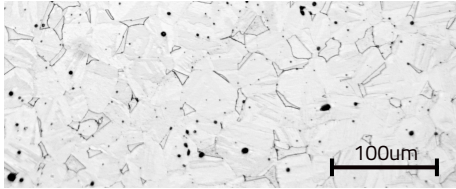


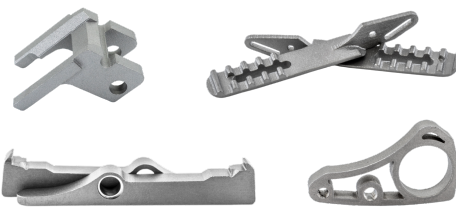
**FEATURES**

- Superior surface finish in metal AM
- Excellent mechanical properties up to ~600°F (316 °C)
- Good weldability & machinability
- Magnetic metal alloy
- Near wrought part density (>99.0%)



**INDUSTRIES SERVED**

- Aerospace & Defense
- Industrial Equipment
- Automotive
- Medical & Dental
- Consumer Products
- Robotics



**POWDER PROPERTIES**

Chemical Composition (wt%)	Min	Max
Carbon (C)	-	0.07
Manganese (Mn)	-	1.00
Phosphorus (P)	-	0.04
Sulfur (S)	-	0.03
Silicon (Si)	-	1.00
Chromium (Cr)	15.00	17.50
Nickel (Ni)	3.00	5.00
Copper (Cu)	3.00	5.00
Niobium & Tantalum (Nb+Ta)	0.15	0.45
Iron (Fe)	Bal	Bal

Other Elements: Total may not exceed 1.00% combined. Same chemical composition as the built parts. In accordance with MPIF Standard 35 (2018 Edition) and ASTM UNS S17400 (12th Edition).

**MATERIAL PROPERTIES** Precipitation-hardening martensitic stainless steel

	3DEO As-sintered	MPIF Standard As-sintered	3DEO H900*	MPIF Standard H900	Standards
<b>Ultimate Tensile Strength (MPa)</b>	1050	790-900	1300	1070-1190	ASTM E8/ E8M
<b>Yield Strength (MPa)</b>	800	650-730	1100	970-1090	
<b>Elongation (%)</b>	4	4-6	7	4-6	
<b>Young's Modulus (GPa)</b>	200	190	200	190	
<b>Hardness (HRC)</b>	30	27	40	35	ASTM E18
<b>Corrosion Resistance (g/dm<sup>2</sup>/d)</b>	0.002	<0.005	-	-	MPIF 62
<b>Density (g/cm<sup>3</sup>)</b>	7.7	7.5	7.7	7.5	ASTM B962
<b>Relative Density (%)</b>	>99.0% of the theoretical density		-	-	
<b>V-Notched Charpy (J)</b>	19	-	16	-	ASTM E26
<b>Surface Roughness (Ra, µm)</b>	As-sintered: 3.2 (125 µin) With Secondary Ops: 0.8 (32 µin)		-	-	ASTM B946
<b>Tolerances</b>	As-sintered: ± 0.3% (± 0.003 in/in) With Secondary Ops: ± 0.1% (± 0.001 in/in)				

The performance characteristics of these materials may vary according to application, operating conditions, or end use. Each buyer is responsible for determining that the material is safe, lawful, and technically suitable for the intended application. 3DEO makes no warranties, expressed or implied, including, but not limited to, the warranties of merchantability, fitness for a particular use, or warranty against patent infringement. Product specifications are subject to change without notice.

\*Additional heat treatment options available upon request.

**MECHANICAL PROPERTIES**

