

Cross Reference for Materials for Fluid Systems Components
Including Military and Federal Specifications and Their
International Equivalents

RATIONALE

AIR1564B has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE:

This SAE Aerospace Report (AIR) provides a cross reference for SAE material standards to other similar standards. The SAE Committee G-3 invites comments and recommendations for the addition of materials and information for inclusion into this informational report.

No attempt has been made to obtain samples of the materials or conduct physical and chemical analyses to determine if they are equivalent. Anyone using this AIR, therefore, is cautioned to verify for themselves the interchangeability of the specific materials.

Additional contributions of missing or supplemental data should be directed to SAE marked for the attention of Committee G-3.

2. DEFINITIONS:

AECMA	European Association of Aerospace Industries
AMS	Aerospace Material Specification
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BSI	British Standards Institute
FED SPEC	Federal Specification
INACTIVE PART	Indicates that material is no longer recommended for the application
ISO	International Organization for Standardization
MIL SPEC	Military Specification
UNS	Unified Numbering System for Metals and Alloys

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on this Technical Report, please visit
<http://www.sae.org/technical/standards/AIR1564B>**

TABLE 1 - Corrosion Resistant Steel (CRES)
Material References in Specifications for Components Used in USA Fluid Systems

AMS	UNS	SC11-N	ISO	MIL SPEC/FED SPEC	AECMA	Alloy	ISO
Tube							
5556	S34700					30347	9532
5557	S32100					30321	9522
5560	S30400			MIL-T-8506 is cancelled and superseded by AMS-T-8506		30304	
5561	S21900					21-6-9	
5567	S30400	1001	DP9552	MIL-T-8504 (inactive) and is superseded by AMS 5567		30304	9552
5569	S30403			MIL-T-8973 (cancelled) and superseded by AMS 5897		30304L	
5570	S32100			MIL-T-8606, type 1, comp 321 (IAND)		30321	
5571	S34700			MIL-T-8606, type 1, comp 347 (IAND)		30347	
5573	S31600					30316	
Bar, Rod and Forgings							
5629						PH13-8MO	
5639	S30400			QQ-S-763 and is now AMS-QQ-S-763, Comp 304, cond A and B. "B" is allowed for MIL-H-25579		30304	9550, 9551
5643	17400	1299	DP9582		2539, 3161, 3162	17-4PH	9581, 9582
5644		1300	DP9581			17-7	
5645	S32100			QQ-S-763 and is now AMS-QQ-S-763, class 321, cond A	3487	30321	9521
5646	S34700			QQ-S-763 and is now AMS-QQ-S-763, Class 347, cond A		347 cond A	9531
5647	S30403			QQ-S-763 and is now AMS-QQ-S-763, Comp 304L, cond A		304L cond A	
5648	S31600			QQ-S-763 and is now AMS-QQ-S-763, Class 316 cond A		316 cond A	
5653	S31603			QQ-S-763 and is now AMS-QQ-S-763, Class 316L cond A		316L cond A	
5659	S15500					15-5PH	
5743	S35500					AM-355	
Wire							
5688	S30302			ASTM A 580		30302	
5689	S32100			ASTM A 580		30321	
5690	S31600			ASTM A 580		30316	
5697	S30400			ASTM A 580		30304	

TABLE 2 - Copper Alloy
Material References in Specifications for Components Used in USA Fluid Systems

AMS	UNS	SAE	ASTM	MIL SPEC/FED SPEC	ISO/TC20/SC11-
4842 4845 4860 4862 4890				QQ-C-390 (cancelled) and is superseded by ASTM B 22, B 30, B 61, B 62, B 66, B 67, B 148, B 176, B 271, B 369, B 427, B 505, B 584, B 763, B 770, B 806	
4610	C36000	J463	B 16	QQ-B-626 (cancelled) Alloy 360 half hard, Bars and rods	61.5Cu-35.5Zn-3Pb
4614	C37700		B 124	QQ-B-626 (cancelled) Alloy 377 forgings, MIL-C-13351	60Cu-20Pd-37.5Zn
				QQ-B-728 is cancelled and superseded by ASTM B 138	
4510 (H08)	C51000		B 103, Alloy 510	QQ-B-750 Comp A, spring temper is cancelled and is superseded by ASTM B 139	94.5Cu-4Sn-.19P
4520	C54400		B 103		88.5Cu-4Pb-4Sn-3Zn-.26p
4555	C33000		B 135	WW-T-791, grade B Tube, seamless, light anneal is cancelled and is superseded by ASTM B 135	66.5Cu-32.5Zn-.5Pb
				MIL-C-13351 is cancelled and there is no superseding document	
4558	C33200		B 135	MIL-T-46072, Alloy 332 Tube, seamless, drawn temper is cancelled and there is no superseding document	66Cu-32.4Zn-1.6Pb
4611 (H02)	C46400 C46500			QQ-B-637, Alloy 464, half hard is cancelled and is superseded by ASTM A 108	60.5Cu-38.7Zn-.8Sn
4612 hard temper	C46600 C46700			QQ-B-637, alloy 464, hard temper; Rods and bars, naval brass is cancelled and is superseded by ASTM A 108	60.5Cu-38.5Zn-.75Sn
4615	C65500			Rods and bars, silicone bronze	95.5Cu-3.2Si
4640	C63000			QQ-C-465 Alloy 630 is cancelled and is superseded by ASTM B 124, B 150, B 169, B 283	81.5Cu10Al-4.8Ni3Fe Annealed

TABLE 3 - Aluminum Alloy
Material References in Specifications for Components Used in USA Fluid Systems

AMS	UNS	SC11-N	ISO	FED/MIL SPEC	AECMA	Alloy	U.K.
Tube							
4071	A95052			WW-T-700/4 Temper 0 (IAND) is cancelled and superseded by AMS-WW-T-700/4		5052-0	
4080	A96061			WW-T-700/6 Temper 0 (IAND) is cancelled and superseded by AMS-WW-T-700/6	2317	6061-0	L117
4081	A96061			MIL-T-7081 is cancelled and is now AMS-T-7081		6061-T4	
4082	A96061	1273 1272	DP9861 DP9860	WW-T-700/6 (IAND) is cancelled and superseded by AMS-WW-T-700/6		6061-T6	
Bar, rod, forgings							
4118	A92017			QQ-A-225/5 is cancelled and is now AMS-QQ-A-225/5		2017-T4, T451	L102
4117	A96061			QQ-A-225/8 is cancelled and is now AMS-QQ-A-225/8	2702	6061-T6, T651	
4120	A92024	1277 1276	DP9821 DP9820	QQ-A-225/6 Temper T4, T351 is cancelled and is now AMS-QQ-A-225/6	3347	2024-T4, T6 2024-T351	L102
4121	A92014	1277	DP9871	QQ-A-225/4 is cancelled and is now AMS-QQ-A-225/4	2635	2014-T6	L168
4122	A97075			QQ-A-225/9 is cancelled and is now AMS-QQ-A-225/9		7075-T6	
4123	A97075			QQ-A-225/9 is cancelled and is now AMS-QQ-A-225/9		7075-T651	
4124	A97075	1275 1278	DP9871 DP9872	QQ-A-225/9 is cancelled and is now AMS-QQ-A-225/9	2632	7075- T351, T73	L160
4150	A92024			QQ-A-200/3 is cancelled and is now AMS-QQ-A-200/3		2024-Txx all tempers	
4160	A96061			QQ-A-200/8 is cancelled and is now AMS-QQ-A-200/8		6061-Txxx all tempers	
4131	A97075			MIL-A-22771 is cancelled and is now AMS-A-22771	3880/ 3881	7075-T74	L161
4133	A92014			QQ-A-367 is cancelled and is now AMS-QQ-A-367 MIL-A-21180		2014-T4, T6	
				QQ-A-367 is cancelled and is now AMS-QQ-A-367		6061-T6	
4141	A97075	1274	DP9870	QQ-A-367 is cancelled and is now AMS-QQ-A-367		7075-T73	

TABLE 4 - Carbon Steel
Material References in Specifications for Components Used in USA Fluid Systems

AMS	UNS	AECMA	MIL SPEC/FED SPEC	Alloy	U.K.
5053	G10100			1010 annealed	
5069	G10180			1018	
5075 (seamless)	G10250		MIL-T-5066 is cancelled and is superseded by AMS-T-5066	1025	
5077 (welded)	G10250		MIL-T-5066 is cancelled and is superseded by AMS-T-5066	1025	
5334	J13042		Comp IC-8630	8630mod	
6280	G86300		MIL-S-6050 is inactive	8630	En79 - 708A37
6345, 6350, 6351, 6355	G41300		MIL-S-18729 is cancelled	4130	
6360	G41300		MIL-T-6736 cond N and is now AMS-T-6736	4130	
6361	G41300	2247, 2211, 2248	MIL-T-6736 and is now AMS-T-6736	4130	En2D - BS970
6362	G41300		MIL-T-6736 cond HT-150 and is now AMS-T-6736	4130	
6373	G41300		MIL-T-6736 and is now AMS-T-6736	4130	
5010	G12120/ G12150			1212/1215	
5020 (not recommended)	G11374			11L37	
5022	G11170			1117	
5024	G11370			1137	
5036			MIL-S-4174 Type I, grade B is cancelled and superseded by ASTM A 463		
5060	G10150			1015	
5069	G10180			1018	
6280	G86300		MIL-S-6050	8630	
6322, 6325, 6327	G87400		MIL-S-6049 cancelled	8740	
6348	G41300		MIL-S-6758	4130	CDS110
6349	G41400		MIL-S-5626	4140	
6370	G41300		MIL-S-6758 is cancelled and superseded by AMS-S-6758	4130	
6349, 6382	G41400		MIL-S-5626 cancelled	4140	