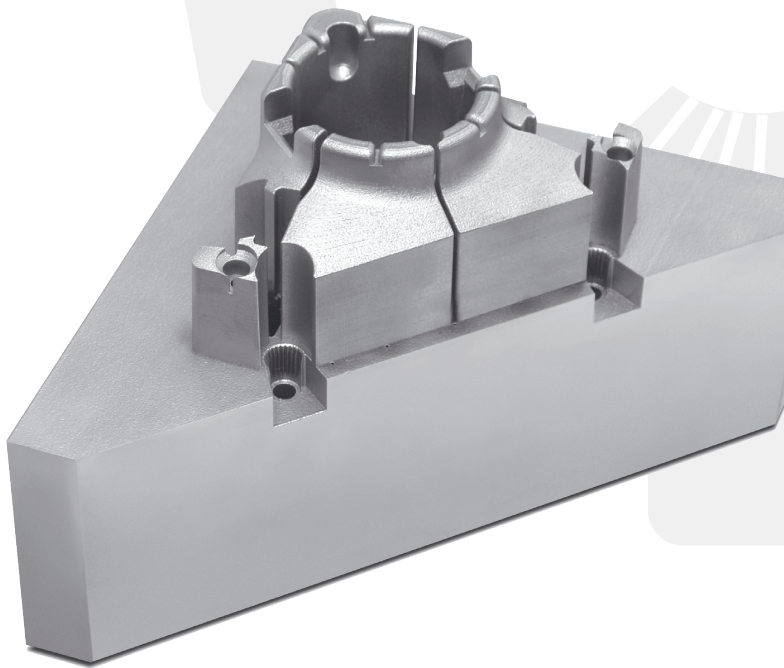


# DirectMetal 20 - for Rapid Tooling and Fast Functional Working Models

DirectMetal 20 is a bronze-based alloy which was specially developed for direct metal laser-sintering. The resulting parts offer good mechanical properties combined with excellent detail resolution and surface quality. The surfaces can be easily post-processed by shot-peening and can be polished with very little effort.

## Properties and Applications

- Good mechanical properties, very fast build rate, very easy to finish
- Injection mould tool inserts for moulding up to hundreds of thousands of plastic parts; other tooling applications; prototype parts, e.g. for functional tests, wind tunnel testing etc.; fixtures, test parts etc.



## Mechanical properties

Ultimate tensile strength	400 MPa 58 ksi
Yield strength	200 MPa 29 ksi
Young's modulus	80 GPa 11.6 Msi
Hardness	115 HV

## Physical properties

Relative density	up to 92 %
Density	up to 7.6 g/cm <sup>3</sup> up to 0.27 lb/in <sup>3</sup>
Coefficient of thermal expansion	18 x 10 <sup>-6</sup> m/m°C 32 x 10 <sup>-6</sup> in/in°F
Thermal conductivity	30 W/m°C 208 Btu/(h ft <sup>2</sup> °F/in)

NOTE: EOS GmbH e-Manufacturing Solutions  
Detailed specifications may be found at <http://www.eos.info/en/products/materials.html>