

# METALS & SPECIFICATIONS

## Aluminum

TYPE	SPECIFICATION
1100-0,H14	AMS 4001.4003,QQA 250/1
2011-T3	QQ-225/3
2014-0,T3,T6	AMS 4028,4029,4121, ASTM B-209
2024-0,T3,T351,T81	AMS 4035-4037, 4041, QQA 200/3, QQA250/3-250/5
2219-0,T31,T351,T81	AMS 4031,4095-4096 QQA-250/30, QQA-367
3003-0, H14	AMS 4006,4008, QQA-250/2
5052-0, H32,H34	AMS 4015-4017 QQA-250/8
5083-0,H32	AMS 4056,QQA-250/6,-200/4, MIL-A-46027
5086-H116	QQA-250/7,QQA-200/5
5454- H32,H34	QQA 200/6
6061-0,T4,T451,T6, T651, T6511	AMS 4021-4027, 4115-4118, QQA-250/8
6063-T52,T6	QQA-200/9
6262-T52,T6	QQA-225/10
7050-T7541,T7651	AMS-4050,4201
7075_0,T4,T451,T7651	AMS- 4044-4048, QQA-200/11, 250/12-13

## Aircraft Alloys

TYPE	SPECIFICATION
4130	AMS-6348, 6350-51, 6360,6371,6373
4140	4140AMS-6349,6379,6381-82, 6395,6452
4142	AMS 4378
4330 Mod	AMS 6411,6427
4340	AMS 6359,6409,6414,6454
4620	AMS 6294
6150	AMS 6448,6450,6455
8620	AMS 6274,6276-77
8740	AMS6322-27,6358
9310	AMS6260,6265-67
17-22	AMS6302-05
300M	AMS-6417,6419
HY-TUF	AMS6418
D6-AC	AMS 6341
50100	AMS 6442
51100	AMS6443-46,6449
52100	AMS 6440,6444,6447
135 MOD	AMS-6470-72
H-11	AMS-6437,6485-88
M-50	AMS-6490-91
Maraging 250	AMS- 6512
Maraging 300	AMS-6414
D6AC	AMS-6438-39

## A-LINE METALS LLC

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37990 STEVENS RD.

LOVETTSVILLE,VA 20180

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## Special Property Metals

TYPE	SPECIFICATION
HY MU-80	AMS 7701 Mil-N-14411
MU Metal -Ann,1/2H	AMS 7701-02
MU Metal Bar	AMS 7705
Invar 36	Mil-S-16598A
Super Invar	Company specs. Applicable
Kovar	AMS 7726-28 Mil-I-23011 C1-1
M-36	AMS 7711
M-27	AMS 7712
M-4,M-5,M-6	AMS 7716
Others= Consumet iron, Moly TZM, Moly ML, Permendur Permalloy,Hyperco,Pure Iron, Silicon Iron, Constant,Hastollys B,C,X.	

## Stainless Steel

TYPE	SPECIFICATION
301-A,1/4H,1/2H, 301F.H.	AMS 5515-5519 MIL-S-5059
302,302 "L"	AMS 5516,5688 MIL-S-7720
303,303 "L"	AMS 5640
304,304 "L"	AMS 5513,5560,5563-67,5511,5647
304,304 "L"	AMS 5513,5560,5563-67,5511,5647
310	AMS 5521,5572,5651,5694
316,316 "L"	AMS 5524,5573,5648,5690,5776, 7707,5663
321	AMS 5510,5645,5570,5576,5689
330	AMS 5592,5716
347	AMS 5512,5646,5556,5571,5674
409	ASTM-B-240
410	AMS 5504,5613,5591,5612-13
416,416 H.T.	AMS 5610,ASTM-A-581,581 Cond.-T
418 (GREEK Ascology)	AMS 5508,5616-17
420	AMS 5621
430,430F	AMS 5503,5627
440 A,C,F	AMS 5631-32, 5618,5630, 5880 ASTM-A-580
446	ASTM-A-580
Alloy 20	ASTM-B-463,B-473
Nitronic,40,50,60	ASTM 5656,5764,ASTM-A-276,A-479
PH 13-8 MO	AMS 5629,5864
15-5 & 7 ph, 7MO	AMS 5862,5659,5520 ASTM-A-564
17-4,17-7 PH	AMS 5526-29,5568,5644,5678
AM 350,355	AMS 5546-5549, 5554,5743,5745,5775,5580
Custom 450,455	AMS 5617,5773,5763

## Magnesium

TYPE	SPECIFICATION
AZ61-A-F	AMS 4350
AZ80A-T5	AMS4360
AZ60A-T5	AMS 4362
AZ31B-0,H24,H26	AMS 4376,4377
ZK21A-K-F	AMS 4387 Mil-M-46039
HM 21A-T8,T81,T5,F	AMS 4383, 4388-90, Mil-M-8916-17 Temp.5
HK31 31 A-0, H24	AMS 4385, Mil-M-26075

## High Temperature Alloys

TYPE	SPECIFICATION
A 286	AMS 5525,5735,5731-32,5737
L-650	AMS 5537,5759,5796
N 155	AMS 5532,5585,5769,5794
Haynes 188	AMS 5608,5772,5807
Inconel 600,601	AMS 5540,5580,5665,5687,5715,5870
Inconel 617	AMS 5887089
Inconel 625	AMS 5599, 5666, 5581
Inconel 706	AMS 5701-03
Inconel 718	AMS 5589,5590,5596,5662-645832
Inconel 722	AMS 5684
Inconel X-750	AMS 5542,5598,5582-83, 5667-71,5698-99
Incoloy 800	AMS 5871
Incoloy 901	AMS 5660-61,5830
Incoloy 909	AMS 5884,5892-93
Hastolloy X-750	AMS 5536,5587,5754,5798
Hastolloy C 276	AMS 5530,5750
Hastolloy W,S,N	AMS 5755,5711,5607
Nickel 200	ASTM-B-160
Nickel 400,405, K500( Monel)	AMS 4544,4574-76 4730, 4675, QQ-N-281 A-B
RENE 41	AMS 5545,5712-13,5800
Waspaloy	AMS.5544,5706-09, 5828
Jethete M-152	AMS 5718-19
Nimonic 263	AMS 5872,5882
MP35N	AMS 5758,5844-45

## Titanium

TYPE	SPECIFICATION
Comm. Pure 40,55, 70 KSI	AMS4900-02,4921, 4951 Mil-T-9046-type1,A-C
6AL-4V Ann & H.T.	AMS 4911,4928,4934-35, 4954 Mil-T-9047 type 3
6AL-4V ELI-duplex Ann.	AMS 4907, 4930-31 Mil-T-9046-7 ELI
8AL-1V-1MO Si, -duplex Ann	AMS 4915-16 Mil-T-9046 type II-F
6AL-6V-2SN	AMS4918,4936-37, 4977-79 Mil-T-9046=47
6AL-2SN-4ZR-2MO	AMS 49019,4975-76 Mil-T-9047
5AL-2.5SN Ann, Eli	AMS 4909-10 4924-26 Mil-T-9046-47 type2
3AL-2.5V	AMS 4943-44
15V-3AL-3CR-3SN	AMS 4914
11SN-5.0ZR-2.3AL-1.0Mo	AMS 4974
10V-2FE-3AL	AMS 4983-87
8MN	AMS 4908

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## Copper & Brass Alloys (Non Ferrous)

TYPE	SPECIFICATION
101 Cu OFE	ASTM F-68
102 Cu	ASTM B 42,152
110 Cu ETP	ASTM B3,101,152,187
122 Cu	ASTM B-42, 75,88,280
145 Cu tellurium	ASTM B-301
Beryllium Cu	ASTMB-196, AMS 4533-alloy 25
RWMA Alloys	ASTM B-441,534,301
210 Gilding Brass	ASTM B-36
220 Commerical Bronze	ASTM B-36
230 Red Brass	ASTM B-36,43
260 Yellow brass	ASTM B-19, 36, 135
330, 345, 353	ASTM B-121,135,453
360 Brass Rod	ASTM B-16
365 Muntz Metal	ASTM B-171
380 architectural bronze	ASTM B-455
1100-0,H14	AMS 4001.4003,QQA 250/1
464-485L Naval bronze	ASTM B- 21,171
510-521-544	ASTM B 103,139
Phosphor bronze	
706,715 Cu-Ni alloys	ASTM B 111, 151
752-770- 792 Ni-Silver	ASTM B 122,151,206
600,800,900 series Bearing	
Bronzes	ASTM B22,124,138,150-51,271,505, 584

## Refractory Metals

TYPE	SPECIFICATION
Molybdenum	AMS 7817-19
Tantalum	AMS 7846-49 ASTM-B-708
Niobium	AMS 7850-55, 7857
Tungsten	AMS 7878-7890,7897-98
Beryllium	AMS 7904-7910
Zirconium	ASTM-B-550-51,493,523,658

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