

NOTES:

1. If the material specification, condition, and code are not found herein, the vendor shall submit a Vendor Information Request (VIR) Form NN3409 to NNGN requesting the appropriate code.
2. Where later revisions of specifications have been issued that change the alpha character prefix of the specifications designator (example: MIL-S-1222 H was changed to MIL-DTL-1222 J) and the later designation is not found herein, use the earlier designation as long as the material condition has not changed between revisions of the specification.

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Aluminum			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-26	A02950, 295	T4, T6, T7, or T62	ALA
	A033560, 356	T6 or T7	ALB
ASTM-B-108	A03560, 356	T6, F, or T71	ALB
ASTM-B-209	5052	0, H22, H32, or H112	ALC
	5052	H24, H26, H28, H34, H36, or H38	ALD
	5086	0 or H112	ALE
	5086	H22, H24, H26, H32, H34, or H38	ALF
	6061	0	ALG
	6061	T4, T42, or T451	ALH
	6061	T6, T62, or T651	ALI
ASTM-B-210	5086	0	ALE
	5086	H32, H34, or H36	ALF
	6061	0	ALG
	6061	T4 or T42	ALH
	6061	T6 or T62	ALI
ASTM-B-211	6061	0	ALG
	6061	T4, T42, or T451	ALH
	6061	T6, T62, or T651	ALI
DOT-3AL 3000	A96061	T6	ALI
MIL-A-22771	6061	T652	ALI
MIL-S-1222	2024	T4 (Fasteners)	2024
	6061	T6 (Fasteners)	6061
	7075	T73 (Fasteners)	7075
QQ-A-200/5	5086	0, H111, or H112	ALE
QQ-A-200/8	6061	0	ALG
	6061	T4	ALH
	6061	T6	ALI
	6061	T6511	ALI
QQ-A-200/7	A95456	H111	ALE
QQ-A-225/8	6061	0	ALG
	6061	T4, T42, or T451	ALH
	6061	T6, T62, or T651	ALI
QQ-A-225/9	7075	T651	ALX
QQ-A-250/7	5086	0 or H112	ALE
	5086	H32, H34, H36, or H38	ALF
QQ-A-250/8	5052	0, H22, H32, or H112	ALC
	5052	H24, H26, H28, H34, H36, or H38	ALD
QQ-A-250/11	6061	0	ALG
	6061	T4, T42, or T451	ALH
	6061	T6, T62, or T651	ALI

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Aluminum			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
QQ-A-596	A03560, A356	T6, T7, or T51	ALB
QQ-A-601	A02950, 295	T4, T6, T7, or T62	ALA
	A03560, 356	T6, T7, or T51	ALB
	520	T-4	ALJ
WW-T-700/5	5086	0	ALE
	5086	H32, H34, or H36	ALF
WW-T-700/6	6061	0	ALG
	6061	T4, or T42	ALH
	6061	T6, or T62	ALI

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Aluminum Bronze			
Specification	UNS-Gr-CL-Ty-Comp	Condition	Code
ASTM-B-111	C60800, 608	O61 (Annealed)	ABA
ASTM-B-124	C64200, 642	H50 (Extruded and Drawn), M20 (Hot Rolled), or M30 (Hot Extruded)	ABB
ASTM-B-148	C95200, 952, 9A	As Cast	ABD
	C95300, 953, 9B	As Cast	ABD
	C95300, 953, 9B	Heat Treated	ABE
	C95400, 954, 9C	As Cast	ABD
	C95400, 954, 9C	Heat Treated	ABE
ASTM-B-150	C60600	HR50 (Drawn and Stress relieved)	ABC
	C61400, 614	HR50 (Drawn and Stress Relieved)	ABC
	C61900, 619	M20 (Hot Rolled), M30 (Hot Forged and Annealed), O20 (Hot Rolled and Annealed), O30, or HR50 (Drawn and Stress Relieved)	ABC
	C62300, 623	M20 (Hot rolled), M30 (Hot Forged and Annealed), O20 (Hot Rolled and annealed), O30	ABC
	C62400	HR50 (Drawn and Stress Relieved)	ABC
	C64200, 642	M10 (Hot Forged), M20 (Hot Rolled), or M30 (Hot Forged and Annealed)	ABB
	C64200, 642	HR50 (Drawn and Stress Relieved)	ABC
ASTM-B-169	C61400	O25, O60, or M20	ABB
ASTM-B-283	C63200, 642	TQ50 (Quenched Hardened, Temper Annealed, Drawn, and Stress Relieved)	ABB
ASTM-B-505	C95300	As Cast	ABD
	C95300	Heat Treated	ABE
	C95400	As Cast	ABD
	C95400	Heat Treated	ABE
MIL-B-16166	C62300, 1	Heat Treated	ABC
QQ-C-390	C95200, 952, G6	As Cast	ABD
	C95300, 953, G7	As Cast	ABD
	C95300, 953, G5	Heat Treated	ABE
	C95400, 954, G5	As Cast	ABD
	C95400, 954, G5	Heat Treated	ABE
QQ-C-450	C60600, 606	Hard Temper or Soft Temper	ABA
	C61300, 613	Soft Temper	ABB
	C61300, 613	Hard Temper	ABC
	C61400, 614	Soft Temper	ABB
	C61400, 614	Hard Temper	ABC

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Aluminum Bronze			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
QQ-C-465	C60600, 606	Stress Relieved	ABC
	C61400	Stress Relieved	ABC
	C64200	Annealed	ABB
	C64200	Stress Relieved	ABC

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Brass			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-16	C36000, 360	H02 (Half-Hard), O60 (Soft Annealed), or O61	BRH
ASTM-B-21	C46200, D	H02 (Half-Hard), H60 (Cold Heading), M30 (Hot Extruded), O50 (Light Anneal), or O60 (Soft Anneal)	BRJ
	C46200, D	H04 (Hard)	BRK
	C46400, 464, A	H02 (Half-Hard), M30 (Hot Extruded), O50 (Light Anneal), or O60 (Soft Anneal)	BRJ
	C46400, 464, A	H04 (Hard) or H50 (Extruded and Drawn)	BRK
	C48200, B	H02 (Half-Hard), M30 (Hot Extruded), O50 (Light Anneal), or O60 (Soft Anneal)	BRJ
	C48200, B	H04 (Hard) or H50 (Extruded and Drawn)	BRK
	C48500, C	H02 (Half-Hard), M30 (Hot Extruded), O50 (Light Anneal), or O60 (Soft Anneal)	BRJ
	C48500, C	H04 (Hard)	BRK
ASTM-B-36	C23000, 3	H01(Quarter-Hard) or H02 (Half-Hard)	BRA
	C24000, 4	H01 (Quarter-Hard) or H02 (Half-Hard)	BRA
	C26000, 6	H01 (Quarter-Hard), H02 (Half-Hard), or M20 (Hot Rolled)	BRA
	C26800, 8	H01 (Quarter-Hard), H02 (Half-Hard), or M20 (Hot Rolled)	BRB
	C26800, 8	H04 (Hard) or H06 (Extra-Hard)	BRC
	C26800, 8	H08 (Spring) or H10 (Extra-Spring)	BRD
ASTM-B-62	C83600, 836	As Cast	BRL
ASTM-B-111	C23000, Red Brass	O61 (Annealed)	BRA
	C28000, Muntz Metal	O61 (Annealed)	BRB
	C44300, B	O61 (Annealed)	BRI
	C44400, C	O61 (Annealed)	BRI
	C44500, D	O61 (Annealed)	BRI
	C68700, Aluminum Brass	O61 (Annealed)	BRX
ASTM-B-121	C34200, 5	H01 (Quarter-Hard) or H02 (Half-Hard)	BRF
	C34200, 5	H04 (Hard) or H06 (Extra-Hard)	BRG
	C35300, 4	H01 (Quarter-Hard) or H02 (Half-Hard)	BRF
	C35300, 4	H04 (Hard) or H06 (Extra-Hard)	BRG

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Brass			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-124	C37700, 377, 2	H50 (Extruded and Drawn), M20 (Hot Rolled), or M30 (Hot Extruded)	BRH
	C48500, 485, 13	H50 (Extruded and Drawn)	BRK
	C48500, 485, 13	M20 (Hot Rolled) or M30 (Hot Extruded)	BRJ
ASTM-B-140	C31400, 314	H02 (Half-Hard)	BRE
	C31600, 316	H02 (Half-Hard) or H04 (Hard)	BRE
	C32000, 320	H02 (Half-Hard)	BRE
ASTM-B-171	C46400, Naval Brass uninhibited	As Rolled	BRJ
ASTM-B-283	C37700, Forging Brass	M10 (Hot Forged) or M11 (Forged and Quenched)	BRH
	C46400	N/A	BRJ
ASTM-B-505	C83600, Leaded Red Brass	As Cast	BRL
	C83800, Leaded Red Brass	As Cast	BRL
	C84200, Semi-Red Brass	As Cast	BRX
	C84400, Semi-Red Brass	As Cast	BRX
ASTM-B-584	C83800	As Cast	BRL
	C84400	As Cast	BRX
	C87500	As Cast	BRX
MIL-F-1183	C83600, B5	N/A	BRL
MIL-T-20168	C23000	Light Annealed	BRA
QQ-B-613	C23000, 230	Quarter-Hard or Half-Hard	BRA
	C24000, 240	Quarter-Hard or Half-Hard	BRA
	C26000, 260	Quarter-Hard or Half-Hard	BRA
	C26800, 268	Quarter-Hard or Half-Hard	BRB
	C26800, 268	Hard or Extra-Hard	BRC
	C26800, 268	Spring or Extra-Spring	BRD
	C34200, 342	Quarter-Hard or Half-Hard	BRF
	C34200, 342	Hard or Extra-Hard	BRG
	C35300, 353	Quarter-Hard or Half-Hard	BRF
	C35300, 353	Hard or Extra-Hard	BRG
QQ-B-626	C23000, 230	Quarter-Hard or half-Hard	BRA
	C24000, 240	Quarter-Hard or half-Hard	BRA
	C26000, 260	Soft, Soft and As Extruded, Quarter-Hard, or Half-Hard	BRA
	C26800, 1	Soft, Quarter-Hard or Half-Hard	BRB
	C26800, 1	Hard or Extra-Hard	BRC
	C26800, 1	Spring or Extra-Spring	BRD
	C34200, 342	Quarter-Hard or Half-Hard	BRF
	C34200, 342	Hard or Extra-Hard	BRG
	C36000, 22	Soft or Half-Hard	BRH
	C37700	As Forged	BRH

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Brass			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
QQ-B-637	C46200, 462	As Extruded, Cold Formed, Soft, or Half-Hard	BRJ
	C46200, 462	Hard	BRK
	C46400, 464	Forging, As Extruded, Soft, or Half-Hard	BRJ
	C46400, 464	Hard	BRK
	C48200, 482	Forging, As Extruded, Soft, or Half-Hard	BRJ
	C48200, 482	Extruded and Drawn or Hard	BRK
	C48500, 485	Forging, As Extruded, Soft, or Half-Hard	BRJ
	C48500, 485	Extruded and Drawn or Hard	BRK
QQ-B-639	C46200, 462	Soft or Half-Hard	BRJ
	C46400, 464	Soft or Half-Hard	BRJ
	C46400, 464	Hard	BRK
	C48200, 482	Soft or Half-Hard	BRJ
	C48500, 485	Soft or Half-Hard	BRJ
	C48500, 485	Hard	BRK
QQ-C-390	C83600, B5	As Cast	BRL
	C83800, B4	As Cast	BRL
	C84200, B1	As Cast	BRX
	C84400, B2	As Cast	BRX
	C85200, A4	As Cast	BRM
	C85400, A3	As Cast	BRM
	C85500, A5	As Cast	BRX
	C85700, A1 or A2	As Cast	BRM
WW-P-351A	C23000	Annealed	BRA
WW-P-460	C31400	N/A	BRE
	C31600	N/A	BRE
	C32000	N/A	BRE
	C36000	N/A	BRH
	C83800	N/A	BRL
	C84400	N/A	BRX

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Chromium Nickel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-560	R20500, 50Cr-50Ni	As Cast	CZA
	R20600, 60Cr-40Ni	As Cast	CZB

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Cobalt			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
AMS-5373C	R30006	Bar	COA
AMS-5373	R30006	As Cast	COA
AMS-5759	R30605, Haynes 25	Solution Heat Treated	COB
DOD-C-24689	R30001, 22	Stress Relieved	COD
	R30006, 20	Stress Relieved	COA
EB-3644	R30021, 21	As Cast	COE
Haynes Alloy 6B	N/A	N/A	COA
MIL-C-15345	R30006, 20	As Cast	COA
	R30021	As Cast	COX
MIL-C-24248	R30006	Stress Relieved	COA
	II	Stress Relieved	COD
	III	Stress Relieved	COD
	IV	Stress Relieved	COD
MIL-C-24252	R3006, 2	B	COA
	R30605, 1	A or C	COB
	R30605, 1	CA-9, CA-11, or CA-B	COC
	N/A	CA-7	COC

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Copper			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-75	C10100, OFE	O50 (Light Anneal), O60 (Soft Anneal), or Drawn	CUA
	C10200, OF	O50 (Light Anneal), O60 (Soft Anneal), or Drawn	CUA
	C10300	O50 (Light Anneal), O60 (Soft Anneal), or Drawn	CUA
	C10800	O50 (Light Anneal), O60 (Soft Anneal), or Drawn	CUA
	C12000, DLP	O50 (Light Anneal), O60 (Soft Anneal), or Drawn	CUA
	C12200, DHP	O50 (Light Anneal), O60 (Soft Anneal), or Drawn	CUA
	C14200, DPA	O50 (Light Anneal), O60 (Soft Anneal), or Drawn	CUA
ASTM-B-111	C10100, OFE	H55 (Light Drawn) or H80 (Hard Drawn)	CUA
	C10200, OF	H55 (Light Drawn) or H80 (Hard Drawn)	CUA
	C10300	H55 (Light Drawn) or H80 (Hard Drawn)	CUA
	C10800	H55 (Light Drawn) or H80 (Hard Drawn)	CUA
	C12000, DLP	H55 (Light Drawn) or H80 (Hard Drawn)	CUA
	C12200, DHP	H55 (Light Drawn) or H80 (Hard Drawn)	CUA
	C14200, DPA	H55 (Light Drawn) or H80 (Hard Drawn)	CUA
	C19200	H55 (Light Drawn) or H80 (Hard Drawn)	CUA
	C19200	O61 (Annealed)	CUB
ASTM-B-124	C11000, 12	H50 (Extruded and Drawn), M20 (Hot Rolled), or M30 (Hot Extruded)	CUA
	C14500	H50 (Extruded and Drawn), M20 (Hot Rolled), or M30 (Hot Extruded)	CUA
	C14700	H50 (Extruded and Drawn), M20 (Hot Rolled), or M30 (Hot Extruded)	CUA
ASTM-B-280	C10100	N/A	CUA
	C10200	N/A	CUA
	C10300	N/A	CUA
	C10800	N/A	CUA
	C12000	N/A	CUA
	C12200	N/A	CUA
ASTM-B-301	C14500, 145	H02, (Half-Hard)	CUA
	C14500, 145	H04 (Hard)	CUC
	C14700, 147	H02 (Half-Hard)	CUA
	C14700, 147	H04 (Hard)	CUC
	C18700, 187	H02 (Half-Hard)	CUA
	C18700, 187	H04 (Hard)	CUC
MIL-T-24107	C10100	Annealed or Drawn	CUA
	C10200, 102	Annealed or Drawn	CUA
	C10300, 103	Annealed or Drawn	CUA
	C10800, 108	Annealed or Drawn	CUA
	C12000, 120	Annealed or Drawn	CUA
	C12200, 122	Annealed or Drawn	CUA
	C14200, 142	Annealed or Drawn	CUA

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Copper Beryllium			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-196	C17200, 25	TB00 (Solution Heat Treated (A))	CBA
	C17200, 25	TD04 (Hard(H))	CBB
	C17200, 25	TF00 (Solution Heat Treated (AT))	CBC
	C17200, 25	TH04 (Hard(HT))	CBD
	C17200	Modified by NAVSEA Dwg H547-0292A	CBB
	C17300	TB00 (Solution Heat Treated (A))	CBA
	C17300	TD04 (Hard(H))	CBB
	C17300	TF00 (Solution Heat Treated (AT))	CBC
	C17300	TH04 (Hard (HT))	CBD
ASTM-B-570	C17200	TB00	CBA
	C17200	TF00	CBC
QQ-C-390	C82000, X5	Solution Heat Treated and Aged	CBE
	C82500, X6	Solution Heat Treated and Aged	CBF
	C82700, X7	Solution Heat Treated and Aged	CBG
	C82800, X8	Solution Heat Treated and Aged	CBF

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Copper Nickel 70/30			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-111	C71500, 70/30	O61 (Annealed)	CNA
	C71500, 70/30	HR50 (Drawn, Stress Relieved)	CNC
ASTM-B-171	C71500, 70/30	As Rolled	CNA
ASTM-B-122	C71500, 5	M20 (Hot Rolled)	CNA
	C71500, 5	H01 (Quarter Hard)	CNB
	C71500, 5	H02 (Half-Hard) or H04 (Hard)	CNC
	C71500, 5	H06 (Extra Hard) or H08 (Spring)	CND
ASTM-B-151	C71500	O60 (Soft)	CNA
	C71500	H01 (Quarter-Hard)	CNB
	C71500	H04 (Hard)	CNC
ASTM-B-369	C96400, B	As Cast	CNE
ASTM-B-505	C96400	As Cast	CNE
MIL-C-15345	C96400, 24	As Cast or Heat Treated	CNE
MIL-C-15726	C71500, 70/30	M20-Soft, M20-Hard, or O60	CNA
	C71500, 70/30	H01	CNB
MIL-C-20159	C96400, 1	As Cast	CNE
MIL-C-24679	C71500	Hot Finished and Annealed or Hot Finished	CNA
MIL-F-24342	C71500, 70/30	Annealed	CNA
MIL-T-15005	C71500, 70/30	Annealed	CNA
MIL-T-16420	C71500, 70/30	Fully annealed	CNA
MIL-T-22214	C71500, 70/30	Annealed	CNA
MIL-T-24270	C71500, 70/30	N/A	CNA
QQ-C-390	C96400, X9	As Cast	CNE

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Copper Nickel 80/20			
Specification	UNS-Gr-C1-Ty-Comp	Condition	Code
ASTM-B-111	C71000, 80/20	O61 (Annealed)	CYA

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Copper Nickel 90/10			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-111	C70600, 90/10	O61 (Annealed)	CXA
ASTM-B-171	C70600, 90/10	As Rolled	CXA
ASTM-B-369	C96200, A	As Cast	CXC
DOD-C-24676	N/A	Form 2	CXF
MIL-C-15726	C70600, 90/10	Soft Temper	CXA
	C70600, 90/10	Hard Temper	CXE
MIL-C-20159	C96200, 2, 90/10	As Cast	CXC
MIL-C-24679	C70600	Hot Finished or Hot Finished and Annealed	CXB
MIL-T-15005	C70600, 90/10	Fully Annealed	CXA
MIL-T-16420	C70600, 90/10	Fully Annealed	CXA
	C70600, 90/10	Light Drawn	CXD
MIL-T-22214	C70600, 90/10	Fully Annealed	CXA
QQ-C-390	C96200, A	As Cast	CXC

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Hastelloy			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-494	N10002	Heat Treated	HSB
ASTM-B-335	N10001	Heat Treated	HSA
ASTM-B-564	N10276	N/A	HSE
ASTM-B-572	N06002	Heat Treated	HSD
ASTM-B-574	N10276	Heat Treated	HSE
ASTM-B-575	N10276	Heat Treated	HSE
ASTM-B0622	N10276	N/A	HSE
ASTM-B-626	N10276	Heat Treated	HSE
EB-3810	N10276	N/A	HSE
MIL-N-24390	N10002	Heat Treated	HSB
	N10003	Heat Treated	HSC

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Manganese Bronze			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-124	C67500, 4	H50 (Extruded and Drawn), M20 (Hot Rolled), or M30 (Hot Extruded)	MBC
ASTM-B-138	C67000, B	H02 (Half-Hard) or O60 (Soft Annealed)	MBA
	C67000, B	H04 (Hard)	MBB
	C67500, A	H02 (Half-Hard) or (Soft Anneal)	MBC
	C67500, A	H04 (Hard)	MBD
ASTM-B-505	C96200	As Cast	MBE
	C86300	As Cast	MBE
	C86500	As Cast	MBF
ASTM-B-584	C86200, B147-8B	As Cast	MBE
	C86500, B147-8A	As Cast	MBF
MIL-S-1222	670	N/A (Fasteners)	670
	675	N/A (Fasteners)	675
QQ-B-728	C67000, B	Soft or Half-Hard	MBA
	C67000, B	Hard	MBB
	C67500, A	Soft or Half-Hard	MBC
	C67500, A	Hard	MBD
QQ-C-390	C86100, C5	As Cast	MBE
	C86200, C4	As Cast	MBE
	C86300, C7	As Cast	MBE
	C86400, C2	As Cast	MBF
	C86500, C3	As Cast	MBF
	C86800, C1	As Cast	MBG

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Naval Brass			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-S-1222	462	N/A (Fastener)	462
	464	N/A (Fastener)	464
	482	N/A (Fastener)	482

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Nickel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-494	N26055	As Cast	NIA
	N30107	CW6M	NIB

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Nickel Aluminum Bronze			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
AMPCO-45		NA	NBX
AMS-4640	C63000	Standard Strength	NBA
	C63000	High Strength	NBB
ASTM-B-124	C63000, 11b	TQ50	NBA
	C63200	TQ50	NBA
ASTM-B-148	C95500, 955, 9D	As Cast	NBC
	C95500, 955, 9D	Heat Treated	NBD
	C95800, 958CC	As Cast	NBE
ASTM-B-150	C63000	HR50	NBA
	C63000, 630, 2	Standard Strength	NBA
	C63000, 630, 2	High Strength	NBB
	C63020	TQ30	NBX
	C63200, 632	TQ50 (Quench-Hardened and Temper-Annealed)	NBA
	C63200, 632	TQ55	NBA
ASTM-B-283	C63000, A1-Ni Bronze	TQ50 (Quench-Hardened and Temper-Annealed)	NBA
	C63200, A1-Ni-Bronze	TQ50 (Quench-Hardened and Temper-Annealed)	NBA
ASTM-B-505	C95500	As Cast	NBC
	C95500	Heat Treated	NBD
	C95500	As Cast or Annealed	NBE
MIL-B-24480	C95800	Temper Annealed	NBE
MIL-S-1222	632	N/A (Fasteners)	632
QQ-C-390	C95500, G3	As Cast	NBC
	C95500, G3	Heat Treated	NBD
	C95800, G8	As Cast or Annealed	NBE
QQ-C-465	C63000, 630	Forgings or Annealed	NBA
	C63000, 630	High Strength	NBB
	C63200, 632M	Forgings or Solution Annealed	NBA

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Nickel Chromium Iron			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
AMS-5662	N07718	N/A	ING
AMS-5665	N06600	N/A	INA
AMS-5666	N06625, 625	Annealed or Hot Finished and Annealed	INE
AMS-5667	N07750	Precipitation Heat Treated	INK
ASTM-B-166	N06600	Annealed or Hot Finished	INA
	N06600	Cold Finished	INC
ASTM-B-168	N06600	Annealed or As Rolled	INA
	N06600	Hard	INC
ASTM-B-366	N06600, 600	Forged and Annealed or Stress Relieved	INA
ASTM-B-443	N06625	Hot Rolled	INE
	N06625, 1	Hot Rolled	INE
ASTM-B-444	N06625	N/A	INE
ASTM-B-446	N06625, 625	1 or 2	INE
ASTM-B-564	N06600	Annealed or C	INA
	N06625	Annealed	INE
	N06625	As Forged	INE
ASTM-B-637	N07718, 1750/AH	N/A	ING
EB-2937	N06625	Annealed	INE
EB-3200	N06625	Annealed	INE
EB-3201	625	N/A	INE
EB-3476	N/A	N/A	INE
MIL-C-24615	N06625	Annealed and Air Cooled or Annealed and Quenched	IND
MIL-F-23508	N06600	Annealed	INA
MIL-M-24130/1	N06600, NiCrFe	Heat Treated	INA
MIL-N-6710	N06600, 600	B	INC
MIL-N-7786	N07750, X750	Annealed	INI
	N07750, X750	Age Hardened	INK
MIL-N-8550	N07750	C	INI
	N07750	A or D	INJ
	N07750	E	INK

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Nickel Chromium Iron			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-N-23228	N06600	AG	INA
	N06600	A	INA
MIL-N-23229	N06600	A, AG, B, or BG	INA
	N06600	DG	INA
MIL-N-24114	N07750, X750	HTH	INK
MIL-N-24271	N06600	Annealed, Casting	INB
MIL-N-24422	A	As Cast	INH
	B	As Cast	INH
MIL-N-24492	N07718, 718	ST/1750 or ST/1950	INF
	N07718, 718	1750/AH or 1950/AH	ING
MIL-N-24687	N06625	SA, SAG, A, AG, H, or HG	INE
MIL-S-1222	N06625, 625	N/A (Fasteners)	625
MIL-S-23192	N07750	Age Hardened	INK
MIL-S-24354	N06600, E	Heat Treated	INA
	N06600, E	Heat Treated	INK
MIL-T-23227	N06600	Annealed	INA
MIL-W-24493	N07750	Age Hardened	INK

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Nickel Copper			
Specification	UNS-Gr-CI-Comp	Condition	Code
ASTM-A-494	M-25S	As Cast	NCC
	M-25S	2 or 3	NCD
	M-30C	As Cast (Previously QQ-N-288 Comp A)	NCA
	M-30C	As Cast (Previously QQ-N-288 Comp E)	NCE
	M-30H	As Cast	NCB
	M-35-1	N/A	NCA
ASTM-B-127	N04400	Annealed	NCF
	N04400	As Rolled	NCG
ASTM-B-164	N04400, 400, A	Annealed	NCF
	N04400, 400, A	Hot Worked	NCG
	N04400, 400, A	Cold Worked	NCI
	N04400, 400, A	Cold Worked (Stress Relieved)	NCH
	N04405, R405, B	Hot Worked or Annealed	NCF
	N04405, R405, B	Cold Worked or Cold Worked (Stress Relieved)	NCH
ASTM-B-165	N04400	Annealed	NCF
ASTM-B-564	N04400	Annealed	NCF
EB-1864 or 688-1864	QQ-N-281	NA (Fastener)	ANiCu
FF-S-86	N04400	Hot Finished or Hot Finished (Stress Relieved)	NCG
MIL-B-857	QQ-N-281, CLA	Annealed	NCF
	QQ-N-281, CLA	Hot Finished or Hot finished (Stress Relieved), or as Rolled	NCG
	QQ-N-281, CLA	Hot Finish, High Tensile (Stress Relieved)	NCI
	QQ-N-281, CLA	Cold Drawn or Cold Drawn (Stress Relieved)	NCH
	QQ-N-281, CLB	Hot Finished or Hot Finished (Stress Relieved), or Annealed	NCF
	QQ-N-281, CLB	Cold Drawn or Cold Drawn (Stress Relieved)	NCH
MIL-C-15345	16	N/A	NCB
MIL-C-24723	M-25S	As Cast	NCC
	M-25S	2 or 3	NCD
	M-30C	As Cast (Previously QQ-N-288 Comp A)	NCA
	M-30C	As Cast (Previously QQ-N-288 Comp E)	NCE
	M-30H	As Cast	NCB
MIL-F-23509	N04400	Annealed	NCF
MIL-M-24130/3	N04400	Annealed	NCF

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Nickel Copper			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-N-24106	N04400	A, AG, or B	NCF
	N04400	C	NCH
	N04400	H	NCG
MIL-S-24354	N04400, C	Hot Finished	NCG
MIL-S-1222	N04400, 400	Hot Finished, or Hot Finished (Stress Relieved), or Cold Drawn, or Cold Drawn (Stress Relieved) (Bar Stock)	NCG
	N04400, 400	Hot Finished, or Hot Finished (Stress Relieved), or Cold Drawn or Cold Drawn (Stress Relieved) (Fasteners)	NC
	N04405, 405	Hot Finished, or Hot Finished (Stress Relieved), or Cold Drawn or Cold Drawn (Stress Relieved) (Bar Stock)	NCG
	N04405, 405	Hot Finished, or Hot Finished (Stress Relieved), or Cold Drawn, or Cold Drawn (Stress Relieved) (Fasteners)	NC-R
MIL-T-1368	N04400	Class A	NCF
	N04400	Class B	NCH
MIL-T-23520	N04400	Annealed	NCF
QQ-N-281	N04400, CLA	Annealed (Hot Finished or Cold Drawn)	NCF
	N04400, CLA	Hot Finished, or Hot Finished (Stress Relieved), or As Rolled	NCG
	N04400, CLA	Hot Finished, High Tensile (Stress Relieved)	NCI
	N04400, CLA	Cold Drawn (Stress Relieved)	NCH
	N04405, CLB	Hot finished, or Hot Finished (Stress Relieved), or Annealed	NCF
	N04405, CLB	Cold Drawn or Cold Drawn (Stress Relieved) (Material marked NCI is acceptable)	NCH
QQ-N-288	A	As Cast	NCA
	B	As Cast	NCB
	C	As Cast	NCC
	E	As Cast	NCE
	N04019	Solution Treated and Age Hardened or As Cast and Age Hardened	NCD

PO Permanent Marking Material Codes, A235 Revision B-1, dated 2/15/07

Nickel Copper Aluminum			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
EB-1864	N05500, K-Monel	Cold Drawn, Annealed and Age Hardened, or Hot Finished, Annealed and Age Hardened (Fasteners)	A•K• AK
	N05500, K-Monel	Cold Drawn, Annealed and Age Hardened, or Hot Finished, Annealed and Age Hardened (Bar Stock)	KMD
	N05500, K-Monel	Hot Finished and Age Hardened (Fasteners)	A•K• AK
	N05500, K-Monel	Hot Finished and Age Hardened (Bar Stock)	KME
NN-688-1864	N05500, K-Monel	Cold Drawn, Annealed and Age Hardened, or Hot Finished, Annealed and Age Hardened (Fasteners)	•K•
	N05500, K-Monel	Cold Drawn, Annealed and Age Hardened, or Hot Finished, Annealed and Age Hardened (Bar Stock)	KMD
NNS Dwg #298357	N05500, K500	Cold Drawn, Annealed and Age Hardened, or Hot Finished, Annealed and Age Hardened	KMD
MIL-B-857	QQ-N-286	Cold Drawn, Annealed and Age Hardened, or Hot Finished, Annealed and Age Hardened	KMD
		Cold Drawn, Annealed and Age Hardened, or Hot Finished, Annealed and Age Hardened (Preferred marking)	•K•
MIL-N-24549	N05500	CP or HP	KMD
MIL-S-1222	500	Annealed and Age Hardened (Fasteners)	•K•
MIL-S-24354	N05500, D	Annealed and Age Hardened	KMD
QQ-N-286	N05500	Annealed	KMA
	N05500	Cold Drawn	KMB
	N05500	Hot Finished	KMC
	N05500	Cold Drawn, Annealed and Age Hardened, or Hot Finished, Annealed and Age Hardened	KMD
	N05500	Hot Finished and Age Hardened	KME
	N05500	Cold Drawn and Age Hardened	KMF
	N05500	Cold Rolled, Full-Hard, As Rolled or Cold Rolled, Half-Hard, as Rolled	KMG
	N05500	Cold Rolled, Half-Hard and Age Hardened or Cold Rolled, full-Hard and Age Hardened or Cold Drawn and Spring Temper or Cold Drawn, Spring Temper and Age Hardened	KMX

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Phospher Bronze			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-S-1222	510	N/A (Fasteners)	510
	544	N/A (Fasteners)	544

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Silicon Bronze			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-98	C65100, B, 6651	H02 (Half-Hard) or O60 (Soft Anneal)	SBC
	C65100, B-, 651	H04 (Hard) or H06 (Extra-Hard)	SBD
	C65500, A, 655	O60 (Soft Anneal) (TS: 52, YS: 15)	SBE
	C65500, A, 655	H02 (Hard-Hard) or O60 (Soft Anneal) (TS: 70-90, YS: 38-55)	SBF
	C65800, 658	O60 (Soft Anneal)	SBG
	C66100, D, 661	O60 (Soft Anneal)	SBG
	C661100, D, 661	H02 (Half-Hard) or H04 (Hard)	SBH
MIL-S-1222	655	N/A (Fasteners)	655
	661	N/A (Fasteners)	661
QQ-C-390	C87200, X2	As Cast	SBI
	C87400, X1	As Cast	SBJ
QQ-C-591	C64700, 647	Cold Formed	SBA
	C64700, 647	Hard	SBB
	C65100, B, 651	Soft or Half-Hard	SBC
	C65100, B, 651	Hard or Extra-Hard	SBD
	C65500, A, 655	Soft (TS: 52, YS: 15)	SBE
	C65500, A, 655	Soft or Half-Hard (TS: 70-90, YS: 38-55)	SBF
	C66100, D, 661	Soft	SBG
	C66100, D, 661	Half-Hard or Hard	SBH

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Stainless Austenitic			
Specifcation	UNS-Gr-CI-Ty-Comp	Condition	Code
AMS-5355	J92200	H1100	SAA
	J92200	H925 or H1000	SAB
	J92200	H900	SAC
AMS-5398	J92170	H925	SAB
AMS-5507	S31603, 316L	Annealed	SAH
AMS-5561	S21900, Ty 2, C13	N/A	SAX
AMS-5617	S45500, 1	H900 or H950	SAX
AMS-5622	S17400	H1075, H1100, or H1150	SAA
	S71400	H925 or H1025	SAB
	S71400	H900	SAC
AMS-5640	S30300, 1	Solution Heat Treated or Hot Finished	SAD
	S30310, 3	Solution Heat Treated or Hot Finished	SAD
	S30323, 2	Solution Heat Treated or Hot Finished	SAD
AMS-5642	S34720, 1	Solution Heat Treated, or Cold Finished, or Hot Finished	SAX
	S34723, 2	Solution Heat Treated, or Cold Finished, or Hot Finished	SAK
AMS-5643	S17400	H1075, H1100, or H1150	SAA
	S17400	H925, or H1025	SAB
	S17400	H900	SAC
	S17400 (Project 90)	Solution Heat Treated	SAA
AMS-5647	S30403	Annealed	SAF
AMS-5648	S31600, 316	Solution Heat Treated, or Cold Finished, or Hot Finished	SAG
AMS-5653	S31603	N/A	SAH
AMS-5659	S15500	A or H900	SAX
	S15500	H1025	SAX
AMS-5737	S66286, 660	B	SAX
AMS-5906	S30200	Cold Work (Strain Hardened) to TS: 185 KSI Min. & YS: 140 KSI Min.	SAX
ASME-SA479	S31600, 316	Annealed	SAG
ASTM-A-167	S30400, 304	Solution Annealed	SAE
	S34700, 347	Solution Annealed	SAK

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Stainless Austenitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-182	S30400, F304	Heat Treated	SAE
	S30403, F304L	Heat Treated	SAF
	S30409, F304H	Heat Treated	SAI
	S31000, F310	Heat Treated	SAJ
	S31600, F316	Heat Treated	SAG
	S31603, F316L	Heat Treated	SAH
	S31609, F316H	Heat Treated	SAI
	S32100, F321	Heat Treated	SAK
	S32109, F321H	Solution Treated	SAM
	S33100, F10	Heat Treated	SAX
	S43700, F347	Heat Treated	SAK
	S34709, F347H	Solution Treated	SAM
	S34800, F348	Heat Treated	SAK
	S34809, F348H	Solution Treated	SAM
ASTM-A-193	S30400, 304, B8, B8A	Carbide Solution Treated (Bar Stock)	SAE
	B8	Carbide Solution Treated (Fasteners)	B8
	B8A	Carbide Solution Treated (Fasteners)	B8A
	S31600, 316, B8M	Carbide Solution Treated (Bar Stock)	SAG
	B8M	Carbide Solution Treated (Fasteners)	B8M
	S32100, 321, B8T	Carbide Solution Treated (Bar Stock)	SAK
	B8T	Carbide Solution Treated (Fasteners)	B8T
	S34700, 347, B8C	Carbide Solution Treated (Bar Stock)	SAK
B8C	Carbide Solution Treated (Fasteners)	B8C	
ASTM-A-194	F	Carbide Solution Treated (Bar Stock)	SAD
	8F	Carbide Solution Treated (Fasteners)	8F
	S30400, 304, 8, 8A	Carbide Solution Treated (Bar Stock)	SAE
	8	Carbide Solution Treated (Fasteners)	8
	8A	Carbide Solution Treated (Fasteners)	8A
	S32100, 321, 8T, 8TA	Carbide Solution Treated (Bar Stock)	SAK
	8T	Carbide Solution Treated (Fasteners)	8T
	8TA	Carbide Solution Treated (Fasteners)	8TA
	S34700, 347, 8C, 8CA	Carbide Solution Treated (Bar Stock)	SAK
	8C	Carbide Solution treated (Fasteners)	8C
8CA	Carbide Solution Treated (Fasteners)	8CA	
ASTM-A-213	S30400, 304	Cold Drawn, Annealed	SAE
	S30403, 304L	Cold Drawn, Annealed	SAF

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Stainless Austenitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-240	S30200, 302	Annealed	SAD
	S30400, 304	Solution Annealed	SAE
	S30403, 304L	Solution Annealed	SAF
	S30500, 305	Solution Annealed	SAN
	S30908, 309S	Solution Annealed	SAJ
	S31008, 310S	Solution Annealed	SAJ
	S31600, 316	Solution Annealed	SAG
	S31600, 316L	Solution Annealed	SAH
	S31700, 317	Solution Annealed	SAG
	S31703, 317L	Solution Annealed	SAH
	S32100, 321	Solution Annealed	SAK
	S34700, 347	Solution Annealed	SAK
	S34800, 348	Solution Annealed	SAK
ASTM-A-249	S30403, 304L	N/A	SAF
ASTM-A-269	S30400, TP304	Heat Treated	SAE
	S30403, TP304L	Heat Treated	SAF
	S31600, TP316	Heat Treated	SAG
	S31603, TP316L	Heat Treated	SAH
	S31700, TP317	Heat Treated	SAG
	S32100, TP321	Heat Treated	SAK
	S34700, TP347	Heat Treated	SAK
	S34800, TP348	Heat Treated	SAK
ASTM-A-276	S20910, XM-19	Annealed	SAX
	S30300, 303	A	SAD
	S30400, 304	A	SAE
	S30400	B	SAX
	S30403, 304L	Annealed	SAF
	S31600, 316	Annealed	SAG
	S31600, 316	Strain Hardened or Cold worked with High Tensile	SAO
	S31600, 316	Strain Hardened in accordance with ASTM-A-465	SAX
	S31600, 316	120 KSI T.S./100 KSI Y.S.	SAX
	S31603, 316L	Annealed	SAH
	S3165, 316Ti	A, Hot Finished and Cold Finished	SAG
	S32100, 321	Annealed	SAK
	S34700, 347	Annealed	SAK

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Stainless Austenitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-312	S30400, TP304	Heat Treated	SAE
	S30403, TP304L	Heat Treated	SAF
	S30409, TP304H	Solution Treated	SAI
	S30900, TP309	Heat Treated	SAJ
	S31600, TP316	Heat Treated	SAG
	S31603, TP316L	Heat Treated	SAH
	S31609, TP316H	Solution Treated	SAI
	S31700, TP317	Heat Treated	SAG
	S32100, TP321	Heat Treated	SAK
	S32109, TP321H	Solution Treated	SAM
	S34700, TP347	Heat Treated	SAK
	S34709, TP347H	Solution Treated	SAM
	S34800, TP348	Heat Treated	SAK
	S34809, TP348H	Solution Treated	SAM
ASTM-A-313	S30200, 302	N/A	SAX
	304	N/A	SAX
ASTM-A-320	B8	Class 1	B8
	B8	Class 1A	B8A
	B8	Class 2	B8
ASTM-A-351	J92500, CF-3, CF-3A	Heat Treated	SAF
	J92800, CF3M, CP3MA	Heat Treated	SAH
	CF-8	N/A	SAE
	J92900, CF-8M	Heat Treated	SAG
ASTM-A-403	304	N/A	SAE
	S30400, 304	Heat Treated	SAE
	304S	Heat Treated	SAE
	S30403, 304L	Heat Treated	SAF
	S30453, 304LN	N/A	SAF
	S31600, 316	Heat Treated	SAG
	S31603, 316L	Heat Treated	SAH
ASTM-A-453	S66286, 660	B	SAX
	S218000	N/A	SAX
ASTM-A-479	S30200, 302	Annealed	SAD
	S30400, 304	Annealed	SAE
	S30403, 304L	Annealed	SAF
	S31008, 310S	Annealed	SAJ
	S31600, 316	Annealed	SAG
	S31603, 316L	Annealed	SAH
	S32100, 321	Annealed	SAK
	S34700, 347	Annealed	SAK
	S34800, 348	Annealed	SAK

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Stainless Austenitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-493	S30400, 304	Annealed or Lightly Drafted	SAE
	S30430	Annealed	SAN
	S38400, 384	Annealed or Lightly Drafted	SAN
ASTM-A-511	S30400, MT304	Cold Finished and Annealed	SAE
	S31600, MT316	Cold Drawn and Annealed	SAG
ASTM-A-564	S13800, XM-13	H1000, H1050	SAX
	S17400, 630	H1075, H1100	SAA
	S17400, 630	H1025, H925	SAB
	S17400, 630, 17-4PH	H900	SAC
	630	H1050	SAB
	S45000, XM-25	N/A	SAX
ASTM-A-580	S32100, 321	N/A	SAK
ASTM-A-581	S30300, 303	A	SAD
ASTM-A-582	S20300, XM-1	Annealed	SAX
	S30300, 303	A	SAD
	S30323, 303Se	Annealed	SAD
	S30345, XM-2	Annealed	SAX
	S330360, XM-2	Annealed	SAX
ASTM-A-638	S66286, 660	B	SAX
ASTM-A-693	S71400, 630	H1100	SAA
ASTM-A-705	S17400, 630	H1100	SAA
ASTM-A-743	J92500, CF-3	Heat Treated	SAF
	J92600, CF-8	Heat Treated	SAE
	J92701, CF-8C	Heat Treated	SAX
	J92800, CF3M	N/A	SAH
	J92800, CF-3M	Heat Treated	SAH
	J92900, CF-8M	Heat Treated	SAG
ASTM-A-744	J92500, CF-3	Heat Treated	SAF
	J92600, CF-8	Heat Treated	SAE
	J92710, CF-8C	Heat Treated	SAE
	J92800, CF-3M	Heat Treated	SAH
	J92900, CF-8M	Heat Treated	SAG
	J95150	Heat Treated	SAX

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Stainless Austenitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-789	S39253	N/A	SAX
ASTM-A-790	S39253	N/A	SAX
ASTM-A-890	J93380, 6A	N/A	SAX
EB-2710	302	N/A (Fasteners, externally threaded)	B8F
	302	N/A (Fasteners, internally threaded – forged)	8F
	302	N/A (Fasteners, internally threaded – machined)	8FB
	303	N/A (Fasteners, externally threaded)	B8F
	303	N/A (Fasteners, internally threaded – forged)	8F
	303	N/A (Fasteners, internally threaded – machined)	8FB
	303 Se	N/A (Fasteners, externally threaded)	B8F
	303 Se	N/A (Fasteners, internally threaded – forged)	8F
	303 Se	N/A (Fasteners, internally threaded – machined)	8FB
	304	N/A (Fasteners, externally threaded)	B8
	304	N/A (Fasteners, internally threaded – forged)	8
	304	N/A (Fasteners, internally threaded – machined)	8B
	305	N/A (Fasteners, externally threaded)	B8P
	305	N/A (Fasteners, internally threaded – forged)	8P
	305	N/A (Fasteners, internally threaded – machined)	8PB
	316	N/A (Fasteners, externally threaded)	B8M
	316	N/A (Fasteners, internally threaded – forged)	8M
316	N/A (Fasteners, internally threaded – machined)	8MB	
FED-STD-66	S30400, 304	Annealed	SAE
	S31600	Heat Treated, Annealed	SAG
FF-S-86	S30200, 302	Annealed	SAD
	S30400, 304	N/A	SAE
	S31600, 316	N/A	SAG
	S38400, 384	N/A	SAN
MIL-B-857	303	N/A (Fasteners)	303
	304	N/A (Fasteners)	304
	305	N/A (Fasteners)	305
	316	N/A (Fasteners)	316
MIL-C-24111	S17400	1 (H915)	SAC
	S17400	2 (H1025)	SAB
	S17400	3 (H1100)	SAA
MIL-C-24527	S17400, 17-4PH	H1100	SAA
MIL-F-18866	S30400, 304	Annealed	SAE
	S31600, 316	Heat Treated (Annealed)	SAG
MIL-F-23467	S30400, 304	Annealed	SAE
	S30403, 304L	Annealed	SAF
	S34700, 347	Annealed	SAK
	S34800, 348	Annealed	SAK

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Stainless Austenitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-M-24130/2	S30400, 304	N/A	SAE
	S34700, 347	N/A	SAK
	S34800, 348	N/A	SAK
MIL-P-1144	304	N/A	SAE
	S31600, 316	Heat Treated	SAG
	S31603	Heat Treated	SAH
MIL-P-24691/3	S30400, F	Heat Treated	SAE
	S30403, G	Heat Treated	SAF
	S31600, J	Heat Treated	SAG
	S31603, K	Heat Treated	SAH
	S32100, P	Heat Treated	SAK
	S34700, Q	Heat Treated	SAK
MIL-S-867	J92800, 3	CF-8 or CF-8M Modified to CF-3M	SAH
MIL-S-867A	J92650, 1	Annealed	SAG
	J92910, 3	Annealed	SAG
MIL-S-1222	303	N/A (Fasteners)	303
	303 Se	N/A (Fasteners)	303 Se
	304	N/A (Fasteners)	304
	305	N/A (Fasteners)	305
	316	N/A (Fasteners)	316
	321	N/A (Fasteners)	321
	347	N/A (Fasteners)	347
	384	N/A (Fasteners)	384
MIL-S-7720	S30200, 302	Annealed	SAD
	S31600, 316	Cold Finished	SAG
MIL-S-23196	J92650	Annealed	SAG
	J92730	Annealed	SAG
	J92900	Annealed	SAG
MIL-S-23195	S30400, 304	Annealed	SAE
	S30403, 304L	A	SAF
	S30700, 347	Annealed	SAK
	S34800, 348	Annealed	SAK
MIL-S-23196	S30400, 304	Solution Annealed	SAE
	S30403, 304L	Solution Annealed	SAF
	S34700, 347	Solution Annealed	SAK
	S34800, 348	Solution Annealed	SAK
MIL-S-24354	S17400, B	H1100	SAA
	S30400, A	Annealed	SAE
	S34700, A	Annealed	SAK
	S34800, A	Annealed	SAK
MIL-S-24550	S66286	A or AH	SAX

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Stainless Austenitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL_T-8504	S30400, 304	Annealed	SAE
MIL-T-8506	S30400, 304	Annealed	SAE
MIL-T-8606	S30403, 304L	Heat Treated	SAF
	S32100, 321	Heat Treated	SAL
	S34700, 347	Heat Treated	SAL
MIL-T-8808	321	N/A	SAK
MIL-T-23226	S3040, 304L	Annealed	SAE
	S32100, 347	N/A	SAK
	S34700, 348	N/A	SAK
QQ-S-763	S20200, 202	A	SAX
	S30200, 302	A	SAD
	S30400, 304	A	SAE
	S30400, 304	B-or B Strain Hardened	SAX
	S30404, 304L	Annealed	SAF
	S30500, 305	A	SAN
	S30900, 309	A	SAJ
	S31000, 310	A	SAJ
	S31600, 316	A	SAG
	316	B	SAO
	S31603, 316L	A	SAH
	S31700, 317	A	SAG
	S32100, 321	A	SAK
	S34700, 347	A	SAK
QQ-S-764	S30300, 303	Annealed, Cold Drawn; Cold Finished; and Annealed Ground	SAD
	S30400, 304	A	SAE
QQ-S-766	S30200, 302	Annealed	SAD
	S30400, 304	Annealed	SAE
	S30403, 304L	Annealed	SAF
	S31600, 316	Annealed	SAG
	S31600, 316L	Annealed	SAH
	S32100, 321	Annealed	SAK
	S34700, 347	Annealed	SAK

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Stainless Martensitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
AISI-410	410	T (Heat Treat to GE Dwg B50AF103B)	SMB
AMS-5630	440C	Heat Treat to 55 HR.	SMK
ASTM-A-182	F6a, Class 1	Annealed or Normalized and Tempered	SMA
	F6a, Class 2	Annealed or Normalized and Tempered	SMA
	F6a	Modified in accordance with Note 4.b of NAVSEA Dwg. 803-2177525 or Note 9 of Crane Dwg. 29938	SMB
	F6a, Class 3	Heat Treated	SMB
	F6a, Class 4	Heat Treated	SMB
ASTM-A-193	B6	Heat Treated (Fasteners)	B6
	S41000, 410, B6	Heat Treated (Bar Stock)	SMB
ASTM-A-194	6	Heat Treated (Fasteners)	6
	6	Heat Treated (Fasteners)	6B
	S41000, 410, 6	Heat Treated (Bar Stock)	SMB
ASTM-A-217	J91150, CA-15	Normalized and Tempered	SMB
ASTM-A-240	S40500, 405	Heat Treated	SMX
	S41000, 410	Annealed	SMA
	S41008, 410S	Heat Treated	SMX
	S43000, 430	Heat Treated	SMC
ASTM-A-276	S40300, 403	A	SMA
	S40300, 403	T or H	SMB
	S41000, 410	A	SMA
	S41000, 410	T or H	SMB
	410	Modified in accordance with Note 4 of NAVSEA Dwg. 803-2177140, 803-2177141, or 803-2177142	SMB
	S42000, 420	A	SMF
	S42000, 420	Heat Treated	SMG
ASTM-A-314	S41000, 410	A	SMA
	S41000, 416	Annealed	SMA
ASTM-A-336	S41000	Annealed or Normalized and Tempered	SMA
ASTM-A-479	S41000, 410	Annealed or 1	SMA
	S41000, 410	2 or 3	SMB
	S41000, 410	3 modified in accordance with Note 4.A of NAVSEA Dwg 803-2177140 or 803-2177141	SMB
	S43000, 430	Annealed	SMC
ASTM-A-487	J91261, CA-15M	Heat Treated	SMX
	J91540, CA-6NM	Heat Treated	SMX
	J91540, CA6NM	N/A	SMX
ASTM-A-565	S42200, 616	Annealed	SMX
ASTM-A-581	S41600, 416	A	SMA
	S41600, 416	T or H	SMB

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Stainless Martensitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-582	S41600, 416	A	SMA
	S41600, 416	T or H	SMB
	S41610, XM-6	T or H	SMB
	S41623, 416Se	A	SMA
	S41623, 416Se	T or H	SMB
	S43020, 430F	A	SMC
	S43023, 430FSe	A	SMC
ASTM-A-743	J91540	Heat Treated	SMX
DOD-F-24669/7	S40300, 403	Annealed	SMA
	S40300, 403	Heat Treated	SMB
	S40500, 405	Quenched	SMX
	S41000, 410	Annealed	SMA
	S41000, 410	Heat Treated	SMB
	S42200, 422	AN-or HT	SMX
MIL-C-24637	J91550	Quenched and Tempered	SMX
MIL-C-24707/6	J91150, CA-15	Normalized and Tempered	SMB
	J91261, CA-15M	Heat Treated	SMX
MIL-L-24128	S40300	A or H1350	SMA
	S40300	H650	SMX
	S40300	H1125	SMB
MIL-S-861	S42200, 422	A	SMX
MIL-S-1222	410	N/A (Fasteners)	410 H
	410	N/A (Fasteners)	410 HT
	416	N/A (Fasteners)	416 H
	416	N/A (Fasteners)	416 HT
	416 Se	N/A (Fasteners)	416 SeH
	416 Se	N/A (Fasteners)	416 SeHT
	431	N/A (Fasteners)	431 H
	431	N/A (Fasteners)	431 HT
MIL-S-16993	J91150, 1	N/A	SMB
	J91261, 2	N/A	SMB
MIL-S-24538	S44002	A	SMH
	S44002	B	SMI
	S44004	A	SMJ
	S44004	B	SMK

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Stainless Martensitic			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
QQ-S-763	S40300, 403	A	SMA
	S40300, 403	T or H	SMB
	S40500, 405	Quenched	SMX
	S41000, 410	A	SMA
	S41000, 410	T or H	SMB
	S41000	Mechanical Properties in accordance with MIL-F-22606	SMB
	S41400, 414	A	SMD
	S41400, 414	H	SME
	S42000, 420	A	SMF
	S42000, 420	Heat Treated	SMG
	S43000, 430	A	SMC
	S44002, 440A	A	SMH
	S44002, 440A	Heat Treated	SMI
	S44003, 440B	A	SMH
	S44003, 440B	Heat Treated	SMI
	S44004, 440C	A	SMJ
	S44004, 440C	Heat Treated	SMK
	S44600, 446	A	SMX
QQ-S-766	S41000, 410	Annealed	SMA

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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ABS-rules	D	Plate	STB
AMS-6322	G87400, 8740	Cold Finished or Hot Finished and Annealed	STL
AMS-6444	G52986	N/A	STX
ASME-SA-234	K3006	Heat Treated	STB
ASTM-A-36	Carbon content less than 0.22%	Rod/Bar	STA
	K02595	N/A	STB
	K02596	N/A	STB
	K02597	N/A	STB
	K02598	N/A	STB
	K02599	N/A	STB
	K02600	N/A	STB
	N/A	Bar	STB
	N/A	Plate	STB
ASTM-A-105	K03504, II	Annealed or Normalized or Normalized and Tempered or Quenched and Tempered or as forged	STB
ASTM-A-106	K02501, A	Hot Finished or Cold Drawn and Heat Treated	STA
	K03006, B	Hot Finished or Cold Drawn and Heat Treated	STB
	K03501, C	Hot Finished or Cold Drawn and Heat Treated	STB
ASTM-A-108	All Grades	Stress Relieved	STA
	G10080, 1008	Cold Finished	STA
	G10100, 1010	Cold Finished	STA
	G10150, 1015	Cold Finished	STA
	G10180, 1018	Cold Finished	STA
	G10200, 1020	Cold Finished	STA
	G10220, 1022	Cold Finished	STA
	G10300, 1030	Cold Finished	STB
	G10350, 1035	Cold Finished	STB
	G10400, 1040	Cold Finished	STB
	G10450, 1045	Cold Finished	STD
	G10500, 1050	Cold Finished	STD
	G11170, 1117	Cold Finished	STF
	G11370, 1137	Cold Finished	STF
	G12120, 1212	Cold Finished	STG
	G12130, 1213	Cold Finished	STG
	G12144, 12L14	Cold finished	STG
G12150, 1215	Cold Finished	STG	
ASTM-A-181	K03502	N/A	STB

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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-182	K11564, F12-Class 2	Annealed or Normalized and Tempered	STN
	K11572, F11-Class 2/3	Annealed or Normalized and Tempered	STN
	K11597, F11-Class 1	Annealed or Normalized and Tempered	STN
	K12822, F1	Annealed or Normalized and Tempered	STO
	K21590, F22-Class 1/3	Annealed or Normalized and Tempered	STR
	K31545, F21	Annealed or Normalized and Tempered	STR
	K41545, F5	Annealed or Normalized and Tempered	STT
	K42544, F5A	Annealed or Normalized and Tempered	STU
	S50300	Annealed or Normalized and Tempered	STT
ASTM-A-193	B5	Heat Treated (Fasteners)	B5
	S50100, B5	Heat Treated (Bar Stock)	STU
	B6	N/A (Fasteners)	B6
	B6X	N/A (Fasteners)	B6X
	B7	Heat Treated (Fasteners)	B7
	G41400, B7	Heat Treated (Bar Stock)	STI
	B7M	Heat Treated (Fasteners)	B7M
	B7M	Heat Treated (Bar Stock)	STI
	B16	Heat Treated (Fasteners)	B16
K14072, B16	Heat Treated (Bar Stock)	STK	
ASTM-A-194	1	Heat Treated (Fasteners), Hot Forged or Cold Punched	1
	1	Heat Treated (Fasteners), Machined	1B
	K01503, 1	Heat Treated (Bar Stock)	STA
	2	Heat Treated (Fasteners), Hot Forged or Cold Punched	2
	2	Heat Treated (Fasteners), Machined	2B
	2HM	Heat Treated (Fasteners), Hot Forged or Cold Punched	2HM
	2HM	Heat Treated (Fasteners), Machined	2HMB
	2H	Heat Treated (Fasteners), Hot Forged or Cold Punched	2H
	2H	Heat Treated (Fasteners), Machined	2HB
	K04002, 2, 2HM, 2H	Heat Treated (Bar Stock)	STB
	4	Heat Treated (Fasteners), Hot Forged or Cold Punched	4
	4	Heat Treated (Fasteners), Machined	4B
	K14510, 4	Heat Treated (Bar Stock)	STO
	S50100, 501	Heat Treated (Bar Stock)	STU
	7	Heat Treated (Fasteners), Hot Forged or Cold Punched	7
	7	Heat Treated (Fasteners), Machined	7B
	7	Heat Treated (Bar Stock)	STI
	7M	Heat Treated (Fasteners), Hot Forged or Cold Punched	7M
7M	Heat Treated (Fasteners), Machined	7MB	
7M	Heat Treated (Bar Stock)	STI	

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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-216	J02502, WCA	Annealed or Normalized or Normalized and Tempered	STV
	J02503, WCC	Annealed or Normalized or Normalized and Tempered	STV
	J03002, WCB	Annealed or Normalized or Normalized and Tempered	STV
	J03003, WCB	N/A	STV
	J03008	Annealed or Normalized or Normalized and Tempered	STV
	J03009	Annealed or Normalized or Normalized and Tempered	STV
	J03504	Annealed or Normalized or Normalized and Tempered	STB
ASTM-A-217	J12072, WC6	Heat Treated	STW
	J12082, WC4	Heat Treated	STW
	J12524, WC1	Heat Treated	STO
	J21890, WC9	Heat Treated	STR
	J22000, WC5	Heat Treated	STJ
	J42045, C5	Heat Treated	STU
ASTM-A-234	K03006, WPB	No Heat Treat	STB
	K03006, WPB	Heat Treated	STB
	K03501, WPC	Heat Treated	STB
	K12062, WP12	Heat Treated	STN
	K12821, WP1	Heat Treated	STO
	K21590, WP22	Heat Treated	STR
	K41545, WP5	Heat Treated	STT
	WP11, Class 2	Heat Treated	STN
	WP11, Class 3	Heat Treated	STN
ASTM-A-283	A	As Rolled	STA
	B	As Rolled	STA
	C	As Rolled	STA
	D	As Rolled	STA
ASTM-A-285	K01700, A	As Rolled	STA
	K02200, B	As Rolled	STA
	K-2801, C	As Rolled	STB
ASTM-A-302	K12022, B	Stress Relieved	STX
ASTM-A-322	G41300, 4130	Normalized	STH
	G41400, 4140	Hot Wrought	STH
	G41500, 4150	Hot Wrought	STH
	G43200, 4320	Hot Wrought	STJ
	G86200, 8620	Hot Wrought	STL
ASTM-A-325	1	N/A (Fasteners) marking may include 3 radial lines 120 degrees apart	A325
	3	N/A (Fasteners)	A325

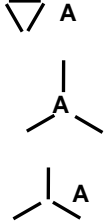
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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-A-335	K11522, P1	Full Annealed or Isothermal Annealed or Normalized and Tempered	STO
	K11547, P2	Full Annealed or Isothermal Annealed or Normalized and Tempered	STN
	K11562, P12	Full Annealed or Isothermal Annealed or Normalized and Tempered	STN
	K11578, P15	Full Annealed or Isothermal Annealed or Normalized and Tempered	STX
	K11597, P11	Full Annealed or Isothermal Annealed or Normalized and Tempered	STN
	K21590, P22	Full Annealed or Isothermal Annealed or Normalized and Tempered	STR
	K31545, P21	Full Annealed or Isothermal Annealed or Normalized and Tempered	STR
	K41245, P5C	Heat Treated	STT
	K41545, P5	Full Annealed or Isothermal Annealed or Normalized and Tempered	STT
	K51545, P5b	Full Annealed or Isothermal Annealed or Normalized and Tempered	STT
	S50300, P7	Full Annealed or Isothermal Annealed or Normalized and Tempered	STT
ASTM-A-336	F9	N/A	STT
	F11B	Annealed or Normalized and Tempered	STN
	K11564, F12	Annealed or Normalized and Tempered	STN
	K11572, FN, F11A	Annealed or Normalized and Tempered	STN
	K12520, F1	Annealed or Normalized and Tempered	STO
	K21590, F22, F22a	Annealed or Normalized and Tempered	STR
	K21590, F22	Quenched and Tempered	STS
	K31545, F21, F21a	Annealed or Normalized and Tempered	STR
K42544, F5a	Annealed or Normalized and Tempered	STU	
ASTM-A-350	K03009, LF-1	Normalized or Normalized and Tempered or Quenched and Tempered	STQ
	K03011, LF-2	Normalized or Normalized and Tempered or Quenched and Tempered	STQ
	K32025, LF-3	Normalized or Normalized and Tempered or Quenched and Tempered	STX
ASTM-A-372	K13548, 4130, 5, E	N/A	STH
ASTM-A-441	K12200	Heat treated	STQ
ASTM-A-487	4, Class A	Annealed or Normalized and Tempered or Quenched and Tempered	STJ
	14	Quenched and Tempered	STX
	J05002	Annealed or Normalized or Normalized and Tempered	STV
	J13005, 2	N/A	STX



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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Steel	Code
ASTM-A-515	K02001, 55	As Rolled	STA
	K02401, 60	As Rolled	STA
	K02800, 65	As Rolled	STB
	K03101, 70	As Rolled	STB
	K03101, 70	As Rolled, fine grain	STB
ASTM-A-516	K02700, 70	N/A	STQ
ASTM-A-519	G10180, 1018	Annealed or Normalized or Quenched and Tempered or Stress Relieved	STA
	G10260, 1026	Annealed or Normalized or Quenched and Tempered or Stress Relieved	STB
	G10260, 1026	Cold Drawn	STB
	G41420, 4142	Annealed or Normalized or Quenched and Tempered or Stress Relieved	STH
ASTM-A-574	N/A	N/A	STK
ASTM-A-576	G10180, 1018	N/A	STA
	G10200, 1020	Hot Wrought	STA
	G10350, 1035	Hot Wrought	STB
	G10400, 1040	Hot Wrought	STB
	G10420, 1042	Hot Wrought	STB
	G10430, 1043	Hot Wrought	STB
	G10440, 1044	Hot Wrought	STB
	G10450, 1045	Hot Wrought	STD
	G12150, 1215	Hot Wrought	STG
ASTM-A-588	K11430, A	N/A	STX
	K12043, B	N/A	STX
ASTM-A-696	K03200, B	N/A	TB



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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
DOD-F-24669/1	1023W	N/A	STA
	G10100	N/A	STA
	G10150	N/A	STA
	G10220	N/A	STA
	G10300	N/A	STB
	G10400	N/A	STB
	G10500	N/A	STD
	G10600	N/A	STD
	G10800	N/A	STD
	G10950	N/A	STD
	G13300	N/A	STQ
	G13350	N/A	STQ
	G13400	N/A	STQ
	G41300	N/A	STH
	G41350	N/A	STH
	G41400	N/A	STH
	G41450	N/A	STH
	G43400	N/A	STJ
	G86150	N/A	STL
	G86200	N/A	STL
	G86250	N/A	STL
	G86300	N/A	STL
G86400	N/A	STL	
G86450	N/A	STL	
DOD-F-24669/2	K21590, F22	A or HT	STR
EB-1864 Or 688-1864	ASTM-A-29 Gr 4037, 4042, 4340, or 8135	N/A (Fasteners)	A-150
	MIL-B-857 Gr 5 / MIL-S-890 Alloy 2	N/A (Fasteners)	
	MIL-S-1222 Gr 4	N/A (Fasteners)	A4
	MIL-S-1222 Gr 4	N/A (Fasteners)	A4B
	MIL-S_1222 Gr B7	N/A (Fasteners)	AB-7
	MIL-S-1222 Gr B7	N/A (Fasteners)	AB7
	MIL-S-1222 Gr B16	N/A (Fasteners)	AB-16
	MIL-S-122 Gr B16	N/A (Fasteners)	AB16
	MIL-S-5000 Gr 4340	N/A (Fasteners)	A4340
	MIL-S-5000 Gr 4340	N/A (Fasteners)	A43
	FED-STD-66 Gr C1137	N/A (Fasteners)	A1137
	FED-STD-66 Gr C1137	N/A (Fasteners)	A11
	FED-STD-66 Gr C11L37	N/A (Fasteners)	A11L37
	FED-STD-66 Gr C11L37	N/A (Fasteners)	A11L

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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
EB-2909	G10180, 1018	N/A	STA
FF-S-85	2	N/A (Fasteners)	2
	2	N/A (Bar Stock)	STA
	5	Quenched and Tempered (Fasteners)	5
	5	Quenched and Tempered (TS: 90-120, YS: 58-92) (Bar Stock)	STC
	5	Quenched and Tempered (TS: 100-180, YS: 80-150) (Bar Stock)	STM
	8	Quenched and Tempered (Fasteners)	8
	8	Quenched and Tempered (TS: 120-150, YS: 115-130) (Bar Stock)	STE
	8	Quenched and Tempered (TS: 100-180, YS: 80-150) (Bar Stock)	STM
	9	Quenched and Tempered (Fasteners)	9
	9	Quenched and Tempered (Bar Stock)	STM
FF-S-86	Low Alloy Ni-Cr-Mo Alloy Steels	Heat Treated	STM
MIL-B-857	2	N/A (Fasteners)	2
	5	N/A (Fasteners)	
	8	N/A (Fasteners)	
MIL-B-1083	G51986, Comp 1, Gr 3	N/A	STX
MIL-C-24707/1	J03504, 70-36	Annealed or Normalized or Normalized and Tempered	STB
MIL-F-20670	G10260	N/A	STB
MIL-F-22606	G41300	Quenched and Tempered	STI
	K21590, F22	Quenched and Tempered (TS: 60-100, YS: 30-45)	STR
	K21590, F22	Quenched and Tempered (TS: 110, YS: 90)	STS
	K31820, HY-80	Quenched and Tempered	STP
MIL-F-24339	N/A	N/A	STB
MIL-P-24338	K03006	Cold Drawn and Heat Treated	STB
MIL-P-24669/2	K11597	A or HT	STN
MIL-P-24691/1	K02501, A	Hot Finished or Cold Drawn and Heat Treated	STA
	K03006, B	Hot Finished or Cold Drawn and Heat Treated	STB
MIL-P-24691/2	K11597, P11	Heat Treated	STN
	K21590, P22	Heat Treated	STR

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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-S-1222	2	N/A	STA
	2H	N/A (Fasteners)	2H
	4	N/A (Fasteners)	4
	5	Heat Treated (Fasteners)	
	5	Heat Treated (TS: 90-120, YS: 58-92) (Bar Stock)	STC
	5	Heat Treated (TS: 100-180, YS: 80-150) (Bar Stock)	STM
	7	Heat Treated (Fasteners)	7
	7	Heat Treated (Bar Stock)	STI
	7M	Heat Treated	STI
	B7	Heat Treated (Fasteners)	B7
	B7	Heat Treated (Bar Stock)	STI
	B7M	Heat Treated	STI
	L7	N/A (Fasteners)	L7
	8	Hardened & Tempered (Fasteners)	
	8	Heat Treated (TS: 120-150, YS: 115-130)	STE
	8	Heat Treated (TS: 100-180, YS: 80-150)	STM
	B16	N/A (Fasteners)	B16
	L43	N/A (Fasteners)	L43
	4340	N/A (Fasteners)	4340
	574	N/A (Fasteners)	574
K14072	Heat Treated	STK	
MIL-S-5000	S43406, 4340	A, B, C, D, or E	STJ
	S43406, 4340	F	STK
MIL-S-5626	G41400, 4140	As Forged or As Rolled or Annealed or Normalized or Normalized and Tempered or Quenched and Tempered	STH
MIL-S-6758	G41300, 4130	As Forged or As Rolled or Annealed or Normalized or Normalized and Tempered or Hardened and Tempered	STH
MIL-S-15083	J03504, 7036	Annealed or Normalized and Tempered or Quenched and Tempered	STB
	J03007, CW	Annealed or Normalized and Tempered or Quenched and Tempered	STX
	J03008, B	Annealed or Normalized and Tempered or Quenched and Tempered	STV
	J03008, B	Normalized and Tempered	STV
	J03008, 70-36	N/A	STV
	J03009, 65-35	Annealed or Normalized and Tempered or Quenched and Tempered	STV
	J05002, 80-40	Annealed or Normalized and Tempered or Quenched and Tempered	STV
	J32075, 100-70	Annealed or Normalized and Tempered or Quenched and Tempered	STX

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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-S-16216	K31820	Quenched and Tempered	STP
	K32045	Quenched and Tempered	STP
MIL-S-16598	K93602	Hot Finished	STX
MIL-S-18729	G41300, 4130	A or MA or N	STH
MIL-S-21952	K31820	Quenched and Tempered	STP
	K32045	Quenched and Tempered	STP
MIL-S-22698	Gr B	N/A	STA
	Gr:D, Cl:U	N/A	STB
	ABS Gr D	NA	STB
	G10260	N/A	STB
	K11852, EH36T	N/A	STL
	K11852, AH36	As Rolled or Normalized	STL
MIL-S-23008	J42015, HY-80	Quenched and Tempered	STP
	J42240, HY-100	Quenched and Tempered	STP
MIL-S-23009	K31820	Quenched and Tempered	STP
	K32045	Quenched and Tempered	STP
MIL-S-23194	A	Heat Treated	STJ
	C	Heat Treated	STB
	K01701	Heat Treated	STX
MIL-S-23284	1	Quenched and Tempered or Normalized and Tempered	STX
	2	Quenched and Tempered or Normalized and Tempered	STX
	3	Quenched and Tempered or Normalized and Tempered	STB
	4	Quenched and Tempered or Normalized and Tempered	STB
	5	Heat Treat and Tempered, Quenched and Tempered or Normalized and Tempered	STX

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Steel			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-S-24093	A, Type I	Quenched and Tempered or Normalized and Tempered	STK
	A, Type II	Quenched and Tempered or Normalized and Tempered	STI
	B, Type I	Quenched and Tempered or Normalized and Tempered	STK
	B, Type II	Quenched and Tempered or Normalized and Tempered	STI
	C, Type I	Quenched and Tempered or Normalized and Tempered	STK
	C, Type II	Quenched and Tempered or Normalized and Tempered	STI
	D, Type I	Quenched and Tempered or Normalized and Tempered	STK
	D, Type II	Quenched and Tempered or Normalized and Tempered	STI
	F, Type II	Quenched and Tempered or Normalized and Tempered	STH
	F, Type III	Quenched and Tempered or Normalized and Tempered	STX
	F, Type IV	Quenched and Tempered or Normalized and Tempered	STB
	G, Type IV	Quenched and Tempered or Normalized and Tempered	STB
	H, Type V	Annealed or Normalized and Tempered	STB
MIL-S-24238	C	Heat Treated	STB
	H	Heat Treated	STX
	K12042, A	Heat Treated	STX
MIL-S-24287	G43400	Heat Treated	STJ
	K14675	Heat Treated	STK
MIL-S-24502	K14675	Heat Treated	STK
MIL-S-24528	G43400	Heat Treated	STJ
MIL-S-46850	200	Solution Annealed	STX
MIL-T-20157	Type E	N/A	STB
	G10210	E	STB
QQ-S-741	N/A	N/A	STB
	K02595	N/A	STB
	K02596	N/A	STB
	K02597	N/A	STB
	K02598	N/A	STB
	K02599	N/A	STB
	K02600	N/A	STB
SA-372	K13548, 4130, Gr 5 or E, Ty V, CL 70	N/A	STH
VASCOMAX	C-200	Modified by Sketch 646D-9403-N2	STX

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Tin Bronze			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
ASTM-B-61	C92200	As Cast	TBK
ASTM-B-139	C51000, A	H04 (Hard)	TBB
	C51000, A	H08, (Spring)	TBC
	C51000, A	O60, (Soft Anneal)	TBA
	C52400, D	H04 (Hard)	TBE
	C52400, D	O60, (Soft Anneal)	TBD
	C54400, B2	H04 (Hard)	TBG
ASTM-B-505	C92200	N/A	TBK
MIL-B-16541	C92200	As Cast	TBK
MIL-F-1183	C90300, D5	N/A	TBH
	C92200, D4	N/A	TBK
MIL-F-24227	C92200	N/A	TBK
MIL-F-20042	C92200	N/A	TBK
QQ-B-750	C51000, A	Soft or Half-Hard	TBA
	C51000, A	Hard	TBB
	C51000, A	Extra-Hard or Spring or Extra-Spring	TBC
	C52400, D	Soft or Half-Hard	TBD
	C52400, D	Hard	TBE
	C52400, D	Extra-Hard or Spring or Extra-Spring	TBF
	C54400, B2	Hard	TBG
QQ-C-390	C90300, D5	As Cast	TBH
	C90500, D6	As Cast	TBH
	C91000, D2	As Cast	TBI
	C91600, D1	As Cast or Chill Cast	TBJ
	C92200, D4	As Cast	TBK
	C92300, D3	As Cast	TBK
	C93200, E7	As Cast	TBL
	C93400, E8	As Cast	TBM
	C93500, E9	As Cast	TBN
	C93800, E6	As Cast	TBO
	C94000, E2	As Cast	TBP
	C94100, E5	As Cast	TBQ
	C94300, E1	As Cast	TBR
	C94700, F2	As Cast	TBS
	C94700, F2	Heat Treated	TBT
	C94800, F3	As Cast	TBS

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Titanium			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
AMS-4928	R56400, 6AL-4V	Annealed	TIF
AMS-4930	R56400, 6AL-4V	ELI Annealed	TIF
ASTM-B-265	R50400, 2	N/A	TIA
	R56400, 5	N/A	TIF
ASTM-B-336	R50550, 3	N/A	TIB
ASTM-B-337	R50400, 2	N/A	TIA
	R50500, 3	N/A	TIB
ASTM-B-338	R50250, 1	AN	TIA
	R50400, 2	AN	TIA
	R50550, 3	AN	TIB
	R52250, 11	AN	TIC
	R52400, 7	AN	TIC
	R56320, 9	Cold Worked and SR	TIX
	R58030, 10	ST	TIX
ASTM-B-348	R50400, 2	N/A	TIA
	R50550, 3	N/A	TIB
	R56400, 5	N/A	TIF
ASTM-B-367	R50400, C-2	As Cast	TIA
	R50550, C-3	As Cast	TIB
	R52400, C-7B	As Cast	TID
	R52550, C-8A	As Cast	TID
	R54520, C-6	As Cast	TIE
	R56400, C-5	As Cast	TIF
ASTM-B-381	R50400, F-2	Annealed	TIA
	R50550, F-3	N/A	TIB
	R56400, F-5	N/A	TIF
ASTM-B-861	Gr 2	N/A	TIA
EB-3155	R52400	Annealed	TID
EB-3690	R50400, 2	N/A	TIA
EB-3903	N/A	N/A	TIF
EB-4132	R50250, 2	Forging	TIA
MIL-S-1222	T-7	N/A (Fasteners)	T7
MIL-T-9046	R56401	AN	TIF

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Titanium			
Specification	UNS-Gr-CI-Ty-Comp	Condition	Code
MIL-T-9047	Alloy Ti-11.5Mo-6Zr-4.5Sn	ST	TIX
	R50700	AN	TIB
	R54520	AN	TIE
	R54521	AN	TIE
	R54620	DA	TIX
	R54810	DA	TIX
	R56400	AN	TIF
	R56401	AN	TIF
	R56620	AN	TIX
	R56740	AN	TIX
	R58010	ST	TIX
	6AL-4V	AN	TIF
	TI-6AL-4V	N/A	TIF
MIL-T-24585	R56620	Annealed	TIX
Oregon Materials Corp. OMC163TI	R56400	As Cast	TIF
Tiline Inc. TITECH-32	R56400, 6AL-4V	As Cast, SR or AN	TIF

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Bare Welding Wire		
Specification	UNS-Gr-C1-Ty-Comp	Remarks
Haynes Alloy	N/A	Mark or tag each cut length (or tag spools or coils) with the manufacturer's designator (e.g., Stellite 21, Haynes 25, etc.)
MIL-E-18193	MIL-A-1	Prefix "MIL" with code is acceptable. Tag each cut length with the MIL type designator.
MIL-E-19933	MIL-308 MIL-308L MIL-309 MIL-312 MIL-316L MIL-410	Prefix "MIL" with code is acceptable. Tag each cut length with the MIL type designator.
MIL-E-21562	EN60 or RN60 EN67 or RN67 EN82H or RN82H RN625	Prefix "MIL" with code is acceptable. Tag each cut length with the MIL type designator.
MIL-E-23765/1	MIL-70S-2 MIL-70S-3	Prefix "MIL" with code is acceptable. Tag each cut length with the MIL type designator.
MIL-E-23765/2	MIL-100S-1	Prefix "MIL" with code is acceptable. Tag each cut length with the MIL type designator.
MIL-R-17131	N/A	Tag each cut length with the MIL type designator.

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Brazing Inserts			
Specification	UNS-Gr-C1-Ty-Comp	Code	Remarks
All	N/A	N/A	Each insert shall be marked with the material alloy designation as specified in the applicable specification. For example: A series of three indentations or the code "BCUP-5" indicates grade III.

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Brazing Wire			
Specification	UNS-Gr-C1-Ty-Comp	Code	Remarks
All	N/A	N/A	Material code for wire and strip shall be the material alloy designation as specified in the applicable specification and shall be marked on a tag attached to the spool or bundle, and to each cut length.

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Coated Electrodes			
Specification	UNS-Gr-C1-Ty-Comp	Code	Remarks
AWS A-5.4	E410NiMo-16	410NiMo-16	
AWS A-5.15	ENIFE-CI	ENIFE-CI	The prefix "E" on the material code is optional
MIL-E-16589	MIL-94-16 MIL-94-15 MIL-480-15 MIL-52-16	9016-B3 or 94-16 or 6N3 9016-B3 480-15 or 11D4 52-16 or 8016-B2 or 4S3	
MIL-E-22200	N/A	N/A	For coated electrodes procured to MIL-E-22200, each length is imprinted on the coating with the applicable type or classification (MIL-Number) from the applicable MIL-E-22200 specification, except that carbon-molybdenum electrode MIL-E-15716 type MIL-7010A1 is color coded only (NEMA color code for type designation). Also, the material designation for MIL-E-22200/4B may include the parenthetical information (70-30).

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Consumable Inserts			
Specification	UNS-Gr-C1-Ty-Comp	Code	Remarks
AMS-5784	AISI 312	AM312	The prefix "MIL" with the code is acceptable.
MIL-E-19933	Ty 312	I-312	The prefix "MIL" with the code is acceptable.
MIL-E-21562	RN 82H or EN82H	RN82H	The prefix "MIL" with the code is acceptable.
MIL-I-23413	MIL-MS1 MIL-308L MIL-60 MIL-67 MIL-82H MIL-316L MIL-515 MIL-625	MS1 308L 60 67 82H 316L 515 625	The prefix "MIL" with the code is acceptable. 60 MON or MON 60 is acceptable. 67 CUN or CUN 67 is acceptable.

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Flux Core Welding Wire			
Specification	UNS-Gr-C1-Ty-Comp	Code	Remarks
AWS	N/A	N/A	For flux core wire to AWS specifications or MIL-E-24403, mark or tag each cut length (or spool if so furnished) with applicable type designator (e.g., MIL-70T-5, E60T-7, E70T-G, etc.)
MIL-E-24403	N/A	N/A	For flux core wire to AWS specifications or MIL-E-24403, mark or tag each cut length (or spool if so furnished) with applicable type designator (e.g., MIL-70T-5, E60T-7, E70T-G, etc.)

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Solder			
Specification	UNS-Gr-C1-Ty-Comp	Code	Remarks
QQ-S-571	SN-50-W-S	SNA	