

Alloy 400 - BARS

Applications

INDUSTRIAL

Power Plants, Chemical Industry, Mineral Oil Distillation Plants

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	63.0 min
Cu (Copper)	28.0 - 34.0
Fe (Iron)	2.5 max
Mn (Manganese)	2.0 max
C (Carbon)	0.3 max
Si (Silicon)	0.5 max
S (Sulfur)	0.024 max

Features

- Resistance against chloride-induced stress corrosion
- Excellent strength even at low application temperatures
- Easy processing compared to other high-alloy materials

Physical Properties

Density 8.82 g/cm³ (0.32 lb/in³) at 20°C

Standard

ASTM B164

Material

MONEL 400 / UNS N04400 / 2.4360 & 2.4361

Mechanical Properties

Heat Treatment	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Hot/cold worked (Annealed): Rod and Bar, all sizes	70,000 (480)	25,000 (170)	35
Cold-worked (as worked): Rounds under ½	110,000 (760)	55,000 (380)	8
Cold-worked (as worked): Hexagons under 1/2	85,000 (585)	30,000 (207)	20
Cold-worked (Stress-relieved): Rounds under 1/2	84,000 (580)	50,000 (345)	10
Cold-worked (Stress-relieved): Rounds 1/2 to 3 1/2	84,000 (580)	55,000 (380)	10
Cold-worked (Stress-relieved): Rounds over 3 1/2 to 4	84,000 (580)	50,000 (345)	20
Cold-worked (Stress-relieved): Hexagons 2 and under	80,000 (552)	50,000 (345)	20
Cold-worked (Stress-relieved): Hexagons over 2 to 3 1/8	87,000 (600)	60,000 (415)	20
Cold-worked (Stress-relieved): Hexagons over 2 1/8 to 4	75,000 (517)	40,000 (276)	30
Hot-worked (Stress-relieved): Rounds up to 12	80,000 (552)	40,000 (276)	30
Hot-worked (Stress-relieved): Rounds over 12 to 14	75,000 (517)	40,000 (276)	30
Hot-worked (Stress-relieved): Hexagons 2 1/8 and under	85,000 (585)	55,000 (380)	25

Surface

Bright annealed / annealed

Package

Wooden case

Heat Treatment

Annealed / Stress-Relieved

The soft annealing should be performed at temperatures of 700 to 900°C (1,292 to 1,652°F), preferably at about 825°C (1,517°F).

Stress-relief annealing at about 550 to 650°C (1,022 to 1,202°F) should then occur, in order to prevent stress corrosion cracking.

Alloy 400 - TUBES

Applications

INDUSTRIAL

Power Plants, Chemical Industry, Mineral Oil Distillation Plants, Offshore Platforms

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	63.0 min
Cu (Copper)	28.0 - 34.0
Fe (Iron)	2.5 max
Mn (Manganese)	2.0 max
C (Carbon)	0.3 max
Si (Silicon)	0.5 max
S (Sulfur)	0.024 max

Features

- Resistance against chloride-induced stress corrosion
- Excellent strength even at low application temperatures
- Easy processing compared to other high-alloy materials

Physical Properties

Density 8.82 g/cm³ (0.32 lb/in³) at 20°C

Standard

ASTM B165 for seamless pipe and tube

Material

MONEL 400 / UNS N04400 / 2.4360 & 2.4361

Mechanical Properties

Heat Treatment	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Annealed: 5 in. (127 mm) outside diameter and under	70,000 (480)	28,000 (195)	35
Annealed: Over 5 in. (127 mm) outside diameter	70,000 (480)	25,000 (170)	35
Stress-Relieved: All sizes	85,000 (585)	55,000 (380)	15

Surface

Bright annealed / annealed

Package

Wooden case

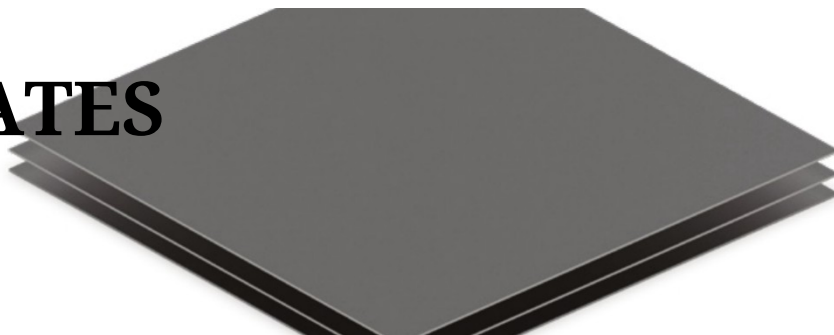
Heat Treatment

Annealed / Stress-Relieved

The soft annealing should be performed at temperatures of 700 to 900°C (1,292 to 1,652°F), preferably at about 825°C (1,517°F).

Stress-relief annealing at about 550 to 650°C (1,022 to 1,202°F) should then occur, in order to prevent stress corrosion cracking.

Alloy 400 - PLATES



Applications

INDUSTRIAL

Power Plants, Chemical Industry, Mineral Oil Distillation Plants, Offshore Platforms

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	63.0 min
Cu (Copper)	28.0 - 34.0
Fe (Iron)	2.5 max
Mn (Manganese)	2.0 max
C (Carbon)	0.3 max
Si (Silicon)	0.5 max
S (Sulfur)	0.024 max

Features

- Resistance against chloride-induced stress corrosion
- Excellent strength even at low application temperatures
- Easy processing compared to other high-alloy materials

Physical Properties

Density 8.82 g/cm³ (0.32 lb/in³) at 20°C

Standard

ASTM B127

Material

MONEL 400 / UNS N04400 / 2.4360 & 2.4361

Mechanical Properties

Heat Treatment	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Hot-Rolled Plate: Annealed	70,000 (485)	28,000 (195)	35
Hot-Rolled Sheet: Annealed	70,000 (485)	28,000 (195)	35
Hot-Rolled Plate: As-rolled	75,000 (515)	40,000 (275)	25
Cold-Rolled Sheet: Annealed	70,000 to 85,000 (485-585)	28,000 (195)	35

Surface

Bright annealed / annealed

Package

Wooden case

Heat Treatment

Annealed / Stress-Relieved

The soft annealing should be performed at temperatures of 700 to 900°C (1,292 to 1,652°F), preferably at about 825°C (1,517°F).

Stress-relief annealing at about 550 to 650°C (1,022 to 1,202°F) should then occur, in order to prevent stress corrosion cracking.