

m4p type13-X

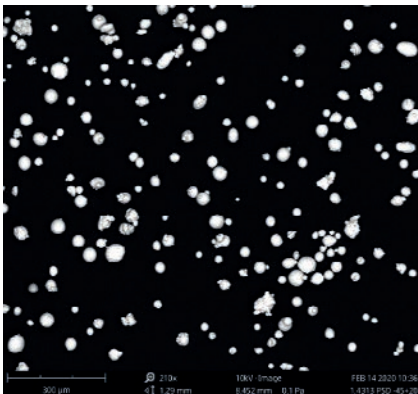
Fe-base for the laser-based powder bed process

Description, properties and applications

m4p™ type13-X is a corrosion resistant steel which can be heat-treated to a certain extent. In contrast to the corrosion resistant „standard material“ on Fe-basis „1.4404/316l“ m4p™ type13-X can therefore also be used for more demanding applications in general mechanical engineering, energy conversion (turbines) and in the petrochemical industry (fittings). In particular, it is used for its increased resistance to cavitation and erosion at operating temperatures up to 350°C.

Corrosion resistance, magnetizability, high strength, usable under changing temperatures and toughness are only some of the properties of m4p™ type13-X which should be particularly emphasized. Developed for additive processing using the powder bed fusion process, extremely high component densities in a wide range of parameters can be achieved on all common systems. For processing, construction field temperatures of <200°C are sufficient.

Powder characteristics



Chemical analysis [wt%]

Element	Cr / Ni / Mo / X
Fe	Base

Material characteristics

(>99,9% rel. density; volume rate 15.2cm³/h; layer thickness 40µm, EOS M290)

Mechanical properties			
	Tensile strength Rm [N/mm ²]	Yield Strength Rp0.2 [N/mm ²]	Elongation at break A ₅ [%]
as-built	1220 ±5	1160 ±20	17 ±2
heat treated (quenched and tempered)	930±11	710±25	27±2

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