

OLA Product Name: Stainless Steel 17-4PH

Color: Natural (Metallic Gray)

Process: SLM

MATERIAL SUMMARY

Tolerance: $\pm 200\mu\text{m}$ or $\pm 0.2\%$

Lead Time: 4 days

Maximum Printing Size: 320mm × 360mm × 360mm

Notes:



EVALUATION

- **Advantages**
 - ① High tensile strength up to 1310MPa (after heat treatment).
 - ② High surface hardness, reaching ~41HRC.
 - ③ Good thermal stability, with performance up to 400°C.
- **Disadvantages**
 - ① Reduced elongation after heat treatment ($\leq 16\%$).
 - ② Very low or negligible magnetism post-treatment.

KEY FEATURES

17-4PH is a precipitation-hardened stainless steel known for its excellent corrosion resistance, high tensile strength at room temperature, and good weldability. It is widely used in tire mold manufacturing, medical applications, and various industrial tooling scenarios.

APPLICATION SCENARIOS

- It is widely used in tire mold manufacturing, medical applications, and various industrial tooling scenarios.

MATERIAL PROPERTIES

- **Surface Roughness (Sandblasted):** $\geq 6\mu\text{m}$
- **Hardness (As-Printed):** HRB 94 \pm 3
- **Hardness (After Heat Treatment):** HRB 41 \pm 3
- **Tensile Strength (As-Printed):** 900 \pm 100 MPa
- **Tensile Strength (After Heat Treatment):** 1300 \pm 100 MPa
- **Yield Strength (As-Printed):** 560 \pm 100 MPa
- **Yield Strength (After Heat Treatment):** 1100 \pm 100 MPa
- **Elongation (As-Printed):** 28% \pm 2
- **Elongation (After Heat Treatment):** 16% \pm 2

POST-PROCESSING OPTIONS

- Thread tapping
- Sand-blasting