 10% strain	18 to 55	4.6.2
Specific gravity, max.	2.18	4.6.3
Crush resistance, pounds Horizontal, min.	15	4.6.4
Low temperature flexibility	No cracking	4.6.5; 10,000 cycles
Heat shock	No dripping, flowing or cracking	4.6.6; 250 ±2°C (482 ±4°F) for 4 hours
Longitudinal change, %, max.	15	