

[Material Data Sheet]

# Sterling Silver 925 Precious Metal



After Sintering



After Sintering + Pin Finishing



After Sintering + HIP + Polish

## MECHANICAL PROPERTIES

	Standard	Production System™ After Sintering	Production System™ After Sintering + Polish	Production System™ After Sintering + HIP + Polish
Density (g/cm³)	ASTM 962-17	<b>10.02</b>	10.02	10.05
Surface roughness <sup>*,**</sup> (µm)	ASTM B311	<b>2.89 ± 0.4</b>	0.05 ± 0.01	0.04 ± 0.01
Top value, trailing value		<b>7.36 ± 0.9</b>	0.1 ± 0.01	0.11 ± 0.01
UTS (MPa)	ASTM E8M	<b>183.53 ± 28</b>	-	-
Material removal (g)	DM	-	0.262	0.23
Average, largest pore size (µm)	DM	<b>30, 35</b>	24, 30	22, 27
Prong strength (deg) <sup>****</sup>	DM	<b>75</b>	-	-
Ring crush strength (Mpa)	ASTM B939-15	<b>500 ± 100</b>	-	-

## COMPOSITION % (AISI/SAE 4140)

Ag	92.5
Cu	7.5

## ATTRIBUTES & APPLICATIONS

Jewelry

Wearables

Consumer electronics

Communications

## KEY NOTES

Material, Printing, Debinding & Sintering specifications provided upon acquisition of machine.

Material, Printing, Debinding, Sintering, HIP and Polishing specifications provided upon acquisition of machine + powder procurement agreement with Formula 3D.

\* Surface roughness measured is average of top & trailing surface.

\*\* Material is open source and can be procured using Desktop Metal specification.

\*\*\* Contract manufacturing is also available through Formula 3D.

\*\*\*\* Angle subtended before crack initiates

PREFERRED MATERIAL PARTNER

**FORMULA 3D**