IDEAL SUPPLY, INC.

11400 Kreutzer Rd.
Huntley, IL 60142
Ph. (847) 961-5900 Fx. (847) 961-5300
Email: illidealsupply@aol.com

624 Innovation Dr
Chesapeake, VA 23320
Ph. (757) 548-8050 Fx. (757) 548-8051
Email: vaidealsupply@aol.com

MIL-DTL-1222J/H3 - ASTM- A193/A194 /F467/F468/F593/F594
HEX HEAD CAP SCREWS - 304SS/316SS - MONEL 400 & K-500

1/4-20x1/2 HHCS
1/4-20x5/8 HHCS
1/4-20x3/4 HHCS
1/4-20x1 HHCS
1/4-20x1 1/4 HHCS
1/4-20x1 1/2 HHCS
1/4-20x2 HHCS
1/4-20x2 1/4 HHCS
1/4-20x2 1/2 HHCS
1/4-20x3 HHCS

7/16-14x1 HHCS
7/16-14x1 1/2 HHCS
7/16-14x2 HHCS
7/16-14x2 1/2 HHCS
7/16-14x3 HHCS

1/2-13x1 HHCS
1/2-13x1 1/4 HHCS
1/2-13x1 1/2 HHCS
1/2-13x1 3/4 HHCS
1/2-13x2 HHCS
1/2-13x2 1/4 HHCS
1/2-13x2 1/2 HHCS
1/2-13x2 3/4 HHCS
1/2-13X3 HHCS
1/2-13x3 1/4 HHCS
1/2-13x3 1/2 HHCS
1/2-13x4 HHCS
1/2-13x4 1/2 HHCS

5/16-18x1/2 HHCS
5/16-18x3/4 HHCS
5/16-18x7/8 HHCS
5/16-18x1 HHCS
5/16-18x1 1/4 HHCS
5/16-18x1 1/2 HHCS
5/16-18x2 HHCS
5/16-18x2 1/4 HHCS
5/16-18x2 1/2 HHCS
5/16-18x3 HHCS

5/8-11x1 HHCS
5/8-11x1 1/4 HHCS
5/8-11x1 1/2 HHCS
5/8-11x1 3/4 HHCS
5/8-11x2 HHCS
5/8-11x2 1/4 HHCS
5/8-11x2 1/2 HHCS
5/8-11x2 3/4 HHCS
5/8-11x3 HHCS
5/8-11x3 1/4 HHCS
5/8-11x3 1/2 HHCS
5/8-11x3 3/4 HHCS
5/8-11x4 HHCS
5/8-11x4 1/4 HHCS
5/8-11x4 1/2 HHCS
5/8-11x5 HHCS
5/8-11x5 1/4 HHCS
5/8-11x5 1/2 HHCS
5/8-11x6 HHCS

3/8-16x3/4 HHCS
3/8-16x1 HHCS
3/8-16x1 1/4 HHCS
3/8-16x1 1/2 HHCS
3/8-16x1 3/4 HHCS
3/8-16x2 HHCS
3/8-16x2 1/4 HHCS
3/8-16x2 1/2 HHCS
3/8-16x2 3/4 HHCS
3/8-16x3 HHCS
3/8-16x3 1/4 HHCS
3/8-16x3 1/2 HHCS
3/8-16x4 HHCS

3/4-10x1 3/4 HHCS
3/4-10x2 HHCS
3/4-10x2 1/4 HHCS
3/4-10x2 1/2 HHCS
3/4-10x2 3/4 HHCS
3/4-10x3 HHCS
3/4-10x3 1/4 HHCS
3/4-10x3 1/2 HHCS
3/4-10x3 3/4 HHCS
3/4-10x4 HHCS
3/4-10x4 1/2 HHCS
3/4-10x5 HHCS
3/4-10x5 1/2 HHCS
3/4-10x6 HHCS

7/8-9 & 1-8 HHCS

NUTS/MIL-SPEC	FW	MLW	MS17828	MS17830	
10-24 HMN					
10-32 HMN	*#10*	*#6*	*10-32 HNILN*	*10-32 HNILN*	***FINE THREAD***
1/4-20 HFN	*1/4*	*#8*	*1/4-20 HNILN*	*1/4-20 HNILN*	***FLAT SOCKETS***
5/16-18HFN	*5/16*	*#10*	*5/16-18 HNILN*	*5/16-18 HNILN*	***HEAVY NUT***
3/8-16 HFN	*3/8*	*1/4*	*3/8-16 HNILN*	*3/8-16 HNILN*	***JAM NUTS***
7/16-14 HFN	*1/2*	*5/16*	*7/16-14 HNILN*	*7/16-14 HNILN*	***MACHINE SCREWS***
1/2-13 HFN	*5/8*	*3/8*	*1/2-13 HNILN*	*1/2-13 HNILN*	***NYLON INSERT L/N***
5/8-11 HFN	*3/4*	*1/2*	*9/16-18 HNILN*	*5/8-11 HNILN*	***SET SCREWS***
3/4-10 HFN	*7/8*	*5/8*	*5/8-11 HNILN*	*3/4-10 HNILN*	***SOCKET CAP SCREWS***
7/8-9 HFN	*1*	*3/4*	*3/4-10 HNILN*	*7/8-9 HNILN*	***STUDS***
1-8 HFN	*1 1/8*	*1*	*7/8-9 HNILN*	*1-8 HNILN*	***THREADED ROD***
1-1/8-7 HFN	*1 1/4*	*1 1/8*	*1-8 HNILN*	*1-1/8 -7 HNILN*	***U-BOLTS***

MIL-I-45208A MIL-STD-105E MIL-STD-45662A MIL-STD-6866 MIL-DTL-18240
MS17828/17830 MS35311 MIL-S-1222H3+G3 MIL-DTL-1222J FF-S-86E4 FF-S-92B

**** * * SBA WOMAN OWNED SMALL BUSINESS / DOD / QSLD APPROVED * * ****

QA PROGRAMS

MIL-I-45208A / MIL-STD-45662A

ASTM A193/A194/F593/F594/F467/F468

ANSI, ASME, ASTM, SAE, FEDERAL, IFI, MIL-SPEC

DOD/QSLD CLASS 2 + 3, CAGE CODE 1T9G7

SBA Registered Small Business Women Owned

MONEL alloy 400

A nickel-copper alloy with high strength and excellent corrosion resistance in a range of media including seawater, hydrofluoric acid, sulfuric acid, and alkalies. Used for marine engineering, chemical and hydrocarbon processing equipment, valves, pumps, shafts, fittings, fasteners, and heat exchangers. Standard product forms are round, hexagon, flats, forging stock, pipe, tube, plate, sheet, strip, and wire.

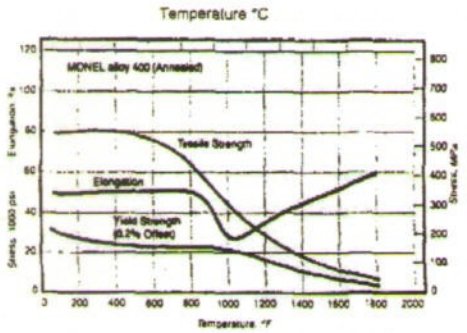
Limiting Chemical Composition, %

Ni* ..... 63.0 min.	Mn ..... 2.0 max.	Si ..... 0.5 max.
Cu 28.0-34.0	C ..... 0.3 max.	
Fe ..... 2.5 max.	S ..... 0.024 max.	

*Plus Co.

Typical Mechanical Properties (Annealed)

Tensile Strength, psi	80,000
MPa	500
Yield Strength (0.2% Offset), psi	35,000
Mpa	240
Elongation, %	40



Physical Constants and Thermal Properties

Density, lb/in³	0.318
Mg/m³	8.80
Melting Range, °F	2370-2460
°C	1300-1350
Specific Heat, Btu/lb · °F	0.102
J/kg·°C	427
Curie Temperature, °F	70-120
°C	20-50
Coefficient of Expansion, 70-200°F, 10⁻⁶ in/in · °F	7.7
21-93°C, µm/m · °C	13.9
Thermal Conductivity, Btu·in/ft²·h·°F	151
W/m · °C	21.8
Electrical Resistivity, ohm · circ mil/ft	329
µΩ · m	0.547

Specifications and Designations

UNS N04400
BS 3072-3076 (NA 13)
ASTM B 127, B163-B165, B564
ASME SB-127, SB-163-SB-165, SB-564, Boiler Code Sections III, IV, VIII IX
AECMA Pr EN 2305
AFNOR NU30
SAE AMS 4544, 4574, 4575, 4675, 4730, 4731, 7233
DIN 17743, 17750-17754
Werkstoff Nr 2.4360, 2.4361
VdTUV 263
MIL-T-1368, MIL-T-23520, MIL-N-24106
QQ-N-281 NACE MR-01-75

MONEL alloy R-405

The free-machine version of MONEL alloy 400. A controlled amount of sulfur is added to the alloy to provide sulfide inclusions that act as chip breakers during machining. Other characteristics are essentially the same as those of MONEL alloy 400. Used for meter and valve parts, fasteners, and screw-machine products. Standard product forms are round, hexagon, flats, and wire.

Limiting Chemical Composition, %

Ni* ..... 63.0 min.	S 0.025-0.060	Si ..... 0.5 max.
Cu 28.0-34.0	Mn ..... 2.0 max.	
Fe ..... 2.5 max.	C ..... 0.3 max.	

*Plus Co.

Typical Mechanical Properties (Annealed)

Tensile Strength, psi	80,000
Mpa	550
Yield Strength (0.2% Offset), psi	35,000
Mpa	240
Elongation, %	40

Physical Constants and Thermal Properties

Density, lb/in³	0.318
Mg/m³	8.80
Melting Range, °F	2370-2460
°C	1300-1350
Specific Heat, Btu/lb · °F	0.102
J/kg · °C	427
Curie Temperature, °F	70-120
°C	20-50
Coefficient of Expansion, 70-200°F, 10⁻⁶ in/in · °F	7.6
21-93°C, µm/m · °C	13.7
Thermal Conductivity, Btu · in/ft² · h · °F	151
W/m · °C	21.8
Electrical Resistivity, ohm · circ mil/ft	307
µΩ · m	0.510

Specifications and Designations

UNS N04405 ASTM B 164 ASME SB-164, Boiler Code Sections III,VIII
SAE AMS 4674, 7234 QQ-N-281 NACE MR-01-75

MONEL WAS INVENTED IN 1905 WITH APPROXIMATELY TWO THIRDS NICKEL AND ONE THIRD COPPER. MONEL ALLOYS RESIST CORROSION IN A WIDE VARIETY OF ENVIRONMENTS AND ARE USED IN SULFURIC ACID AND HYDROFLUORIC ACID, AND IN VARIOUS MARINE/NAVAL APPLICATIONS INVOLVING CONTACT WITH SEA AND FRESH WATER. MONEL ALLOYS ARE FREQUENTLY UTILIZED IN HEAT EXCHANGERS DUE TO GOOD THERMAL CONDUCTIVITY AND CORROSION RESISTANCE.

MONEL APPLICATIONS INCLUDE: MARINE, VALVES, PUMPS, SHIPBUILDING, CHEMICAL AND OIL PROCESSING, HEAT EXCHANGERS, ELECTRICAL.

MONEL alloy K-500

A precipitation-hardenable nickel-copper alloy that combines the corrosion resistance of MONEL alloy 400 with greater strength and hardness. It also has low permeability and is nonmagnetic to under -150°F(-101°C). Used for pump shafts, oil-well tools and instruments, doctor blades and scrapers, springs, valve trim, fasteners, and marine propeller shafts. Standard product forms are round, hexagon, flats, forging stock, pipe, tube, plate, sheet, strip, and wire.

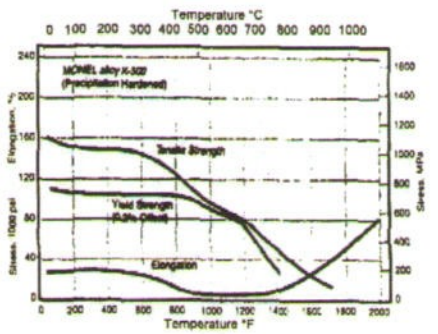
Limiting Chemical Composition, %

Ni* ..... 63.0 min.	Ti 0.35-0.85	Mn ..... 1.5 max.
Cu 27.0-33.0	Fe ..... 2.0 max.	S ..... 0.01 max.
Al 2.30-3.15	C ..... 0.25 max.	Si ..... 0.5 max.

*Plus Co.

Typical Mechanical Properties (Precipitation Hardened)

Tensile Strength, psi	160,000
MPa	1100
Yield Strength (0.2% Offset), psi	115,000
Mpa	790
Elongation, %	20



Physical Constants and Thermal Properties

Density, lb/in³	0.305
Mg/m³	8.44
Melting Range, °F	2400-2460
°C	1315-1350
Specific Heat, Btu/lb · °F	0.100
J/kg · °C	419
Curie Temperature, °F	-150
°C	-65
Permeability at 200 oersted (15.9 kA/m)	1.002
Coefficient of Expansion, 70-200°F, 10⁻⁶ in/in. ° · °F	7.6
21-93°C µm/m °C	13.7
Thermal Conductivity, Btu · in/ft² · h · °F	121
W/m · °C	17.5
Electrical Resistivity, ohm · circ mil/ft	370
µΩ · m	0.615

Specifications and Designations

UNS N05500
BS 3072-3076 (NA18)
ASME Boiler Code Section VIII
SAE AMS 4676
MIL-N-24549
DIN 17743, 17752, 17754
Werkstoff Nr 2.4375
QQ-N-286
NACE MR-01-75

ASTM B98/B127	**FF-W-82**	**QQ-B-637**	**MIL-S-1222G3**
ASTM B164/B473	**FF-W-84**	**QQ-C-591E**	**MIL-S-1222H3**
ASTM A193/A194	**FF-S-86E4**	**QQ-S-763E**	**MIL-DTL-1222J**
ASTM F467/F468	**FF-S-92B**	**QQ-N-281D2**	**MS17828/MS17830**
ASTM F593/F594	**FF-W-92**	**QQ-N-286F+G**	**MS35311/MS35307**