

# A-286

A-286 is a type of iron-based superalloy known for its impressive mechanical properties and high level of resistance to corrosion.

The alloy is **often used in high-temperature applications due to its ability to maintain its structural integrity** at elevated temperatures. Due to its iron base, A-286 has lower raw material cost compared to most superalloys.

**Similar alloy:** 718



## KEY FEATURES OF A-286

- **High-temperature resistance:** A-286 is known for its ability to maintain its structural integrity even at elevated temperatures. This makes it an ideal choice for high-temperature applications, particularly in the aerospace industry.
- **Corrosion resistance:** With a significant amount of chromium and nickel addition, the alloy is highly resistant to corrosion, which increases its lifespan and reduces maintenance costs. This makes it a cost-effective choice for many industries. It also has oxidation resistance up to 1500°F.
- **Versatility:** A-286's unique composition allows it to be used in a wide range of applications, from aircraft engines to car exhaust systems. This broad usability can appeal to a wide range of potential customers.

A-286 tubes were used on the space shuttle main engine as hydrogen fuel injector nozzles due to their excellent strength and ductility from room temperature down to cryogenic temperature.

- **Strengthening capabilities:** A-286 can be strengthened through cold working and by different heat treatments, allowing it to be customized to meet specific requirements. This adaptability can be a strong selling point.
- **Durability:** The alloy's impressive mechanical properties, including its strength and durability, make it a reliable choice for demanding applications. This can be a key point for industries where reliability and longevity are crucial.

