Stainless Steel 420

420 · S42000

Hardenable martensitic stainless powder for plastic mold inserts, corrosion-resistant tooling, and wear parts.

Designations: 420 · UNS S42000 · EN 1.4021

Supply

Item	Value
Particle-size cuts	15–45 µm · 15–53 µm
Processes	LPBF
Minimum pack	1 kg (paid samples)
Packaging	Aluminium-foil bag · 1 kg sealed pack · Drum
Documents	Lot-specific COA · Particle-size report · Safety data sheet · Chemistry report
List price	Price on request

Chemical composition, wt.%

Element	Limit
Fe	Balance
Cr	12.0–14.0
C	0.16–0.25
Mn	≤1.00
Si	≤1.00
Ni	≤0.75
P	≤0.04
S	≤0.03

Typical partner-plant limits for 420 powder per GB/T 20878 (X20Cr13 type), wt.%. The quoted lot COA governs.

Powder properties · LPBF screening window

Property	Value	Note
Apparent density	≥4.00 g/cm³	
Flow	≤23 s/50 g	Method and conditioning to be confirmed
Oxygen	≤300 ppm	
Nitrogen	≤300 ppm	

A second partner's datasheet window for 420 powder; PSD statistics are reported on the lot COA.

Typical mechanical properties

Condition	Temperature	Tensile	Yield	Elongation	Note
Partner typical value	Room temperature	1750 ± 50 MPa	1450 ± 50 MPa	6 ± 2%	Post-processing condition confirmed per datasheet

Partner-plant datasheet values for LPBF test bars at room temperature unless stated. Printed-part properties depend on machine, parameters, orientation, and post-processing.

Typical values, not a lot certificate. The certificate of analysis for the quoted lot governs. Formal quotations and commercial terms are valid only when issued from our official corporate email.

Request a quote: https://metal3dpowder.com/rfq/?product=420 · Grade page: https://metal3dpowder.com/products/420/
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