

# Fiche Matière

## 15-5PH (1.4545)

SLM Solutions' 15-5PH is a martensitic precipitation-hardening stainless steel that has excellent processability on SLM Solutions' additive manufacturing machines. 15-5PH is suitable for applications requiring high strength and hardness combined with moderate corrosion resistance. The alloy is the ferrite-free version of 17-4PH.

### Chemical composition (nominal), %

Material / Element	Fe	Cr	Ni	Cu
15-5PH (1.4545) 10-45 µm	Bal.	14.50-15.50	3.50-5.50	2.50-4.50

Mechanical data <sup>1</sup>	Formula symbol and unit	As-built
Tensile strength	R <sub>m</sub> [MPa]	1190
Offset yield strength	R <sub>p0.2</sub> [MPa]	805
Elongation at break	A [%]	9
Reduction in area	Z [%]	30
Young's modulus	E [GPa]	155
Vickers hardness	HV10	360
Roughness average	Ra [µm]	10
Mean roughness depth	Rz [µm]	65

<sup>1</sup> Process conditions and parameters according to SLM Solutions standards

<sup>2</sup> Rounded mean values of different layer thicknesses and orientations (exception: elongations at break are not rounded)

Further information and data can be found in our material data sheets.

