

RATIONALE

THIS IS A CONVERSION OF AMS-DTL-23053/7 INTO AN AEROSPACE STANDARD WHICH INCLUDES QUALIFICATION AND REQUIREMENTS FOR A QUALIFIED PRODUCTS LIST.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS23053.

REQUIREMENTS

1. DIMENSIONS AND PROPERTIES IN INCH/POUND UNITS AND THE FAHRENHEIT TEMPERATURES ARE PRIMARY; DIMENSIONS AND PROPERTIES IN SI UNITS AND THE CELSIUS TEMPERATURES ARE SHOWN AS THE APPROXIMATE EQUIVALENTS OF THE PRIMARY UNITS AND ARE PRESENTED ONLY FOR INFORMATION.
2. POLYMER TYPE: THE BASE POLYMER USED IN FORMULATING THIS SLEEVING SHALL BE POLYETHYLENE TEREPHTHALATE.
3. CONTINUOUS OPERATING TEMPERATURE RANGE: -76 TO +275 °F (-60 TO +135 °C).
4. COLOR: THE HEAT SHRINKABLE SLEEVING SHALL BE FURNISHED IN CLEAR, AS MANUFACTURED. THE ACQUIRING ACTIVITY MAY SPECIFY COLORS FOR CLASS 2 SLEEVING ONLY (SEE 7.3.B). COLORS SHALL CONFORM TO CLASS I OF MIL-STD-104. (SEE 1.3 AND 3.3.3)
5. CLASSIFICATION: THE HEAT SHRINKABLE SLEEVING SHALL BE FURNISHED IN THE FOLLOWING CLASSES, AS SPECIFIED (SEE 7.3.A):

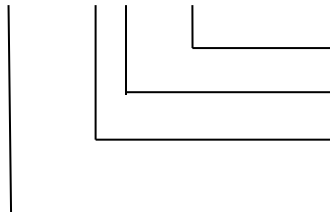
CLASS 1 - SINGLE LONGITUDINAL SEAM, THERMALLY BONDED
CLASS 2 - SPIRALLY WOUND, RESIN BONDED

6. LONGITUDINAL CHANGE:

CLASS 1: 30% MAXIMUM
CLASS 2: 35% MAXIMUM

7. PART NUMBER: THE PART NUMBER SHALL BE AS LISTED BELOW:

M23053/7 - X XX - X



COLOR CODE DESIGNATOR (SEE 1.3)

SIZE IDENTIFIER (SEE TABLE 1)

CLASS (WHERE NO CLASSES ARE SPECIFIED IN THE SPECIFICATION SHEET, THE NUMERIC "0" IS USED)

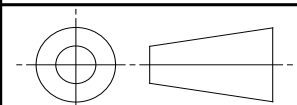
SPECIFICATION

EXAMPLE: CLASS 1 CLEAR, .125 INCHES (3.2 MM), AS SUPPLIED I.D. SLEEVING SHALL BE IDENTIFIED AS M23053/7-103-C.

8. DIMENSIONAL LIFE: THE DIMENSIONAL LIFE OF A PRODUCT APPLIES TO THE EXPANDED I.D., RECOVERED I.D., AND WALL THICKNESS DIMENSIONS OF THE PRODUCT AS SOLD BY THE MANUFACTURER, DISTRIBUTORS, AND REBRAND DISTRIBUTORS. AS23053/7 PRODUCTS CAN BE EXPECTED TO HAVE A MINIMUM DIMENSIONAL LIFE OF 4 YEARS WHEN STORED BETWEEN 32 TO 95 °F (0 TO 35 °C). PRODUCTS STORED ABOVE THESE CONDITIONS MAY NOT MEET THE MINIMUM EXPANDED I.D. REQUIREMENTS OF THE DETAIL SPECIFICATION. A PRODUCT MAY BE USED BY THE FINAL PURCHASER BEYOND THE EXPECTED MINIMUM DIMENSIONAL LIFE, AS LONG AS THE EXPANDED I.D., RECOVERED I.D., AND WALL THICKNESS OF THE PRODUCT MEET THE REQUIREMENTS OF THIS SPECIFICATION AT THE TIME OF USE.

For more information on this standard, visit
<https://www.sae.org/standards/content/AS23053/7>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8D

PROCUREMENT SPECIFICATION: AS23053



AEROSPACE STANDARD

INSULATION SLEEVING, ELECTRICAL, HEAT
SHRINKABLE POLYETHYLENE TEREPHTHALATE,
NON-CROSSLINKED

AS23053™/7
SHEET 1 OF 4

Documents

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9. UNRESTRICTED SHRINKAGE: TEST METHOD 5.5; 320 °F ± 4 °F (160 °C ± 2 °C) FOR 5 MINUTES.

TABLE 1 - CONSTRUCTION DETAILS, INCHES (MM) 1/

PART NUMBER 4/	ID MINIMUM	AFTER UNRESTRICTED SHRINKAGE	
		ID MAXIMUM	WALL THICKNESS 2/
CLASS 1			
M23053/7-101-C		NO LONGER MANUFACTURED	
M23053/7-102-C		NO LONGER MANUFACTURED	
M23053/7-103-C	.125 (3.2)	.088 (2.2)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-104-C	.187 (4.7)	.131 (3.3)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-105-C	.250 (6.4)	.175 (4.4)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-106-C	.375 (9.5)	.263 (6.7)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-107-C	.500 (12.7)	.350 (8.9)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-108-C	.750 (19.1)	.525 (13.3)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-109-C	1.000 (25.4)	.700 (17.8)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-110-C	1.375 (34.9)	.963 (24.5)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-111-C	1.500 (38.1)	1.050 (26.7)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-112-C	2.000 (50.8)	1.400 (35.6)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-113-C	2.500 (63.5)	1.750 (44.5)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-114-C	3.000 (76.2)	2.100 (53.3)	.0027 ± .0004 (0.07 ± 0.01)
M23053/7-115-C	4.000 (101.6)	2.800 (71.1)	.0027 ± .0004 (0.07 ± 0.01)
CLASS 2			
M23053/7-201-*	.015 (0.4)	.011 (0.3)	3/
M23053/7-202-*	.020 (0.5)	.015 (0.4)	
M23053/7-203-*	.025 (0.6)	.019 (0.5)	
M23053/7-204-*	.030 (0.8)	.023 (0.6)	
M23053/7-205-*	.042 (1.1)	.032 (0.8)	
M23053/7-206-*	.046 (1.2)	.035 (0.9)	
M23053/7-207-*	.062 (1.6)	.047 (1.2)	
M23053/7-208-*	.093 (2.4)	.070 (1.8)	
M23053/7-209-*	.125 (3.2)	.094 (2.4)	
M23053/7-210-*	.187 (4.7)	.140 (3.6)	
M23053/7-211-*	.250 (6.4)	.188 (4.8)	
M23053/7-212-*	.312 (7.9)	.234 (5.9)	
M23053/7-213-*	.375 (9.5)	.281 (7.1)	
M23053/7-214-*	.500 (12.7)	.375 (9.5)	
M23053/7-215-*	.625 (15.9)	.469 (11.9)	
M23053/7-216-*	.750 (19.1)	.563 (14.3)	
M23053/7-217-*	1.000 (25.4)	.750 (19.1)	
M23053/7-218-*	1.125 (28.6)	.844 (21.4)	
M23053/7-219-*	1.250 (31.8)	.938 (23.8)	
M23053/7-220-*	1.375 (34.9)	1.032 (26.2)	
M23053/7-221-*	1.500 (38.1)	1.125 (28.6)	
M23053/7-222-*	1.750 (44.5)	1.313 (33.4)	
M23053/7-223-*	2.000 (50.8)	1.500 (38.1)	

1/ DIAMETER LIMITS FOR THE OBJECT TO BE ENCLOSED SHALL BE NO LESS THAN 85% OF THE AS SUPPLIED DIAMETER.

2/ CLASS 1 WALL THICKNESS MEASUREMENTS SHALL BE MADE AWAY FROM THE SEAM.

3/ BECAUSE OF IRREGULAR SHRINK DOWN OF CLASS 2 SLEEVING, WALL THICKNESS SHALL BE DETERMINED "AS SUPPLIED" AS FOLLOWS:

NOMINAL ID (AS SUPPLIED)		WALL THICKNESS RANGE (AS SUPPLIED)	
INCH	(MM)	INCH	(MM)
.015 TO .061	(0.4 TO 1.5)	.0015 TO .0040	(0.04 TO 0.10)
.062 TO .074	(1.6 TO 1.9)	.0015 TO .0050	(0.04 TO 0.13)
.075 TO .094	(1.9 TO 2.4)	.0015 TO .0060	(0.04 TO 0.15)
.095 TO .124	(2.4 TO 3.1)	.0015 TO .0080	(0.04 TO 0.20)
.125 TO 2.000	(3.2 TO 50.8)	.0015 TO .0100	(0.04 TO 0.25)