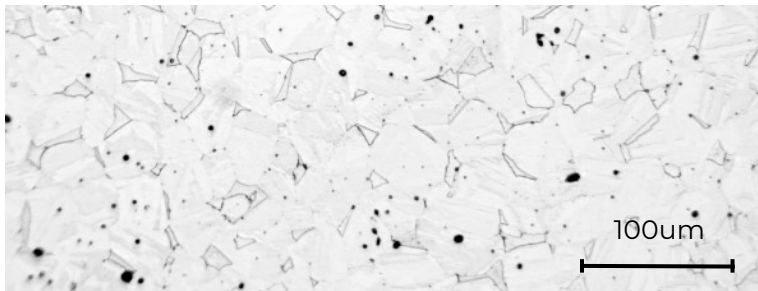


FEATURES

- A precipitation-hardening martensitic stainless steel
- Excellent mechanical properties up to ~600°F (316 °C)
- Good welding & machinability
- Good corrosion resistance

APPLICATIONS

- Medical & Dental
- Aerospace
- Chemical & food processing industries
- Defense & Firearms
- Automotive
- Oil & Gas



POWDER PROPERTIES

| Chemical Composition (wt%) | Minimum | Maximum |
|----------------------------|---------|---------|
| Element | | |
| 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) | Balance | Balance |

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).

TYPICAL MATERIAL PROPERTIES

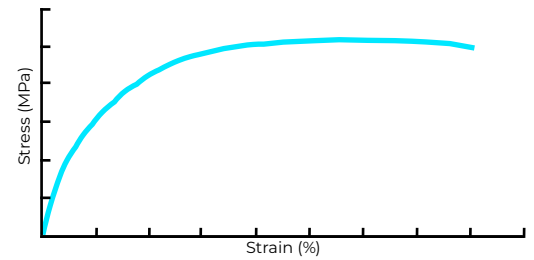
| | As-sintered | Heat-treated* | Standard |
|------------------------------|---|--------------------|-------------|
| Ultimate Tensile Strength | 1000 MPa (145 ksi) | 1317 MPa (191 ksi) | ASTM E8/E8M |
| Yield Strength (0.2% offset) | 750 MPa (109 ksi) | 1172 MPa (170 ksi) | |
| Elongation to Failure | 4% | 8% | |
| Elastic Modulus | 185 GPa (26.8 msi) | | |
| Hardness | 34 HRC | 42 HRC | ASTM E18 |
| Notched Charpy Impact Energy | 19 J (14 ft-lbs) | 16 J (12 ft-lbs) | ASTM E26 |
| Relative Density | >99% | | ASTM B962 |
| Density | 7.7 g/cm ³ (0.28 lbs/in ³) | | |
| Surface Roughness (Ra) | 3.0 µm (120 µin) | | ASTM B946 |
| Corrosion | Pass | | ASTM F1089 |
| Tolerances | ± 0.001 in/in** | | |

* Heat treatment condition: H900. Additional heat treatment options available upon request.

** ± 0.004 in/in as sintered, ± 0.001 in/in possible with secondary machining operations.

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As-Sintered State



Heat-Treated (H900)

