

Hastelloy B2 / UNS N10665 / DIN 2.4617

Solution Hardened Nickel-Molybdenum Alloy

Alloy B2 Data Sheet

Introduction

Hastelloy B2 a.k.a Alloy B2 is Nickel-Molybdenum Solution Hardened Alloy for increase strength at elevated temperatures. Having molybdenus as an alloying element, it provide excellent resistance to reducing agents & formation of grain boundry precipitating the carbide at heat affected zone.

Chemical Composition (Typical)

Element	Limits	
	min	max
Carbon	0.000	0.200
Manganese	0.000	1.000
Sulphur	0.000	0.030
Phosphorus	0.000	0.040
Iron	0.000	2.000
Chromium	0.000	1.000
Molybdenum	26.000	30.000
Cobalt	0.000	1.000
Nickel	Remainder	

Mechanical Properties (Typical)

Parameter	Value
Yield 0.2 % (Mpa/Nmm ²), Min	350
Tensile (Mpa/Nmm ²), Min	760
Elongation (% in 50MM), Min	40
Reduction Area(%), Min	--
Hardness (HRB), Max	100*

Physical Properties

Parameter	Value
Density (Kg/m ³)	9220
Elastic Modulus (Gpa)	179
*Co-eff of Expansion ($\mu\text{m}/\text{m}/^\circ\text{C}$)	11.7
*Thermal Condc. (W/m.K)	17.3
*Electric Resistivity (n Ω .m)	1410

*Note : @500°C

Corrosion Data

Hastelloy B2 is high resistance to reducing agents owing to its molybdenum content. It is resistant to Stress & Pitting. Doest allow formation of grain boundry & subsequently precipitaes carbide in the heat affected zone. It offers superior resistance to any concentration of hydrochloric acid at high temperatures, sulphuric acid, acetic & phosphoric acid. It also shows resistance to knife like & heat affected zone attack.

Equivalent Grade Designation

Hastelloy B2
Alloy B2
UNS N10665
W. Nr./EN 2.4617
DIN 2.4615

Alloy B2 Data Sheet

Available Product Forms

Round, Square, Hexagon ,Flat Bars & Wires
Seamless / Welded Pipes
Seamless / Welded Tubes
Hot & Cold Rolled Plates & Sheets
Forged Bars
Forged Flanges
Butt-Weld Pipe Fittings
Socket-Weld/Forged Pipe Fittings
Machined Components
Ferrule Compression Fittings
Welding Consumables

Common Manufacturing Specifications

ASTM B333, ASTM B335, ASTM B366, ASTM B564, ASTM B619, ASTM B622, ASTM B626, ASME SB333, ASME SB335, ASME SB366, ASME SB564, ASME SB619, ASME SB622, ASME SB626

Alternate to Alloy

Hastelloy C22 & Hastelloy C276 are alternatives to Alloy B2.

Applications & Industries

Chemical & Pharmaceutical Industries
Vacuum Furnaces
Manufacturing component for reducing environment
Herbicides, Insecticides, Ethylene glycol and Ethyl benzene production units
Valves, Pumps, Fasteners - Nuts, Bolts, Washer, Anchor Rods
Machine Components
Acetic acid production

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