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AS81914/6

FEDERAL SUPPLY CLASS
9330

RATIONALE

TO PROVIDE SUPERSESSON DETAILS AS PART OF THE PART NUMBER INFORMATION FOR CLARIFICATION OF THE PRODUCT APPLICATIONS AS A RESULT OF THE TRANSFER FROM THE AMST DOCUMENTS TO THE AS DOCUMENTS.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS81914.

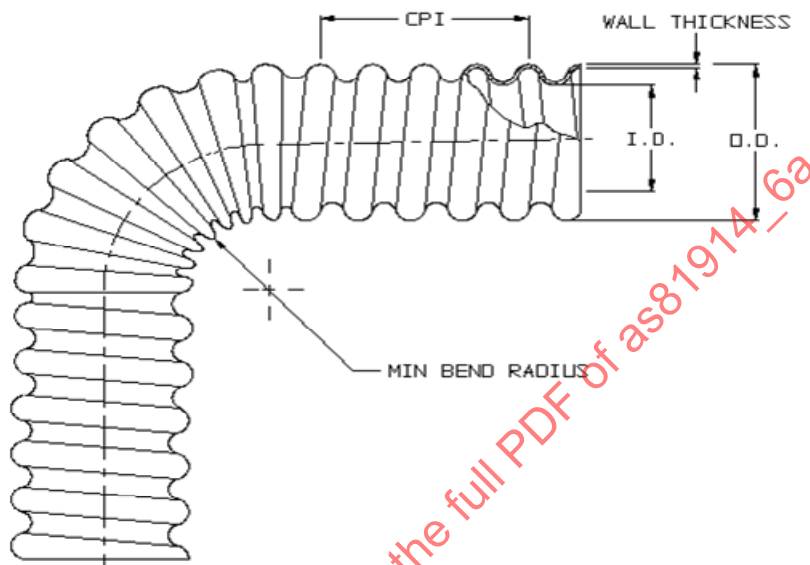
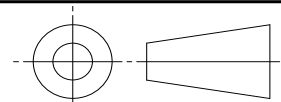


FIGURE 1 - DIMENSIONS AND CONFIGURATION

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THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS81914



AEROSPACE STANDARD

TUBING, PLASTIC, FLEXIBLE, CONVOLUTED, HELICAL
ETHYLENE TETRAFLUOROETHYLENE (ETFE),
STANDARD CONVOLUTION

AS81914/6
SHEET 1 OF 4

REV.
A

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TABLE 1 - FIGURE 1 DIMENSIONS

DASH NUMBER	MAX INSIDE DIA. (I.D.)	MIN INSIDE DIA. (I.D.)	MAX OUTER DIA. (O.D.)	MAX WALL THICKNESS	CONVOLUTIONS PER INCH (CPI) ± 1	APPROX. WEIGHT LB (KG) PER 100 FEET (30.5 M) REF.	MIN BEND RADIUS
01	.188 (4.78)	.181 (4.60)	.320 (8.13)	.018 (0.46)	8	1.2 (0.54)	.50 (12.7)
02	.281 (7.14)	.273 (6.93)	.414 (10.52)	.018 (0.46)	8	1.4 (0.64)	.75 (19.1)
03	.312 (7.92)	.306 (7.77)	.450 (11.43)	.018 (0.46)	8	1.5 (0.68)	.75 (19.1)
04	.375 (9.53)	.364 (9.25)	.510 (12.95)	.018 (0.46)	8	1.8 (0.82)	.88 (22.4)
05	.437 (11.10)	.427 (10.85)	.571 (14.50)	.018 (0.46)	8	2.5 (1.13)	.88 (22.4)
06	.500 (12.70)	.485 (12.32)	.650 (16.51)	.023 (0.58)	7	3.2 (1.45)	1.25 (31.8)
07	.625 (15.88)	.608 (15.44)	.770 (19.56)	.023 (0.58)	7	3.9 (1.77)	1.50 (38.1)
08	.750 (19.05)	.730 (18.54)	.930 (23.62)	.023 (0.58)	6	4.9 (2.22)	1.75 (44.5)
09	.875 (22.23)	.860 (21.84)	1.073 (27.25)	.023 (0.58)	5	5.6 (2.54)	2.00 (50.8)
10	1.000 (25.40)	.975 (24.77)	1.226 (31.14)	.023 (0.58)	5	6.8 (3.08)	2.37 (60.2)
11	1.125 (28.58)	1.105 (28.07)	1.390 (35.31)	.023 (0.58)	5	7.5 (3.40)	2.37 (60.2)
12	1.250 (31.75)	1.210 (30.73)	1.539 (39.09)	.023 (0.58)	4	8.8 (3.99)	2.75 (69.9)
13	1.500 (38.10)	1.437 (36.50)	1.832 (46.53)	.023 (0.58)	4	10.2 (4.63)	3.38 (85.9)
14	1.750 (44.45)	1.688 (42.88)	2.082 (52.88)	.023 (0.58)	4	11.9 (5.40)	3.88 (98.6)
15	2.000 (50.80)	1.937 (49.20)	2.332 (59.23)	.023 (0.58)	4	13.5 (6.12)	4.25 (108.0)

NOTES:

1. DIMENSIONS ARE IN INCHES.
2. UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE: .XX = $\pm .010$ (0.25 MM), .XXX = $\pm .005$ (0.13 MM).
3. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED ON 25.4 MM = 1 INCH.
4. METRIC DIMENSIONS IN PARENTHESES ARE SHOWN IN MILLIMETERS.

REQUIREMENTS:

1. DIMENSIONS AND CONFIGURATION: SEE FIGURE 1 AND TABLE 1.
2. CONVOLUTION TYPE: HELICAL
3. LENGTHS SHALL BE SPECIFIED IN FEET BY THE PROCURING ACTIVITY AND DOES NOT FORM A PART OF THE IDENTIFYING PART NUMBER. MINIMUM ORDER LENGTH SHALL BE 3 FEET (0.914 M) AND THE TUBING ORDER LENGTH TOLERANCES SHALL BE AS SPECIFIED IN TABLE 2. TUBING SHALL BE PROCURED AS COILS.



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AS81914/6
SHEET 2 OF 4

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TABLE 2 - ORDER LENGTH TOLERANCE

ORDER LENGTH RANGE	
LENGTH IN FEET (METERS)	TOLERANCE IN INCHES (MM)
3 - 12 (0.914 M - 3.66 M)	+2.0/-0.0 (+50.8 MM/-0.0 MM)
13 - 50 (3.96 M - 15.24 M)	+4.0/-0.0 (+101.6 MM/-0.0 MM)
51 AND UP (15.55 M AND UP)	+6.0/-0.0 (+152.4 MM/-0.0 MM)

4. CONTINUOUS OPERATING TEMPERATURE: -67 °C (-88 °F) TO 150 °C (302 °F).
5. COLOR: UNLESS OTHERWISE SPECIFIED, THE SUPPLIED COLOR SHALL BE CLEAR, NATURAL.
6. PHYSICAL PROPERTIES: GENERAL PHYSICAL REQUIREMENT VALUES ALONG WITH ASSOCIATED TEST CONDITIONS ARE LOCATED IN TABLE 3.
7. SHELF LIFE: THE STORAGE/SHELF LIFE SHALL BE 20 YEARS. SEE AS81914.

TABLE 3 - PHYSICAL PROPERTIES

PROPERTY	REQUIREMENT
CONSTRUCTION DETAILS	IN ACCORDANCE WITH TABLE 1
STRESS IN PSI @ 10% STRAIN	150 TO 750
SPECIFIC GRAVITY	1.70 MAX.
CRUSH RESISTANCE, HORIZONTAL	12 POUNDS (4.54KG) MIN.
LOW TEMPERATURE FLEXIBILITY	10 000 CYCLES, NO CRACKING
HEAT SHOCK	177/173 °C (351/343 °F) FOR 4 HOURS. 15% MAX LONGITUDINAL CHANGE. NO DRIPPING, FLOWING, OR CRACKING.
HEAT AGING	STRESS IN PSI @ 10% STRAIN, 80% OF INITIAL VALUE. 177/173 °C (351/343 °F) FOR 96 HOURS.
FLUID RESISTANCE	STRESS IN PSI @ 10% STRAIN 80% OF INITIAL VALUE
FLAMMABILITY	NON-FLAMMABLE <u>1/</u>
FUNGUS RESISTANCE	NON-NUTRIENT <u>1/</u>
DIELECTRIC BREAKDOWN	12 000 VOLTS, NO BREAKDOWN

1/ PROPERTIES NOT TESTED.



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AS81914/6
SHEET 3 OF 4

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