

Direct Metal Printing (DMP)

Material Summary Sheet

Maraging Steel 18Ni300 / 1.2709

Versatile steel with very good mechanical properties, which can be increased further with a simple age-hardening process.

This steel exhibits low levels of residual stress and is the first choice for printing of particularly challenging geometry.

Easy to machine, weld, polish and plate.

	AS BUILT	AGE-HARDENED
Ultimate Tensile Strength (MPa/PSI)	1100	2050
Yield Strength (MPa/PSI)	1000	1990
Elongation at Break (%)	10	4
Hardness (HRc)	35	54

Stainless Steel 316L / 1.4404

Highly corrosion resistant austenitic stainless steel. Suitable for a wide range of applications including medical, food processing and marine.

Low magnetic permeability.

	AS BUILT
Ultimate Tensile Strength (MPa/PSI)	630
Yield Strength (MPa/PSI)	470
Elongation at Break (%)	40
Hardness (HRb)	95

Inconel 625 / 2.4856

Heat and corrosion resistant nickel alloy with good tensile and fatigue properties and resistance to elevated temperatures.

It demonstrates remarkable protection against corrosion and oxidation. Typical applications motorsport, aerospace and oil and gas industries.

	AS BUILT
Ultimate Tensile Strength (MPa/PSI)	1030
Yield Strength (MPa/PSI)	30
Elongation at Break (%)	22
Hardness (HRc)	29

Inconel 718 / 2.4668

Heat and corrosion resistant nickel alloy with good tensile and fatigue properties at temperatures up to 650 °C.

Mechanical properties can be increased with age-hardening (AMS 5662 / 5664). Commonly used for applications in motorsport, aerospace, and oil and gas industries.

	AS BUILT	AGE-HARDENED	AGE-HARDENED, TESTED 649 °C
Ultimate Tensile Strength (MPa/PSI)	970	1370	1120
Yield Strength (MPa/PSI)	610	1120	920
Elongation at Break (%)	31	12	14
Hardness (HRc)	30	47	-

For more information please contact our metal printing specialists on
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