

Hastelloy Alloys – Technical Data Sheet

Hastelloy Alloys are premium nickel-based superalloys renowned for their exceptional corrosion resistance and performance in extreme environments. These high-performance materials are widely used in chemical processing, pharmaceutical, oil & gas, pollution control, and power generation industries where resistance to aggressive acids, chlorides, and high temperatures is critical.

What are Hastelloy Alloys?

Hastelloy is a family of nickel-chromium-molybdenum alloys designed to provide outstanding resistance to corrosion in a wide range of harsh chemical environments. They offer superior performance compared to stainless steels in oxidizing and reducing conditions.

Key Features

- Exceptional resistance to corrosion in acids and chlorides
- Outstanding performance in oxidizing and reducing environments
- High resistance to pitting, crevice, and stress corrosion cracking
- Excellent high-temperature strength and stability
- Good weldability and fabricability
- Long service life with minimal maintenance
- Versatile for use in highly aggressive chemical processes

Technical Data Sheet – Hastelloy C-276

Property	Value
UNS Designation	N10276
Density	8.89 g/cm ³
Tensile Strength	690 MPa (Min)
Yield Strength	310 MPa (Min)
Elongation	40% (Min)
Hardness	100 HRB (Max)
Melting Range	1323°C – 1371°C
Common Standards	ASTM B575, B574, B622, B619

Technical Data Sheet – Hastelloy C-22

Property	Value
UNS Designation	N06022

Density	8.69 g/cm ³
Tensile Strength	690 MPa (Min)
Yield Strength	310 MPa (Min)
Elongation	45% (Min)
Hardness	100 HRB (Max)
Melting Range	1357°C – 1399°C
Common Standards	ASTM B575, B574, B622, B619

Typical Applications

Chemical processing equipment, pharmaceutical reactors, pollution control systems, flue gas desulfurization, heat exchangers, pressure vessels, piping systems in oil & gas, waste treatment, and marine environments with aggressive chemicals.

Available Product Forms

Sheets, plates, pipes, tubes, round bars, fittings, flanges, fasteners, forgings, and custom components.

Why Choose Hastelloy Alloys?

Hastelloy alloys deliver unmatched corrosion resistance and reliability in the most demanding industrial environments. They help reduce downtime, extend equipment life, and lower overall maintenance costs.

Maintenance and Care

Regular inspection, proper cleaning, and adherence to operating conditions help maintain optimal performance and longevity.

Conclusion

Hastelloy Alloys are the preferred choice for critical applications requiring superior corrosion resistance and high performance. Their proven track record makes them essential in chemical, energy, and process industries worldwide.