

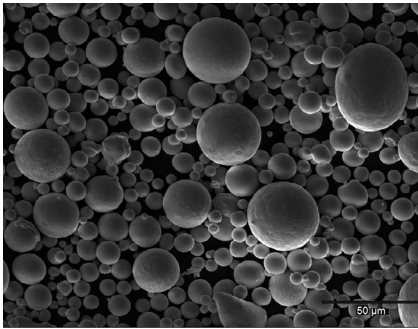
m4p Brz10

Metal powder for laser-based powder bed fusion

Description, properties and application

m4p™ Brz10 is an excellent engineering material which has acceptable elongation by medium hardness. In addition to the good mechanical strength properties this tin bronze is characterized by good corrosion resistance, especially in seawater and mine effluents. This results in typical applications, such as valve industry, ranging from pump housings to guide vanes and impellers for pumps and turbines. The good mechanical properties are complemented by the excellent sliding properties, that's why the material is traditionally used in the regular processing sequence for plain bearings and helical gears. Due to the color appearance, the material m4p™ Brz10 is also used for applications in the field of jewelry and design.

Powder characteristics



Chemical analysis [wt%]		
Element	Min	Max
Sn	9,0	11,0
others		<0,5
Cu		Base

Particle size Laser PBF
Bulk density ~5,3 g/cm³

Additive manufacturing and strength properties



Typical characteristics of tensile test (relative component density: 99.8%, as-built)		
Tensile strength	R _m ~	430 N/mm ²
Elongation at break	A ~	7%
Hardness	~	170 HV

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