

# ASTM B564 UNS N04400 Monel 400 Flanges | ASME B16.5

ASTM B564 UNS N04400 Monel 400 flanges are forged nickel-copper alloy flanges manufactured in accordance with ASME B16.5, ASME B16.47 Series A & B, and EN 1092-1. Monel 400 flanges offer excellent resistance to seawater, acids, and alkaline environments, making them ideal for marine, chemical, and oil & gas applications.

## ASTM B564 Standard Description

ASTM B564 is a standard specification for nickel alloy forgings including flanges, fittings, valves, and similar pressure components. It defines chemical composition, mechanical properties, heat treatment, and testing requirements to ensure consistent quality and performance in corrosive and high-pressure service conditions.

## Material Grade – UNS N04400 (Monel 400)

UNS N04400, commonly known as Monel 400 or Alloy 400, is a nickel-copper alloy providing excellent corrosion resistance, good mechanical strength, and outstanding performance in marine and chemical environments.

## Equivalent Grades

Standard	Equivalent Grade
UNS	N04400
EN / DIN	2.4360 / 2.4361
EN Designation	NiCu30Fe
ISO	NW 4400

## Flange Types

Weld Neck (WN), Slip On (SO), Blind (BL), Threaded (TH), Socket Weld (SW), Lap Joint (LJ).

## Applicable Standards

Material Standard: ASTM B564

Flange Dimensions: ASME B16.5, ASME B16.47 Series A & B

European Standard: EN 1092-1

## Chemical Composition (wt %)

Nickel (Ni)	63.0 – 70.0
Copper (Cu)	28.0 – 34.0
Iron (Fe)	≤ 2.5
Manganese (Mn)	≤ 2.0
Silicon (Si)	≤ 0.50
Carbon (C)	≤ 0.30
Sulfur (S)	≤ 0.024

## Mechanical Properties (Room Temperature)

Tensile Strength	≥ 480 MPa
Yield Strength (0.2%)	≥ 170 MPa

Elongation	≥ 35%
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### Hardness

Maximum 160 HB.

### Heat Treatment

Solution annealed at 870 – 925°C followed by air or water quenching to restore corrosion resistance and mechanical properties.

### Applications

ASTM B564 UNS N04400 Monel 400 flanges are widely used in marine and offshore engineering, chemical processing plants, oil & gas production, heat exchangers, seawater piping systems, and power generation industries worldwide.

ASTM B564 UNS N04400 Monel 400 flanges are the ideal solution for corrosive and marine service piping systems. For drawings, pricing, and fast global delivery, please contact a trusted Monel 400 flange supplier.

