

RATIONALE

THIS IS A CONVERSION OF AMS-DTL-23053/13 INTO AN AEROSPACE STANDARD WHICH INCLUDES QUALIFICATION AND REQUIREMENTS FOR A QUALIFIED PRODUCTS LIST.

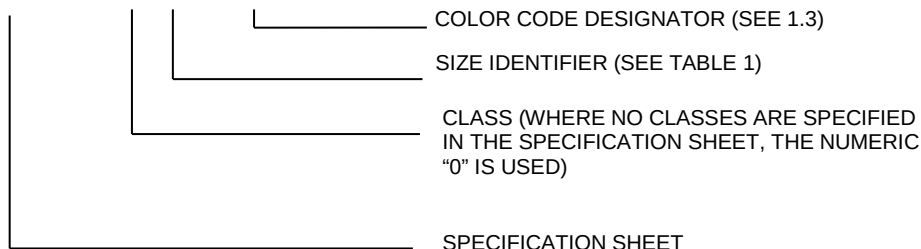
NOTICE

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 ELASTOMER USED IN FORMULATING THIS SLEEVING SHALL BE FLUOROELASTOMER.
3. CONTINUOUS OPERATING TEMPERATURE RANGE: -40 TO +392 °F (-40 TO +200 °C).
4. COLOR: THE HEAT SHRINKABLE SLEEVING SHALL BE FURNISHED IN THE COLOR SPECIFIED BY THE ACQUISITION ACTIVITY (SEE 7.3); HOWEVER, BLACK SHALL BE CONSIDERED STANDARD. COLORS SHALL CONFORM TO THE REQUIREMENTS OF CLASS II OF MIL-STD-104. (SEE 1.3 AND 3.3.3)
5. LONGITUDINAL CHANGE: ±20%.
6. PART NUMBER: THE PART NUMBER SHALL BE AS LISTED BELOW:

M23053/13 - X XX - X

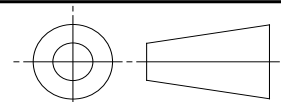


EXAMPLE: BLACK, 0.500 INCH (12.7 MM) AS SUPPLIED ID SLEEVING SHALL BE IDENTIFIED AS M23053/13-004-0.

7. 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. AS23053/13 PRODUCTS CAN BE EXPECTED TO HAVE A MINIMUM DIMENSIONAL LIFE OF 2 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.
8. UNRESTRICTED SHRINKAGE: TEST METHOD 5.5; 392 °F ± 9 °F (200 °C ± 5 °C) FOR 10 MINUTES MAXIMUM.

For more information on this standard, visit
<https://www.sae.org/standards/content/AS23053/13>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8D

PROCUREMENT SPECIFICATION: AS23053



AEROSPACE STANDARD

INSULATION SLEEVING, ELECTRICAL,
HEAT SHRINKABLE, FLUOROELASTOMER,
FLEXIBLE

AS23053™/13
SHEET 1 OF 3



Documents

TABLE 1 - CONSTRUCTION DETAILS, INCHES (MM) ^{1/}

PART NUMBER ^{3/}	AS SUPPLIED ID MINIMUM	AFTER UNRESTRICTED SHRINKAGE	
		ID MAXIMUM	WALL THICKNESS ^{2/}
M23053/13-001-*	.187 (4.7)	.094 (2.4)	.035 ± .007 (0.9 ± 0.2)
M23053/13-002-*	.250 (6.4)	.125 (3.2)	.035 ± .007 (0.9 ± 0.2)
M23053/13-003-*	.375 (9.5)	.187 (4.7)	.035 ± .007 (0.9 ± 0.2)
M23053/13-004-*	.500 (12.7)	.250 (6.4)	.035 ± .007 (0.9 ± 0.2)
M23053/13-005-*	.625 (15.9)	.312 (7.9)	.042 ± .008 (1.1 ± 0.2)
M23053/13-006-*	.750 (19.1)	.375 (9.5)	.042 ± .008 (1.1 ± 0.2)
M23053/13-007-*	.875 (22.2)	.437 (11.1)	.049 ± .011 (1.2 ± 0.3)
M23053/13-008-*	1.000 (25.4)	.500 (12.7)	.049 ± .011 (1.2 ± 0.3)
M23053/13-009-*	1.250 (31.8)	.625 (15.9)	.055 ± .015 (1.4 ± 0.4)
M23053/13-010-*	1.500 (38.1)	.750 (19.1)	.055 ± .015 (1.4 ± 0.4)
M23053/13-011-*	2.000 (50.8)	1.000 (25.4)	.065 ± .017 (1.7 ± 0.4)
M23053/13-012-*	.125 (3.2)	.063 (1.6)	.030 ± .007 (0.8 ± 0.2)

- ^{1/} DIAMETER LIMITS FOR OBJECT TO BE ENCLOSED SHALL BE AS SPECIFIED IN TECHNICAL DATA.
^{2/} WALL THICKNESS VALUES ARE LESS WHEN SHRINKAGE IS RESTRICTED.
^{3/} THE ASTERISK IN THE PART NUMBER SHALL BE REPLACED BY COLOR CODE DESIGNATIONS (SEE 1.3). BLACK IS THE STANDARD COLOR.

TABLE 2 - PHYSICAL PROPERTIES

CHARACTERISTIC	REQUIREMENT	TEST PROCEDURE AND CONDITION (SEE AS23053)
AS SUPPLIED:		
ID, MINIMUM	TABLE 1	5.3.1
COLD IMPACT	NO CRACKING	5.7.2; -40 °F ± 1 °F (-40 °C ± 2 °C)
HEAT SHOCK	NO CRACKS, FLOWING, OR DRIPPING	5.8; 572 °F ± 9 °F (300 °C ± 5 °C)
RESTRICTED SHRINKAGE	NO CRACKS	5.6; 392 °F ± 4 °F (200 °C ± 2 °C)
VOLTAGE WITHSTAND	PASS	5.6.2.C
AFTER UNRESTRICTED SHRINKAGE:		
ID, MAXIMUM	TABLE 1	5.3.2
WALL THICKNESS	TABLE 1	5.3.3
TENSILE STRENGTH, PSI (MPa), MINIMUM	1200 (8.2)	5.13; ASTM D412, 20 INCHES/MINUTE
ULTIMATE ELONGATION, PERCENT	250	5.13; ASTM D412, 20 INCHES/MINUTE
TENSILE STRESS AT 200 PERCENT ELONGATION, PSI (MPa), MAXIMUM	2000 (13.8)	5.12.2; ASTM D412
DIELECTRIC STRENGTH, VOLTS/MIL, (KV/MM), MINIMUM	200 (7.9)	5.2; ASTM D2671
VOLUME RESISTIVITY, OHM-CM, MINIMUM	1 X 10 ⁹	5.2; ASTM D876