

# 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)	1220	2160
Yield Strength (MPa/PSI)	1090	2070
Elongation at Break (%)	13	5
Hardness (HRc)	35	55

### 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.

	AFTER STRESS RELIEF
Ultimate Tensile Strength (MPa/PSI)	570
Yield Strength (MPa/PSI)	440
Elongation at Break (%)	49
Hardness (HRb)	90

### 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)	730
Elongation at Break (%)	33
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
Ultimate Tensile Strength (MPa/PSI)	930	1340
Yield Strength (MPa/PSI)	660	1200
Elongation at Break (%)	36	14
Hardness (HRc)	20	40

For more information please contact our metal printing specialists on  
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