

Pearl[®]Micro 420

Powder for Additive Manufacturing



CHEMICAL COMPOSITION

Elements	Fe	Cr	Si	Mn	Ni	P	S	C	N
Min		12						0.35	
Max	Bal	14	1	1	0.5	0.04	0.03	0.4	0.1

STANDARDS

- European standards
 - X40Cr13
 - 1.2083
- US Standards
 - AISI 420

CHARACTERISTICS

Pearl[®]Micro 420 is a martensitic stainless steel with high hardness, good fatigue resistance and polishability. It is suitable for additive manufacturing of plastic injection mold inserts as well as surgical instruments and general engineering components.

APPLICATIONS

- Plastic injection mold inserts
- Surgical instruments
- General engineering components

QUALITY CERTIFICATES

- ISO9001 accreditation
- Certified material test report according to EN 10 204/3.1

PARTICLE SIZE DISTRIBUTIONS

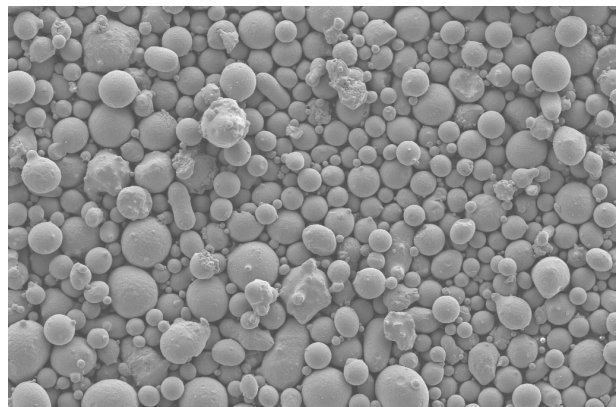
- Metal Injection Moulding < 22 μm
- Laser Beam Melting (powder bed): 20-53 μm
- Directed Energy Deposition (LMD): 45-106 μm

PHYSICAL PROPERTIES

Typical properties after LPBF followed by stress relieving 1 x 2h at 250°C.

PROPERTY	TYPICAL VALUE
Hardness	52 HRC
Density	7.7 g/cm ³
Thermal conductivity at 100°C	25 W/m*K

POWDER MORPHOLOGY



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