

REV.  
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AS23053™/10

FEDERAL SUPPLY CLASS  
5970

RATIONALE

CORRECTION TO PART NUMBERS IS REQUIRED.

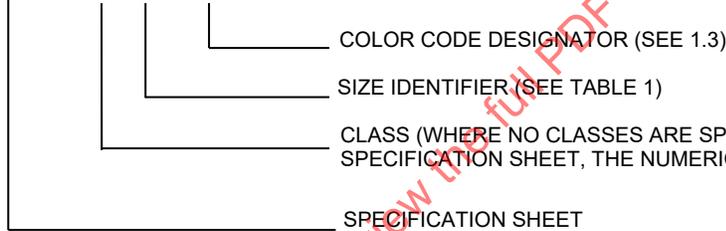
NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS23053. PARAGRAPH NUMBERS WITHOUT SPECIFICATION NUMBER ARE THAT 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 ELASTOMER USED IN FORMULATING THIS SLEEVING SHALL BE A SILICONE. CONTINUOUS OPERATING.
3. TEMPERATURE RANGE: -103 TO 347 °F (-75 TO 175 °C).
4. COLOR: THE SLEEVING SHALL BE FURNISHED IN A BLACK COLOR THAT CONFORMS TO THE REQUIREMENTS OF CLASS II OF MIL-STD-104 (SEE 1.3).
5. LONGITUDINAL CHANGE: +3, -10%.
6. PART NUMBER: THE PART NUMBER SHALL BE AS LISTED BELOW:

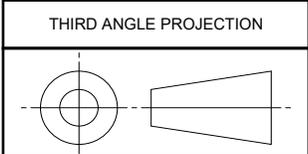
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EXAMPLE: BLACK, 2.000 INCHES (50.80 MM) AS SUPPLIED ID SLEEVING SHALL BE IDENTIFIED AS M23053/10-012-0.

7. DIMENSIONAL LIFE: THE DIMENSIONAL LIFE OF A PRODUCT APPLIES TO THE EXPANDED ID, RECOVERED ID AND WALL THICKNESS DIMENSIONS OF THE PRODUCT AS SOLD BY THE MANUFACTURER, DISTRIBUTORS, AND REBRAND DISTRIBUTORS. AS23053/10 PRODUCTS CAN BE EXPECTED TO HAVE A MINIMUM DIMENSIONAL LIFE OF 1 YEAR WHEN STORED BETWEEN 32 TO 95 °F (0 TO 35 °C). PRODUCTS STORED ABOVE THESE CONDITIONS MAY NOT MEET THE MINIMUM EXPANDED ID 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 ID, RECOVERED ID, AND WALL THICKNESS OF THE PRODUCT MEET THE REQUIREMENTS OF THIS SPECIFICATION AT THE TIME OF USE.
8. UNRESTRICTED SHRINKAGE: TEST METHOD 5.5.2; 392 °F ± 4 °F (200 °C ± 2 °C) FOR 10 MINUTES.

For more information on this standard, visit  
<https://www.sae.org/standards/content/AS23053/10B/>



CUSTODIAN: AE-8/AE-8D

PROCUREMENT SPECIFICATION: AS23053



AEROSPACE STANDARD

INSULATION SLEEVING, ELECTRICAL, HEAT SHRINKABLE, SILICONE RUBBER, FLEXIBLE

AS23053™/10  
SHEET 1 OF 3

REV.  
B

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ISSUED 2016-10 REVISED 2023-02

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

PART NUMBER 3/	AS SUPPLIED	AFTER UNRESTRICTED SHRINKAGE	
	ID MINIMUM	ID MAXIMUM	WALL THICKNESS 2/
M23053/10-001-0	.125 (3.2)	.071 (1.8)	.020 ± .006 (0.5 ± 0.2)
M23053/10-002-0	.250 (6.4)	.143 (3.6)	.035 ± .010 (0.9 ± 0.3)
M23053/10-003-0	.375 (9.5)	.214 (5.4)	.040 ± .010 (1.0 ± 0.3)
M23053/10-004-0	.500 (12.7)	.286 (7.3)	.048 ± .015 (1.2 ± 0.4)
M23053/10-005-0	.625 (15.9)	.357 (9.1)	.052 ± .015 (1.3 ± 0.4)
M23053/10-006-0	.750 (19.1)	.428 (10.9)	.057 ± .015 (1.4 ± 0.4)
M23053/10-007-0	.875 (22.2)	.500 (12.7)	.065 ± .015 (1.7 ± 0.4)
M23053/10-008-0	1.000 (25.4)	.570 (14.5)	.070 ± .020 (1.8 ± 0.5)
M23053/10-009-0	1.250 (31.8)	.714 (18.1)	.087 ± .020 (2.2 ± 0.5)
M23053/10-010-0	1.500 (38.1)	.857 (21.8)	.095 ± .020 (2.4 ± 0.5)
M23053/10-011-0	1.750 (44.5)	1.000 (25.4)	.107 ± .020 (2.7 ± 0.5)
M23053/10-012-0	2.000 (50.8)	1.140 (29.0)	.110 ± .020 (2.8 ± 0.5)

1/ DIAMETER LIMITS FOR THE OBJECT TO BE ENCLOSED SHALL BE AS RECOMMENDED IN TECHNICAL DATA.

2/ WALL THICKNESS VALUES ARE LESS WHEN SHRINKAGE IS RESTRICTED.

3/ THE COLOR CODE IDENTIFIED IS THE STANDARD COLOR.

**TABLE 2 - PHYSICAL PROPERTIES**

CHARACTERISTIC	REQUIREMENT	TEST PROCEDURE AND CONDITION (AS23053)
<b>AS SUPPLIED:</b>		
ID, MINIMUM	TABLE 1	5.3.1
HEAT SHOCK	NO CRACKS, FLOWING, OR DRIPPING	5.8 572 °F ± 7.2 °F (300 °C ± 4 °C) NO MANDREL BEND
TENSILE STRESS AT 100%, PSI (MPA), MAX	1000 (6.9)	5.12.2 ASTM D412
COLD IMPACT	NO CRACKING	5.7.2 -105 °F ± 4 °F (-75 °C ± 2 °C) LONGITUDINAL STRIP, ASTM D746
DIELECTRIC STRENGTH, V/MIL (KV/MM), MIN	200 (7.9)	5.2 ASTM D2671
RESTRICTED SHRINKAGE	NO CRACKS	5.6 392 °F ± 4 °F (200 °C ± 2 °C)
VOLTAGE WITHSTAND	PASS	5.6.2C
<b>AFTER UNRESTRICTED SHRINKAGE:</b>		
ID, MAX	TABLE 1	5.3.2
WALL THICKNESS	TABLE 1	5.3.3
TENSILE STRENGTH, PSI (MPA), MIN	600 (4.2)	5.13 ASTM D638, 20 IN/MIN
ULTIMATE ELONGATION, PERCENT, MIN	200	5.13 ASTM D638, 20 IN/MIN
VOLUME RESISTIVITY, OHM-CM, MIN	1 X 10 <sup>11</sup>	5.2 ASTM D876
WATER ABSORPTION, PERCENT, MAX	1.0	5.2 ASTM D570, 24 HOURS AT 23 °C
CORROSION	NO CORROSION OR PITTING	5.10.1 AND 5.10.2, 347 °F ± 4 °F (175 °C ± 2 °C), 16 HOURS