

m4p Fe-4828

Stainless steel powder for selective laser melting

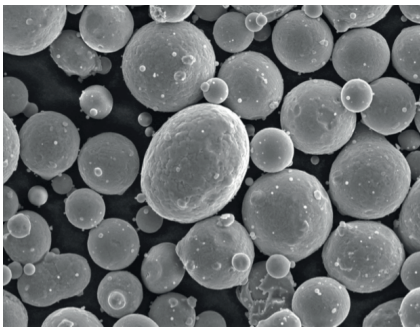
Description and properties

Powders of the quality **m4p™ Fe-4828** can be processed excellently on all PBF systems in a wide range of parameters. After additive manufacturing, there are very densely built parts that are particularly suitable for high-temperature applications.

The high silicon share significantly reinforces the oxide layer characteristic of Fe-Cr-Ni alloys and enables high scaling resistance of up to approx. 1000 °C in air. When developing the **m4p™ Fe-4828**, the focus was on high ductility and a high level of corrosion resistance, which is why the carbon contents are subject to an additional restriction. With this type of alloy, the carbon content can influence the ductility and in this context also the heat resistance. An "HC" variant is available for applications with higher heat resistance requirements.

The as-built condition of the **m4p™ Fe-4828** can already be seen in shiny surfaces with low surface roughness, which can - next to functional components - also be attractive for decorative prototypes.

Powder characteristics



Chemical analysis [wt%]

Element	Min	Max
C		<0,20
Si	1,5	2,5
Mn		<2,0
Cr	19,0	21,0
Ni	11,0	13,0
Fe		Base

Additive manufacturing and strength properties

Typical characteristics of tensile test

(Parameter 99.98% Density, as-built)

Tensile strength	$R_m =$	670N/mm ²
Yield strength	$R_e =$	520N/mm ²
Elongation at break	$A_5 =$	60%

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