

[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	10.02	10.02	10.05
Surface roughness ^{**} (µm)	ASTM B311	2.89 ± 0.4	0.05 ± 0.01	0.04 ± 0.01
Top value, trailing value		7.36 ± 0.9	0.1 ± 0.01	0.11 ± 0.01
UTS (MPa)	ASTM E8M	183.53 ± 28	–	–
Material removal (g)	DM	–	0.262	0.23
Average, largest pore size (µm)	DM	30, 35	24, 30	22, 27
Prong strength (deg) ^{****}	DM	75	–	–
Ring crush strength (Mpa)	ASTM B939-15	500 ± 100	–	–

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