



AEROSPACE STRUCTURAL METALS DATABASE (ASMD)

CINDAS LLC

GRADE UNS

ALUMINUM ALLOYS

Cast

355/C355/A355	A03550/A33550/A13550
A201	A02010
A356/356	A03560/A13560
A357	A13570

Wrought/Heat Treatable

2014 & Clad 2014	A92014
2024 Clad	A92024
2024	A92024
2048	A92048
2050	A92050
2090	A92090
2098	A92098
2099	A92099
2124	A92124
2195	A92195
2219 & Clad 2219	A92219
2297	A92297
2519	A92519
2618	A92618
2624/2026	A92624/A92026
6013	A96013
6061	A96061
6069	A96069
6082	A96082
7049	A97049
7050	A97050
7055	A97055
7075 & Clad 7075	A97075
7085	A97085
7150	A97150
7175	A97175
7475	A97475
8090	A98090
Al2198	Axxxxxx
X7005	A97005

Wrought/Non-Heat Treatable

5052	A95052
5059	A95059
5083	A95083
5456	A95456
905XL	None
X5090	None

ADDITIVE MANUFACTURING

AlSi10Mg	A13600/A13601/A13602
Titanium 6Al-4V	R3400/R56400/R56401

GRADE UNS

STAINLESS STEELS

Austenitic

19-9DL	J92843/K63198/K63199
203EZ	S20300
21-6-9	S21904
CF8C-Plus	J92604
Nitronic® 60	S20162/S21800
Type 201	S20100
Types 301 & 302	S30100/S30200
Types 303/303 Se	S30300/S30323
Types 304/304L	S30400/S30403
Type 305	S30500
Types 310/310S	S31000/S31008
Type 314	S31400
Types 316 & 317	S31600/S31603 & S31700/S31703
Type 321	S32100
Types 347 & 348	S34700/S34800

Martensitic

410Cb	S41040
9Cr-1Mo	S50400
Ferrium S53	S10500
Greek Ascology	S41800
Type 420	S42000
Type 422	S42200
Type 431	S43100
Type 440 A/B/C & F	S44002(A)/S44004(C)
Types 403, 410 & 416	S40300/S41000/S41600

Precipitation Hardening

15-5 PH®	J92110/S15500
17-4 PH	S17400
17-7 PH	S17700
AFC77	S65770
AM 350®	S35000
AM 355	S35500
AM 362	None
AM 363	S36300
Custom 455®	S45500
HNM	None
PH13-8 MO	S13800
PH14-8 MO	S14800
PH15-7 MO	S15700
Stainless W	None

Ferritic

INCOLOY® MA 956	S67956
430	S43000

GRADE UNS

HIGH STRENGTH STEELS

17-22A(S)/17-22A(V)	K23015
18Ni Maraging (200 Grade)	K92810
18Ni Maraging (250 Grade)	K92890/K92940
18Ni Maraging (300 Grade)	K93120/K93160
300-M	K44220/K44540
4130	G41300
4140	G41400/J14046
4330V	J23260/K23080
4335V Mod	K33517
4340	G43400
52100	G52986
8630	G86300/J13042/J13050
9Ni Steel	K813403
9Ni-4Co	K91283
AerMet 100	K92580
AF 1410	K92571
D6A/D6AC	K24728/K24729
E9310	G93106
Ferrium C61	K93061
Ferrium C64	K92731
H-11 Mod	T20811
H-13	T20813
Hy-130/5Ni-Cr-Mo-V	K51255
Hy-Tuf	K32550
M50/M50 NiL Steels	K88165/T11350
Maraging T-250	K92150
Nitralloy 135 Mod	K24065
Ferrium M54	None

LOW ALLOY STEELS

T-1	None
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BERYLLIUM ALLOYS

Beryllium	None
Lockalloy	None

COLUMBIUM (NIOBIUM) ALLOYS

Commercially Pure	None
B-66	None
Cb-129 Y	None
Cb-132/132M	None
Cb-752	None
FS-85	None

CINDAS LLC

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GRADE UNS**NICKEL BASED ALLOYS <5% CO**

D979	N09979
HASTELLOY® X	N06002
HAYNES® 230®	N06230
HAYNES® 242®	N10242
INCOLOY® 601	N06601
INCOLOY® 901	N09901
INCONEL® 600	N06600
INCONEL® 625	N06625
INCONEL® 702	N07702
INCONEL® 706	N09706
INCONEL® 713 LC	N07713
INCONEL® 713C	N07713
INCONEL® 718	N07718
INCONEL® 722™	N07722
INCONEL® MA 6000	None
INCONEL® MA 754	N07754
INCONEL® X-750	N07750
MONEL® K-500	N05500
RA-333	N06333
TD Nickel	N03260
TD NiCr	None

NICKEL BASED ALLOYS ≥5% CO

ATI 718Plus®	N07818
ATI M-252™	N07252
B-1900	None
CMSX-2/3	None
CMSX-4®	None
HAYNES® 263	N06231/N07263
HAYNES® 282®	N07208
IN® 100	N13100
IN-738	N07738
INCOLOY® 909	N19909
INCONEL® 617	N06617
Mar-M-246	None
Mar-M-247®	None
Nicrotung	None
NIMONIC® 105	None
NIMONIC® 115	None
NIMONIC® 90	N07090
René® 41	N07041
René® 80	None
René® 95	None
UDIMET® 500	N07500
UDIMET® 700	N07700
UDIMET® 720	N07720
WASPALOY™	N07001

GRADE UNS**NICKEL CHROMIUM STEELS**

16-15-6	None
INCOLOY®	None
INCOLOY® 800	N08800
INCOLOY® 800H	N08810
INCOLOY® 801	N08801
INCOLOY® 802	N08802
INCOLOY® A-286	K66286/S66286
N-155	R30155
NASA-23	None
NASA-HR-1	None
RA330	N08330
RA-330HC	None
V-57	None

COBALT ALLOYS

HAYNES® 188	R30188
L-605, HAYNES® 25	R30605
Mar-M-509	None
STELLITE® 21	R30021
STELLITE® 6	R30006
VM-103	None
WI-52	None
X40/X45 (STELLITE® 31)	R30031
INCONEL® 783	R30783

TITANIUM ALLOYS**Wrought**

Commercially Pure	R50250/R50400/ R50550/R50700
10-2-3	R56410
15-3-3-3	None
17	R58650
1Al-8V-5Fe	None
21S	R58210
3Al-2.5V	R56320
38-644/Beta C	R58640
48-2-2	None
5Al-2.5Sn	R54520/R54521
6-2-2-2-2	R56222
6-2-4-2	R54620
6-2-4-6	R56260
6-6-2	R56620
679	R54790
6Al-2Cb-1Ta-0.8Mo	R56210
6Al-4V	R53400/R56400/R56401
7Al-4Mo	R56740
8Al-1Mo-IV	R54810
8Mn	R56080
8Mo-8V-2Fe-3Al	None
B120 VCA	None
Beta III	R58030

Cast

6Al-4V/Cast	R56400/R56401
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GRADE UNS**MAGNESIUM ALLOYS****Cast**

AM100A	M10100
AZ63A	M11630
AZ91	M11910
AZ92A	M11920
EZ33A	M12330
HZ32A	M13320
QE22A	M18220/M18221
ZH62A	M16620
ZK51A	M16510/M16511
ZK61A	M16610/M16611

Wrought/Heat Treatable

AZ80A	M11800
EK31XA	None
HK31A	M13310
HM21A	M13210
HM31A	M13312
LA91A	None
ZK60A	M16600

Wrought/Non-Heat Treatable

AZ31A, B, C & D	M11311/M11312
AZ31B	M11311/M11312
AZ61A	M11610
ZE10A	M16100

MOLYBDENUM ALLOYS

Commercially Pure	None
Mo-0.5Ti	None
TZM	R03630

COPPER ALLOYS

GRCop-84	None
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TANTALUM ALLOYS

Commercially Pure	R05200
Ta-111	None
Ta-222	None
Ta-10W	R05255

TUNGSTEN ALLOYS

Commercially Pure	None
W-HfC & W-4Re-HfC	None

ZIRCONIUM ALLOYS

Zircaloy-2	R60802
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