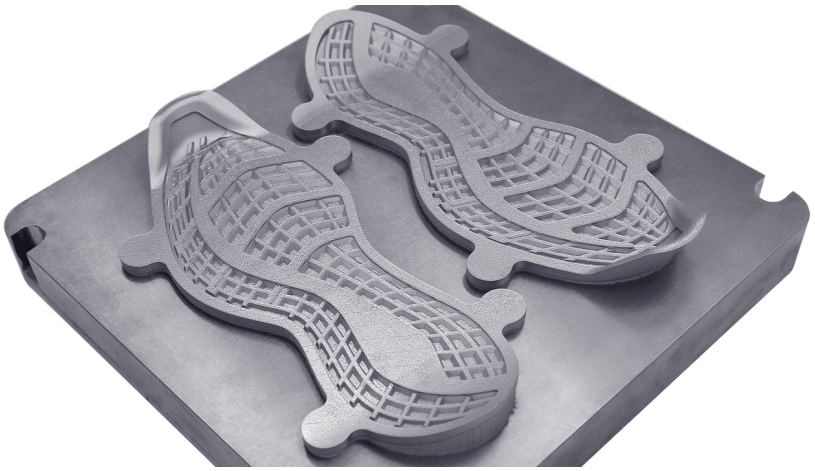
Maraging Steel

INDUSTRIAL GRADE MATERIALS FOR SLM 3D PRINTING



MATERIAL NAME
Maraging Steel

COLOR
Silvery-gray

PROCESS
SLM

PRODUCT DESCRIPTION

Maraging Steel is one of the ultrahigh-strength steels mainly used for precision forging dies and plastic moulds. This kind of steel has a simple and convenient heat treatment process, small heat treatment deformation, good processing performance and welding performance.

TYPICAL APPLICATIONS

- Medical implants and surgical tools
- Automotive performance and racing parts
- Defense industries for missile and rocket casings
- Aerospace structural and engine components
- Tooling and molds for high-strength applications

PRODUCT SAFETY

If there are sharp edges on the surface of the parts, be careful not to scratch them. If there are metal powders on the parts, be careful not to inhale them into the lungs and avoid contact with strong acids and alkalis.

PRODUCT DELIVERY & WAREHOUSING

- **STORAGE**
  Store in a dry, ventilated environment, avoiding moisture and exposure to corrosive chemicals.
  Apply protective coatings to prevent oxidation or corrosion of metal surfaces.

- **USAGE AND HANDLING**
  Remove burrs and residual materials from the product. Use protective equipment like gloves when handling.
  Avoid using the product in extreme environments or high-load scenarios; regularly inspect for mechanical performance.

- **CHEMICAL COMPATIBILITY**
  Avoid contact with strong acids, alkalis, or corrosive solvents. Use appropriate cleaning and maintenance solutions.
  Assess risks of oxidation, corrosion, or magnetic effects based on specific application environments.

MATERIAL PROPERTIES

Formed Part Properties	Value
Hardness	30~36 HRC
Yield Strength (Mpa)	≥1000 Mpa
Tensile strength (Mpa)	≥1090 Mpa
Elongation at break	≥10 Mpa
Heat-Treated Properties	**Value**
Hardness	48~52HRC
Yield Strength (Mpa)	≥1890 Mpa
Tensile strength (Mpa)	≥1930 Mpa
Elongation at break	≥3%
Elastic Modulus (Gpa)	160 GPa
Other Properties	**Value**
Poisson's Ratio	/
Coefficient of themal expension(/°C)	11.2x10-6
Thermal Conductivity	25-30W (M.K)
Electrical Resistivity	/
Electrical Conductivity	/
Surface Roughness of Formed Parts	RA 6.3~7

Tips: Want to explore a wider range of materials? Check out *https://www.unionfab.com/materials*