

DM 718

DM 718 is a nickel based superalloy qualified for metal AM in Digital Metal's binder jetting system.

718 alloys are commonly used in aerospace applications, turbines, rocket engines, turbo pumps and similar high temperature environments, as well as in cryogenic applications.

The material exhibits high strength and corrosion resistance at elevated temperatures. The strength comes mainly from gamma double prime precipitates, giving the alloy an improved weldability in comparison to high gamma prime strengthened alloys, which are often considered non-weldable.

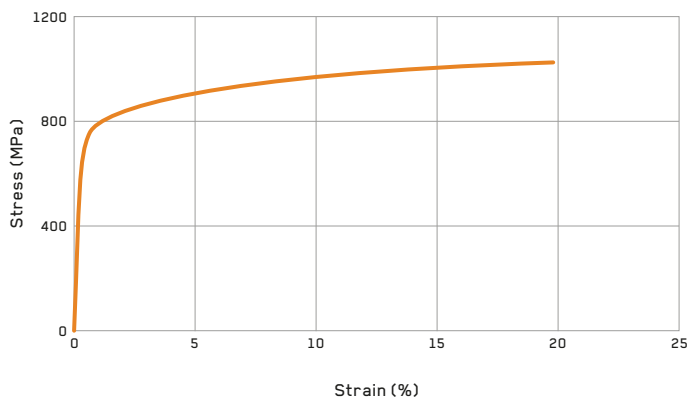
COMPOSITION - TYPICAL VALUES (WEIGHT %)

Al	C	Cr	Cu	Fe	Mn	Mo	Nb	Ni	P	Si	Ti
0.5	0.04	18	0.05	17	0.01	3	5	Bal	0.01	0.01	0.9

Related denominations: Inconel® 718, IN718, UNS N07718, ASTM B637, 2.4668, NCF718

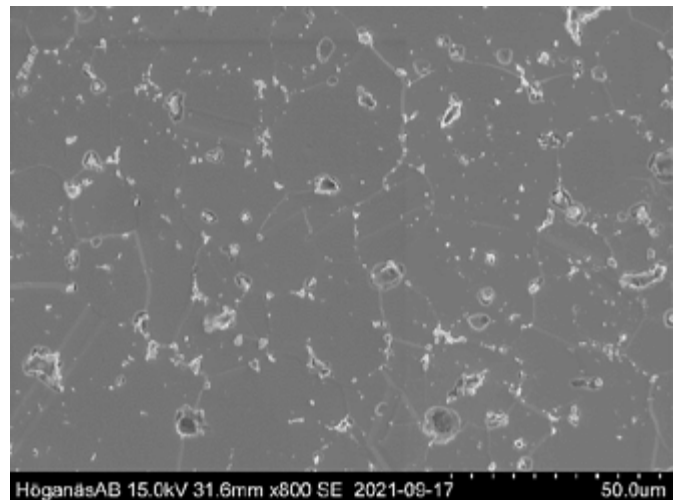
PHYSICAL PROPERTIES - TYPICAL VALUES

Property	As sintered
Ultimate tensile strength (MPa)	1000
Yield strength (MPa)	700
Elongation (%)	15
Hardness (HRC)	34
Relative density (%)	98



FEATURES

- High strength and creep resistance, even at elevated temperatures
- Great corrosion resistance
- Properties can be further improved through post process heat treatments
- Weldable



As sintered microstructure