BÖHLER

BÖHLER W722
AMPO

ADDITIVE MANUFACTURING POWDER

W722 AMPO / FE-BASED ALLOYS

Available Product Shapes

15 - 45 µm	45 - 90 µm

Product Description

Precipitation hardening nickel martensitic (maraging) steel, material number 1.2709, which offers a good combination of strength and toughness. Can be printed very easily without additional heating of the building platform or chamber. The achievable hardness of 55 HRC makes this material a universal solution for tool steel applications in which conformal cooling is required, such as die casting applications.

Properties

Particle size distribution 15 - 45 µm:

D10[µm]	18 - 24
D50[µm]	29 - 35
D90[µm]	42 - 50
Apparent density*	≥ 3.5

Measurement of particle size distribution according to ISO 13322-2 (Dynamic image analysis methods);
* Measurement of apparent density is based on ASTM B964 resp. DIN EN ISO 3923-1 and relates to our typical measured values

Achievable mechanical properties of printed part after heat treatment:

Tensile strength (Rm)	2030 ± 70 MPa
Yield strength ($RP_{0,2}$)	1950 ± 70 MPa
Elongation (%)	6 ± 2
Hardness	53 ± 2 HRc
Impact toughness (ISO V)	18 ± 2 J

Applications

- 3D Printing - direct metal deposition
- 3D Printing - selective laser melting
- Automotive
- Automotive Racing
- Civil and mechanical engineering
- Forging Applications
- High Pressure Die-Casting
- Injection Molding
- Mechanical Engineering / Machine Building General
- Other Components
- Powder for additive manufacturing
- Unknown Components Application

Material designation

1.2709	SEL

Chemical composition

C	Si	Mn	P	S	Mo	Ni	Co	Ti
≤ 0,03	≤ 0,10	≤ 0,15	≤ 0,01	≤ 0,01	4.90	18.00	9.30	1.10

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ONE STEP AHEAD.

Heat treatment

Solution annealing

Temperature (°C / °F)	820 / 1508	Soaking time: 1h / air, gas

Precipitation hardening

Temperature (°C / °F)	490 / 914	Soaking time: 6h / air

For more information see www.voestalpine.com/bohler-edelstahl

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