

AS4356

FEDERAL SUPPLY CLASS

4720

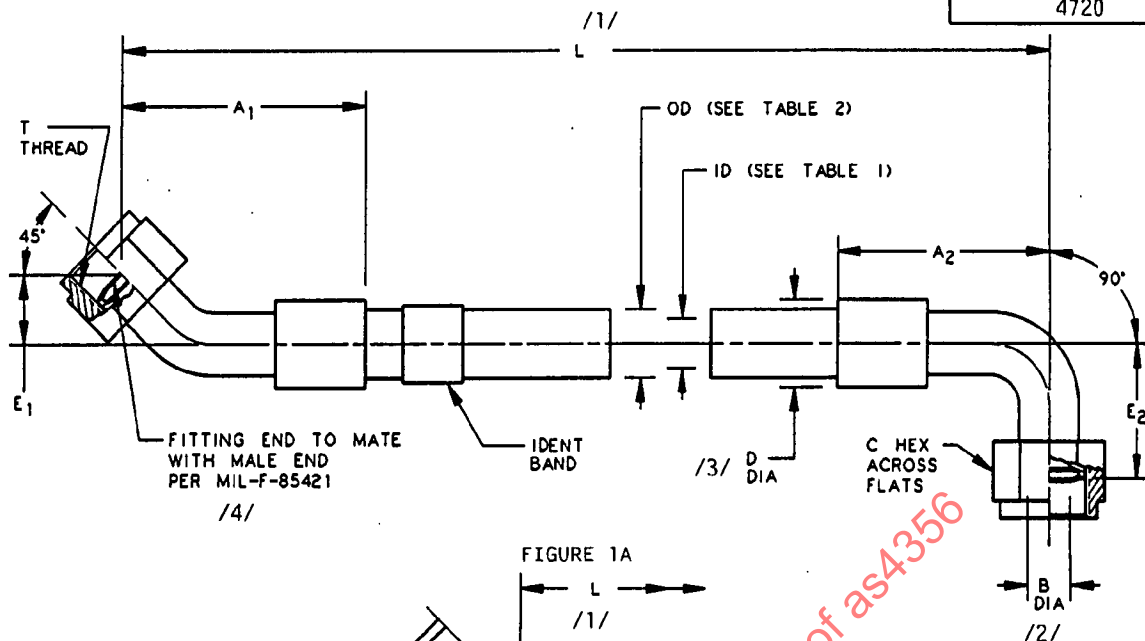


TABLE 1

HOSE ASSEMBLY NO. AND SIZE CODE	SIZE REF.	THREAD T PER MIL-S-8879 REF.	I.D. MIN.	A ₁ MAX.	A ₂ MAX.	B /2/ BALL SIZE MIN THRU DIA MS19059 DASH NO.	B /2/ BALL SIZE MIN THRU DIA DIA. IN.	C HEX. REF.	/3/ D DIA. MAX. WITHOUT SLEEVING	E ₁ MIN.	E ₁ MAX.	E ₂ MIN.	E ₂ MAX.
AS4356E	0.250	0.4375 - 24UNJS-3B	0.212	2.31	2.02	4807	0.109	0.56	0.88	0.450	0.550	0.795	0.983
AS4356G	0.375	0.5625 - 20UNJS-3B	0.298	2.59	2.25	4812	0.188	0.69	1.00	0.517	0.600	1.000	1.125
AS4356H	0.500	0.7188 - 20UNJS-3B	0.391	2.92	2.38	4816	0.313	0.88	1.20	0.513	0.675	1.033	1.240
AS4356J	0.625	0.8438 - 18UNJS-3B	0.485	3.36	2.94	4818	0.375	1.00	1.41	0.620	0.765	1.258	1.445
AS4356K	0.750	1.0000 - 16UNJS-3B	0.602	3.67	3.57	4821	0.469	1.25	1.69	0.760	0.874	1.530	1.954
AS4356M	1.000	1.2500 - 14UNJS-3B	0.852	4.47	4.10	4829	0.719	1.50	2.00	0.890	1.283	1.860	2.681
/15/ AS4356N	1.250	1.5781 - 14UNJS-3B	1.101	4.29	4.13	4834	0.875	2.00	2.10	0.881	0.951	2.002	2.220

CUSTODIAN: G-3/G-3D

PROCUREMENT SPECIFICATION AS604

SAE The Engineering Society
For Advancing Mobility
Land Sea Air and Space
INTERNATIONAL

400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARDHOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE,
CRES REINFORCED, 400°F, 3000 PSI,
HEAVYWEIGHT, BEAM SEAL, 45° TO 90°**AS4356**

SHEET 1 OF 6

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TABLE 2

SLEEVE CODE	SLEEVE MATERIAL	TEMP. LIMIT °F	HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/		HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/		HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/		HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/		HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/	
			HOSE SIZE	HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/	HOSE SIZE	HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/	HOSE SIZE	HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/	HOSE SIZE	HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/	HOSE SIZE	HOSE OR SLEEVE OUTSIDE DIAMETER (MAX-MIN) /S/
-	(-) INDICATES HOSE ONLY. NO SLEEVE	400	0.250	0.465 0.395	0.375	0.595 0.535	0.500	0.735 0.675	0.625	0.935 0.875	1.000	1.410 1.350
A	ABRASION SLEEVE TUBULAR (TFE-AS1291-CODE B)	400		0.540 0.468	0.715 0.615	0.855 0.770	0.855 0.770	0.855 0.770	1.025 0.960	1.195 1.125	1.515 1.445	1.825 1.755
B	ABRASION SLEEVE COIL (NYLON AS1294)	275		0.509 0.413	0.684 0.584	0.809 0.721	0.809 0.721	0.809 0.721	1.005 0.906	1.170 1.062	1.492 1.257	1.750 1.690
C	FIRE SLEEVE (AS1072 SIL-FG) (15 MIN)	400		0.808 0.562	0.875 0.750	1.058 0.875	1.058 0.875	1.058 0.875	1.250 1.125	1.495 1.250	1.750 1.590	2.000 1.875
E	ABRASION SLEEVE SHRINK-ON (FEP)	350		0.520 0.417	0.655 0.592	0.797 0.727	0.797 0.727	0.797 0.727	0.995 0.927	1.160 1.086	1.450 1.251	1.688 1.632
F	ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS1073 - CODE B)	275		0.520 0.440	0.670 0.590	0.795 0.731	0.795 0.731	0.795 0.731	0.997 0.920	1.174 1.086	1.482 1.251	1.740 1.680
G	FIRE SLEEVE (AS1072 SIL-FG) (5 MIN)	400		0.808 0.562	0.875 0.750	1.058 0.875	1.058 0.875	1.058 0.875	1.250 1.125	1.495 1.250	1.750 1.590	2.000 1.875
H	FIRE SLEEVE INTEGRAL SILICONE (15 MIN)	400		0.700 0.640	0.880 0.820	1.000 0.940	1.000 0.940	1.000 0.940	1.203 1.143	1.343 1.283	1.656 1.596	1.906 1.846
J	FIRE SLEEVE INTEGRAL SILICONE (5 MIN)	400		0.705 0.645	0.880 0.820	1.005 0.945	1.005 0.945	1.005 0.945	1.217 1.143	1.382 1.280	1.748 1.593	1.906 1.846
K	INTEGRAL ABRASION SLEEVE (BRAIDED) POLYESTER	300		0.505 0.480	0.675 0.645	0.795 0.765	0.795 0.765	0.795 0.765	0.985 0.955	1.150 1.120	1.470 1.440	1.740 1.680
L	ABRASION SLEEVE COIL (PTFE-AS1293)	400		0.522 0.449	0.692 0.605	0.831 0.747	0.831 0.747	0.831 0.747	1.015 0.937	1.172 1.086	1.492 1.281	1.750 1.690

TABLE 3

HOSE ASSY LENGTH	AVAILABLE INCREMENTS	TOLERANCE
UNDER 18 INCHES	(NOT LESS THAN) 0.125 INCH	(PLUS OR MINUS) 0.125 INCH
18 TO 36 INCHES	(NOT LESS THAN) 0.250 INCH	(PLUS OR MINUS) 0.250 INCH
36 TO 50 INCHES	(NOT LESS THAN) 0.500 INCH	(PLUS OR MINUS) 0.500 INCH
OVER 50 INCHES	(NOT LESS THAN) 1.000 INCH	(PLUS OR MINUS) 1 PERCENT

TABLE 4

HOSE OR TYPE SLEEVE	HOSE OR TYPE SLEEVE	UNITS	0.250		0.375		0.500		0.625		0.750		1.000		1.250	
			MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)	MAXIMUM WEIGHT LB/INCH (*)
-	HOSE ONLY	LB/IN	0.012	0.028	0.028	0.040	0.062	0.062	0.086	0.086	0.140	0.154	0.140	0.154	0.154	0.154
A	ABRASION SLEEVE (TPE-AS1291-B)	LB/IN	0.003	0.004	0.004	0.003	0.005	0.005	0.007	0.007	0.009	0.011	0.009	0.011	0.011	0.011
B	ABRASION SLEEVE (NYLON AS1294)	LB/IN	0.001	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.005	0.007	0.005	0.007	0.007	0.007
C	FIRE SLEEVE (15 MIN) AS1072	LB/IN	0.007	0.010	0.010	0.011	0.015	0.015	0.017	0.017	0.021	0.025	0.021	0.025	0.025	0.025
E	ABRASION SLEEVE (FEP)	LB/IN	0.002	0.003	0.003	0.003	0.005	0.005	0.006	0.006	0.007	0.009	0.007	0.009	0.009	0.009
F	ABRASION SLEEVE (AS1073B)	LB/IN	0.002	0.003	0.003	0.003	0.004	0.005	0.005	0.005	0.006	0.008	0.006	0.008	0.008	0.008
G	FIRE SLEEVE (5 MIN) AS1072	LB/IN	0.007	0.010	0.010	0.011	0.015	0.015	0.017	0.017	0.021	0.025	0.021	0.025	0.025	0.025
H	FIRE SLEEVE INTEGRAL (15 MIN) ON HOSE	LB/IN	0.022	0.042	0.042	0.056	0.081	0.081	0.102	0.102	0.154	0.190	0.154	0.190	0.190	0.190
J	FIRE SLEEVE INTEGRAL (5 MIN) ON HOSE	LB/IN	0.022	0.042	0.042	0.056	0.081	0.081	0.102	0.102	0.154	0.190	0.154	0.190	0.190	0.190
K	ABRASION SLEEVE POLYESTER WITH HOSE	LB/IN	0.013	0.028	0.028	0.039	0.060	0.060	0.082	0.082	0.130	0.160	0.130	0.160	0.160	0.160
L	ABRASION SLEEVE (PTFE-AS1293)	LB/IN	0.003	0.004	0.004	0.005	0.005	0.005	0.006	0.006	0.007	0.009	0.007	0.009	0.009	0.009
NONE	FIRE SLEEVE CLAMP	(*)	0.020	0.020	0.020	0.025	0.026	0.026	0.026	0.026	0.033	0.038	0.033	0.038	0.038	0.038
NONE	FITTING END (45°)	(*)	0.071	0.122	0.122	0.185	0.266	0.266	0.435	0.435	0.715	1.310	0.715	1.310	1.310	1.310
NONE	FITTING END (90°)	(*)	0.089	0.160	0.160	0.235	0.310	0.310	0.460	0.460	0.735	1.330	0.735	1.330	1.330	1.330

(*)NOTE: FIRE SLEEVE CLAMP AND FITTING END ARE IN LB EACH

FLAG NOTES:

- /1/ LENGTH "L" IS A THREE DIGIT NUMBER OF WHICH THE FIRST TWO DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES, AND THE THIRD DIGIT, THE FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM OUTER CORNER OF SEALING SURFACE AS SHOWN IN FIGURE 1B FOR 45° FITTINGS TO THE CENTERLINE OF THE ELBOW FOR 90° FITTINGS. FOR LENGTH INCREMENTS AND TOLERANCES SEE TABLE 3.
- /2/ A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED THROUGH THE FITTING I.D. HOWEVER, THE APPLICABLE BALL DIAMETER LISTED IN TABLE 1 SHALL PASS THROUGH THE END FITTING AFTER IT IS ASSEMBLED TO THE HOSE.
- /3/ DISTANCE ACROSS CORNERS OF THE COUPLING NUT MAY EXCEED THIS DIMENSION.
- /4/ STANDARD COUPLING NUTS SHALL MATE WITH MIL-F-85421 FITTING ENDS. NONSTANDARD COUPLING NUTS MAY BE USED, PROVIDED THEY ARE DIMENSIONALLY AND FUNCTIONALLY EQUIVALENT, AND PROVIDED THEY CANNOT BE REMOVED FROM THE FITTING. NUTS SHALL MEET TORQUE TEST REQUIREMENTS PER AS604 EXCEPT TORQUE VALUES SHALL BE PER MIL-F-85421.
- /5/ DIAMETERS ARE LISTED FOR CLAMP SELECTION. TUBULAR SLEEVES MAY NOT BE A PERFECT ROUND AND SHALL BE MEASURED WITH A DIAMETER TAPE RULER (OFTEN REFERRED TO AS PI-TAPE).
- /6/ TUBULAR ABRASION (TFE) SLEEVES SHALL HAVE AN I.D. NO GREATER THAN HOSE O.D. +0.05 in. AXIAL MOVEMENT OF THE SLEEVE INSTALLED ON THE HOSE SHALL NOT EXCEED 0.05 in. ENDS OF THE TUBULAR SLEEVE SHALL BE TERMINATED WITH A LENGTH OF M23053/11 (FEP) CLASS 1 OR 2, COLOR CLEAR, PER TABLE 5 AND FIGURE 2.
- /7/ COIL ABRASION SLEEVES, WHEN ASSEMBLED ON A STRAIGHT HOSE, SHALL HAVE AN AVERAGE GAP BETWEEN COILS NOT EXCEEDING 0.05 in. DISPLACEMENT OF THE COILS OF THE SLEEVE, CAUSING A GREATER GAP, SHALL NOT BE CAUSE FOR REJECTION IF THE COILS CAN BE REPOSITIONED TO MEET THE GAP REQUIREMENTS. ENDS OF THE COIL SLEEVE SHALL BE TERMINATED WITH A LENGTH OF HEAT SHRINKABLE SLEEVING IN ACCORDANCE WITH TABLE 5 AND FIGURE 2, COLOR BLACK. CODE "L" (COIL ABRASION) SLEEVES SHALL BE TERMINATED WITH M23053/5, CLASS 1, COLOR TRANSPARENT. CODE "I" (COIL ABRASION) SLEEVES SHALL BE TERMINATED WITH M23053/12, CLASS 1, COLOR TRANSPARENT, PTFE. (OPTIONAL M23053/11 (FEP) CLASS 1 OR 2, COLOR CLEAR.)

TABLE 5

HOSE SIZE	LENGTH (INCHES)
0.250	2.00 ± 0.25
0.375	2.00 ± 0.25
0.500	2.50 ± 0.25
0.625	2.50 ± 0.25
0.750	3.00 ± 0.25
1.000	
1.250	3.50 ± 0.25

