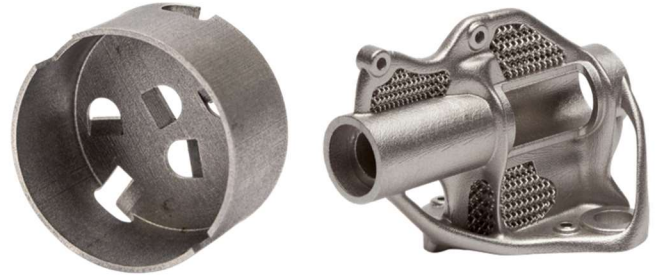


[Material Data Sheet]

17-4 PH

Stainless Steel

Binder Jetting



COMPOSITION %

C	0.07 (max)
Cr	15.0 - 17.5
Ni	3 - 5
Cu	3 - 5
Mn	1.0 (max)
Si	1.0 (max)
Nb + Ta	0.15 - 0.45
Fe	Balance

Mechanical Properties are tabulated in as-sintered state with no post machining

	Standard	Binder Jetting As-Sintered	AM - MPIF 35 min ** As-Sintered	Binder Jetting H900 Heat Treat	AM - MPIF 35 min ** H900 Heat Treat
Yield strength (MPa)	ASTM E8M	750 ± 20	590	1030 ± 30	1000
Ultimate tensile strength (MPa)	ASTM E8M	850 ± 20	790	1200 ± 30	1100
Elongation at break (%)	ASTM E8M	4.3 ± 1	4	7 ± 1	4
Hardness (HRC)	ASTM E18	23 ± 1	25	40 ± 2	36

SURFACE ROUGHNESS (@ 50 μM LAYER THICKNESS)

Avg all surfaces (μm Ra)	4-6um
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OTHER STANDARD DESIGNATIONS *

UNS S17400
EN 1.4542
ISO 4542-174-00-I

ATTRIBUTES & APPLICATIONS

- Acid & corrosion resistant
- High strength, hardness, & elongation
- Heat Treatable to a range of strength and hardness levels
- Surgical tooling / end-of-arm components
- Mechanical components

* Listed designations are for reference purposes only. Composition and mechanical properties may vary.

** Per MPIF Standard 35, Materials Standards for Metal Injection Molded Parts (MPIF 35-MIM, 2018). End-use material performance is impacted (+/-) by certain factors including but not limited to part geometry and design, application and evaluation conditions, etc.

End-use material performance is impacted (+/-) by certain factors including but not limited to part geometry and design, application and evaluation conditions, etc.

[Material Data Sheet]

17-4 PH

Stainless Steel

Lithography



COMPOSITION %

C	0.07 (max)
Cr	15.5 - 17.5
Ni	3 - 5
Cu	3 - 5
Mn	1.0 (max)
Si	1.0 (max)
Nb + Ta	0.15 - 0.45
Fe	Balance

Mechanical Properties are tabulated in as-sintered state with no post machining

	Standard	Lithography As-Sintered	AM - MPIF 35 min ** As-Sintered	Lithography H900 Heat Treat	AM - MPIF 35 min ** H900 Heat Treat
Yield strength (MPa)	ASTM E8M	850 ± 30	590	1030 ± 20	1000
Ultimate tensile strength (MPa)	ASTM E8M	1000 ± 30	790	1200 ± 20	1100
Elongation at break (%)	ASTM E8M	5.3 ± 1	4	7 ± 1	4
Hardness (HRC)	ASTM E18	27 ± 2	25	40 ± 2	36

SURFACE ROUGHNESS (@ 50 µM LAYER THICKNESS)

Avg all surfaces (µm Ra)	4-6µm
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OTHER STANDARD DESIGNATIONS *

UNS S17400
EN 1.4542
ISO 4542-174-00-I

ATTRIBUTES & APPLICATIONS

- Acid & corrosion resistant
- High strength, hardness, & elongation
- Heat Treatable to a range of strength and hardness levels
- Surgical tooling / end-of-arm components
- Mechanical components

* Listed designations are for reference purposes only. Composition and mechanical properties may vary.

** Per MPIF Standard 35, Materials Standards for Metal Injection Molded Parts (MPIF 35-MIM, 2018). End-use material performance is impacted (+/-) by certain factors including but not limited to part geometry and design, application and evaluation conditions, etc.

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