

## MONEL alloy 400

A nickel-copper alloy with high strength and excellent corrosion resistance in a range of media including sea water, hydrofluoric acid, sulfuric acid and alkalis. 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.

### Specifications and Designations

UNS N04400	SAE AMS 4544, 4574, 4575,
BS 3072-3076 (NA13)	4675, 4730, 4731, 7233
ASTM B127, B163, B164, B165, B564	DIN 17743, 17750-17754 Werkstoff Nr. 2.4360, 2.4361
ASME SB-127, SB-163, SB-164 SB-165, SB-564, Boiler Code	VdTÜV 263 MIL-T-1368, MIL-DTL-23520, MIL-N-24106
Sections III, IV, VIII, IX	QQ-N-281
AECMA Pr EN 2305	NACE MR-01-75
AFNOR NU30	

### Limiting Chemical Composition, %

Ni <sup>a</sup> . . . . . 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.	

<sup>a</sup>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/in <sup>3</sup> . . . . .	0.319
Mg/m <sup>3</sup> . . . . .	8.83
Melting Range, °F . . . . .	2370-2460
°C . . . . .	1300-1350