



# Ultrafuse® 17-4 PH

The Filament Enabling Stainless Steel Parts for Applications that Require High Hardness and Mechanical Strength

Ultrafuse® 17-4 PH is a filament for the production of metal components on standard Fused Filament Fabrication (FFF) printers. Also referred to as Type 630, this chromium-copper martensitic precipitation hardened stainless steel it is both magnetic and fully heat treatable to high levels of strength and hardness. Maintaining its mechanical and corrosion resistance at temperatures up to 315 °C (600 °F), 17-4 PH parts are ideal for the Petrochemical, Aerospace, Automotive, and Medical industries. Parts printed with our metal-polymer composite Ultrafuse® 17-4 PH filament obtain their final full metal properties via an industrially proven catalytic debinding and sintering process developed for the metal injection molding industry.

## Benefits at a Glance

- Easy and affordable way of metal 3D printing
- High mechanical strength and hardness
- Good corrosion resistance
- Fully hardened enables highest strength
- Wide range of post-processing options for green parts

## Example Applications

- Tooling
- Jigs and fixtures
- Series production
- Functional parts and prototypes

## Filament Properties

Filament diameter	1.75 mm / 2.85 mm
Tolerances	±0.05 mm / ±0.075 mm
Roundness	±0.05 mm / ±0.075 mm
Bending radius	5 ± 1 mm / 10 ± 3 mm
Spool length	250 m / 83 95 m / 32 m
Spool weight	3 kg / 1 kg

## Customer Reference



## Our solution and added value for the customer:

With Ultrafuse® 17-4 PH we offer an efficient way to produce metal parts with high mechanical strength. Ultrafuse® 17-4 PH is compatible with most FFF 3D printers, giving our customers a high degree of flexibility and freedom. Spare parts, tools or customized geometries are now easily and cost-effectively accessible.

### Customized Tool Insert:

- Accessibility of individualized tools
- Increased productivity
- High stiffness for high tool loads



### Spare Part Solar Panel Clamp:

- Discontinued serial product
- Need for weather resistance (UV-radiation, heat, moisture)
- Long-life solution (upgrade from aluminium to stainless steel)



### Spare Part Gate Lock:

- Small-series production
- High mechanical strength required

