Tungsten-Bronze

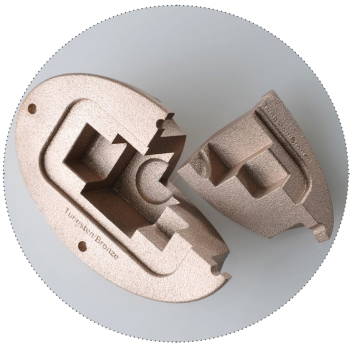
ExOne™ Collaborate. Innovate. Accelerate.

ExOne's Tungsten-Bronze is a versatile high-density shielding material with an excellent tensile strength. Tekna's plasma spheroidized Tungsten Powder is printed using ExOne's M-Flex® printer.

Printed part

Applications

ExOne® Tungsten-Bronze has the versatility to be manufactured on various scales for different industries such as a lead replacement material, radiation shielding components and thin wall collimators.

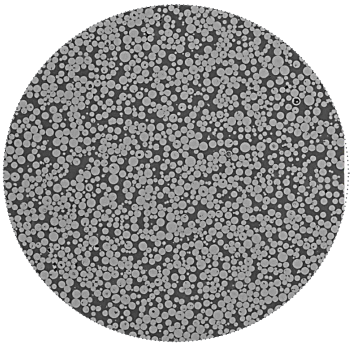


Printed part

Typical Material Properties

Material Properties	Test Method	Tungsten-Bronze
Tensile Strength		
Ultimate Strength	ASTM E8	X & Y: 427 MPa Z: 496 MPa
Yield Strength (0.2% offset)		X & Y: 420 MPa Z: 441 MPa
Elongation		X & Y: 0% Z: 1%
Hardness	ASTM E18	85 HRB
Relative Density		97%
Density		14.0 g/cc

Material Composition	
Tungsten	50-55%
Bronze	bal



Microstructure image

TEKNA