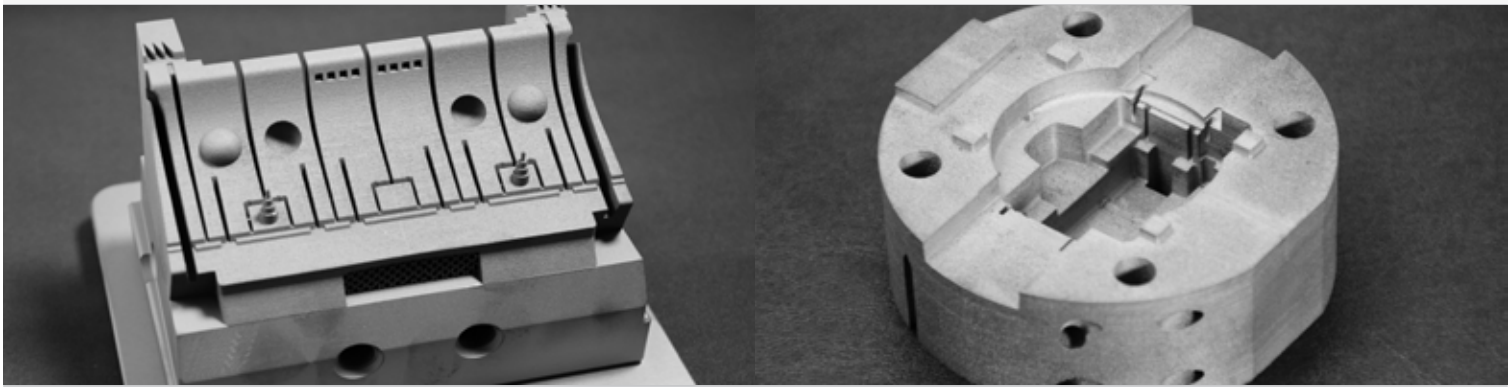
Maraging steel

for ProX™ 200 and 300 Direct Metal Printers

A fine metal powder with properties like 1.2709 for direct production of tools and molds as well as high-performance parts that require high strength and hardness

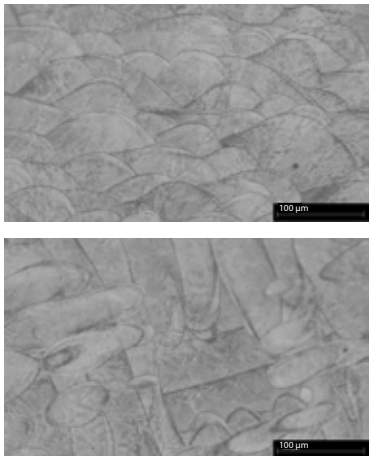


Technical Data

Chemical Composition

Maraging Steel (like 1.2709)

Element	% of weight
Fe	Balance
Ni	17.0 - 19.0
Co	9.0 - 11.0
Mo	4.0 - 6.0
Ti	0.9 - 1.0
Si	≤ 1.0
Mn	≤ 1.0
C	≤ 0.03



As-built very fine microstructure in two perpendicular directions of view

Mechanical Properties[1]

	Condition	As-built[2]	After post heat treatment[3]
Ultimate Tensile Strength, MPa	ASTM E8	1110 ± 50	
Yield Strength, MPa	ASTM E8	860 ± 50	
Elongation at break, %	ASTM E8	11 ± 3	
Hardness		37 ± 2 HRC	55 ± 2 HRC
Density		approx. 100%	

[1] Parts built on a ProX 200 Direct Metal Production Printer

[2] As-built refers to the state of components built on the ProX 200 Direct Metal Printer before any post processing except removal from the build platform

[3] Different post heat treatments might be applied for this type of alloy

Applications

- Tools and molds for injecting molding, die casting and extrusion
- High-performance industrial parts, e.g. tire manufacturing and automotive
- High-wear components
- Aerospace

Features

- High strength
- Easily heat treatable
- High hardness
- Good corrosion and wear resistance
- Good weldability and machinability

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