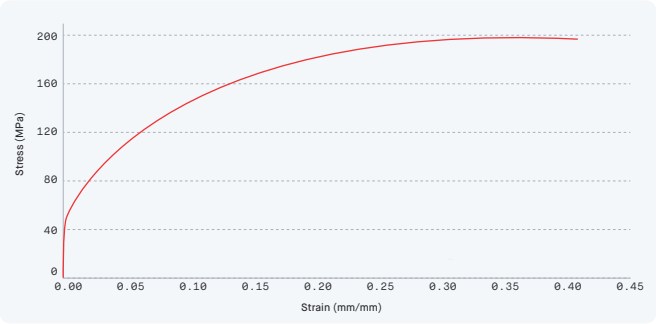
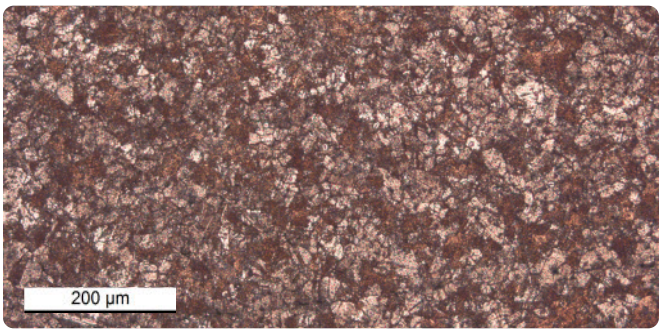
[Material Data Sheet]

Copper



COMPOSITION %

Cu	99.9
O	0.01
Other	Balance



PERFORMANCE

	Standard		Studio System™ As-Sintered	MIM - MPIF 35 typ [1] As-Sintered
Electrical conductivity	ASTM E1004		**85.2 %IACS**	n/a
Coefficient of thermal expansion (CTE)	ASTM E228	20 - 38 °C	**17.01 *10^{-6} /°C**	15.7 *10^{-6} /°C
	ASTM E228	20 - 66 °C	**17.15 *10^{-6} /°C**	16 *10^{-6} /°C
	ASTM E228	20 - 93 °C	**17.22 *10^{-6} /°C**	16.4 *10^{-6} /°C
	ASTM E228	20 - 121 °C	**17.33 *10^{-6} /°C**	16.7 *10^{-6} /°C
	ASTM E228	20 - 149 °C	**17.43 *10^{-6} /°C**	16.9 *10^{-6} /°C

MECHANICAL PROPERTIES

	Standard	Studio System™ As-Sintered	MIM - MPIF 35 typ[1] As-Sintered
Ultimate tensile strength (MPa)	ASTM E8M	**195**	207
Yield strength (MPa)	ASTM E8M	**45**	69
Elongation (%)	ASTM E8M	**37**	30
Density (g/cc)	ASTM B311	**8.75**	8.5 (min)

1. Per MPIF Standard 35, Materials Standards for Metal Injection Molded Parts (MPIF 35-MIM, 2018). End-use material performance is impacted (+/-) by certain factors including but not limited to part geometry and design, application and evaluation conditions, etc.

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Tensile properties, density, and electrical conductivity data reported are mean values minus 1 sigma.

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