

RATIONALE

THIS IS A CONVERSION OF AMS-DTL-23053/18 INTO AN AEROSPACE STANDARD WHICH INCLUDES QUALIFICATION AND REQUIREMENTS FOR A QUALIFIED PRODUCTS LIST.

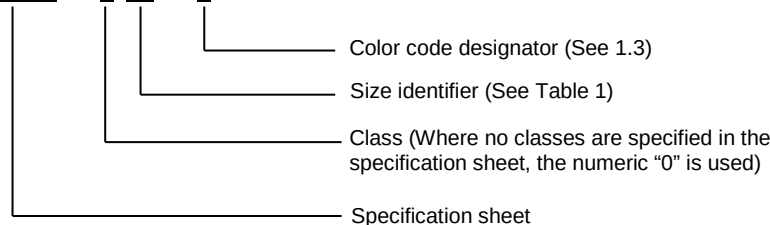
NOTICE

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

REQUIREMENTS

- 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.
- POLYMER TYPE: THE BASE POLYMER USED IN FORMULATING THIS SLEEVING SHALL BE A COPOLYMER OR TERPOLYMER OF POLYVINYLIDENE FLUORIDE.
- CONTINUOUS OPERATING TEMPERATURE RANGE:
CLASS 1: -67 TO +347 °F (-55 TO +175 °C).
CLASSES 2 AND 3: -67 TO +302 °F (-55 TO +150 °C).
- COLOR: COLOR: THE SLEEVING SHALL BE SUPPLIED IN COLORS AND CLEAR. COLORS SHALL CONFORM TO THE REQUIREMENTS OF CLASS 1 OF MIL-STD-104. (SEE 1.3 AND 3.3.3)
- CLASS: THE SLEEVING SHALL BE FURNISHED IN THE FOLLOWING CLASSES, AS SPECIFIED (SEE 7.3A):
CLASS 1 - SEMI-RIGID. (SECANT MODULUS OVER 100 000 PSI (690 MPA).
CLASS 2 - FLEXIBLE. (SECANT MODULUS OVER 25 000 TO 120 000 PSI (172 TO 828 MPA)
CLASS 3 - VERY FLEXIBLE. (SECANT MODULUS TO 25 000 PSI (172 MPA) MAXIMUM.)
- LONGITUDINAL CHANGE: +5, -10%; OVEREXPANDED SLEEVING: -15%.
- PART NUMBER: THE BASIC PART NUMBER SHALL BE AS LISTED BELOW:

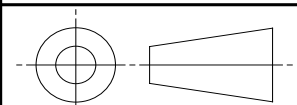
M23053/18 - X XX - X



EXAMPLE: CLASS 1 CLEAR, 0.250 INCH (6.35 MM) AS SUPPLIED ID SLEEVING SHALL BE IDENTIFIED AS M23053/18-106-C.

For more information on this standard, visit
<https://www.sae.org/standards/content/AS23053/18/>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8D

PROCUREMENT SPECIFICATION: AS23053



AEROSPACE STANDARD

INSULATION SLEEVING, ELECTRICAL,
HEAT SHRINKABLE,
MODIFIED FLUOROPOLYMER, CROSSLINKED

AS23053™/18

SUPERSEDES AMS-DTL-23053/18A

SHEET 1 OF 1

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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. AS23053/18 PRODUCTS CAN BE EXPECTED TO HAVE A MINIMUM DIMENSIONAL LIFE OF 5 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.
9. UNRESTRICTED SHRINKAGE: TEST METHOD 5.5: 392 °F ± 4 °F (200 °C ± 2 °C) FOR 3 MINUTES.

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

PART NUMBER ^{3/}	AS SUPPLIED ID MINIMUM	AFTER UNRESTRICTED SHRINKAGE	
		ID MAXIMUM	WALL THICKNESS ^{2/}
<u>CLASS 1</u>			
M23053/18-101-*	.046 (1.2)	.023 (0.6)	.010 ± .002 (0.3 ± 0.1)
M23053/18-102-*	.063 (1.6)	.031 (0.8)	.010 ± .002 (0.3 ± 0.1)
M23053/18-103-*	.093 (2.4)	.046 (1.2)	.010 ± .002 (0.3 ± 0.1)
M23053/18-104-*	.125 (3.2)	.062 (1.6)	.010 ± .002 (0.3 ± 0.1)
M23053/18-105-*	.187 (4.7)	.093 (2.4)	.010 ± .002 (0.3 ± 0.1)
M23053/18-106-*	.250 (6.4)	.125 (3.2)	.012 ± .003 (0.3 ± 0.1)
M23053/18-107-*	.375 (9.5)	.187 (4.7)	.012 ± .003 (0.3 ± 0.1)
M23053/18-108-*	.500 (12.7)	.250 (6.4)	.012 ± .003 (0.3 ± 0.1)
M23053/18-109-*	.750 (19.1)	.375 (9.5)	.017 ± .003 (0.4 ± 0.1)
M23053/18-110-*	1.000 (25.4)	.500 (12.7)	.019 ± .003 (0.5 ± 0.1)
M23053/18-111-*	1.500 (38.1)	.750 (19.1)	.020 ± .003 (0.5 ± 0.1)
M23053/18-112-*	2.000 (50.8)	1.000 (25.4)	.020 ± .003 (0.5 ± 0.1)
<u>CLASS 2</u>			
M23053/18-201-*	.046 (1.2)	.023 (0.6)	.010 ± .002 (0.3 ± 0.1)
M23053/18-202-*	.063 (1.6)	.031 (0.8)	.010 ± .002 (0.3 ± 0.1)
M23053/18-203-*	.093 (2.4)	.046 (1.2)	.010 ± .002 (0.3 ± 0.1)
M23053/18-204-*	.125 (3.2)	.062 (1.6)	.010 ± .002 (0.3 ± 0.1)
M23053/18-205-*	.187 (4.7)	.093 (2.4)	.010 ± .002 (0.3 ± 0.1)
M23053/18-206-*	.250 (6.4)	.125 (3.2)	.012 ± .003 (0.3 ± 0.1)
M23053/18-207-*	.375 (9.5)	.187 (4.7)	.012 ± .003 (0.3 ± 0.1)
M23053/18-208-*	.500 (12.7)	.250 (6.4)	.012 ± .003 (0.3 ± 0.1)
M23053/18-209-*	.750 (19.1)	.375 (9.5)	.017 ± .003 (0.4 ± 0.1)
M23053/18-210-*	1.000 (25.4)	.500 (12.7)	.019 ± .003 (0.5 ± 0.1)
OVEREXPANDED SLEEVING			
M23053/18-211-*	.093 (2.4)	.031 (0.8)	.017 ± .003 (0.4 ± 0.1)
M23053/18-212-*	.187 (4.7)	.062 (1.6)	.020 ± .003 (0.5 ± 0.1)
M23053/18-213-*	.375 (9.5)	.125 (3.2)	.020 ± .003 (0.5 ± 0.1)
M23053/18-214-*	.750 (19.1)	.250 (6.4)	.025 ± .003 (0.6 ± 0.1)
M23053/18-215-*	1.000 (25.4)	.333 (8.5)	.030 ± .005 (0.8 ± 0.1)
<u>CLASS 3</u>			
M23053/18-301-*	.046 (1.2)	.023 (0.6)	.010 ± .002 (0.3 ± 0.1)
M23053/18-302-*	.063 (1.6)	.031 (0.8)	.010 ± .002 (0.3 ± 0.1)
M23053/18-303-*	.093 (2.4)	.046 (1.2)	.010 ± .002 (0.3 ± 0.1)
M23053/18-304-*	.125 (3.2)	.062 (1.6)	.010 ± .002 (0.3 ± 0.1)
M23053/18-305-*	.187 (4.7)	.093 (2.4)	.010 ± .002 (0.3 ± 0.1)
M23053/18-306-*	.250 (6.4)	.125 (3.2)	.012 ± .003 (0.3 ± 0.1)
M23053/18-307-*	.375 (9.5)	.187 (4.7)	.012 ± .003 (0.3 ± 0.1)
M23053/18-308-*	.500 (12.7)	.250 (6.4)	.012 ± .003 (0.3 ± 0.1)
M23053/18-309-*	.750 (19.1)	.375 (9.5)	.017 ± .003 (0.4 ± 0.1)
M23053/18-310-*	1.000 (25.4)	.500 (12.7)	.019 ± .003 (0.5 ± 0.1)

^{1/} DIAMETER LIMITS FOR OBJECT TO BE ENCLOSED SHALL BE AS RECOMMENDED 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).

	AEROSPACE STANDARD	AS23053™/18 SHEET 2 OF 5 	
	INSULATION SLEEVING, ELECTRICAL, HEAT SHRINKABLE, MODIFIED FLUOROPOLYMER, CROSSLINKED		

