

DIRECT METAL LASER SINTERING

Inconel 718

Product Specifications

Product Description

Inconel is a high strength, corrosion resistant nickel chromium superalloy ideal for parts that will experience extreme temperatures and mechanical loading. Final parts built in Inconel 718 receive stress relief application. Solution and aging per AMS 5663 is also available to increase tensile strength and hardness. It is available in both high and normal resolution and can be used for parts as large as 31.5 in. x 15.7 in. x 19.7 in. in size.

Applications

Inconel is an excellent choice for rocket engine components and related equipment exposed to extreme environments.

Key Product Benefits

- Oxidation and corrosion resistance
- High performance tensile, fatigue, creep, and rupture strength

Properties

Resolution	Condition	Ultimate Tensile Strength (ksi)	Yield Stress (ksi)	Elongation (%)	Hardness
20 µm	Stress Relieved	143	98	36	33 HRC
30 µm	Stress Relieved	144	91	39	30 HRC
30 µm	Solution & Aged per AMS 5663	208	175	18	46 HRC
60 µm	Stress Relieved	139	83	40	27 HRC
60 µm	Solution & Aged per AMS 5663	201	174	19	45 HRC