

VDM® Powder 699 XA

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VDM® Powder 699 XA is the powder variant of a metal dusting corrosion and oxidation resistant alloy for use in additive manufacturing. This is achieved by high chromium and aluminum content.

VDM® Powder 699 XA is characterized by:

- Spherical particles
- High purity
- Low oxygen content
- High metal dusting corrosion and oxidation resistance
- Weldability under Argon

Designations (based on VDM® Alloy 699 XA)

Standard	Material designation
EN	2.4842 - NiCr30Al
UNS	N06699

Table 1 – Designations

Chemical composition

	Ni	Cr	Al	Fe	Mn	Si	Ti	Nb	Cu	Zr	C	N	P	S	B
Min.	Bal.	26.0	1.9								0.005				
Max.		30.0	3.0	2.5	0.50	0.50	0.60	0.50	0.50	0.10	0.10	0.05	0.02	0.01	0.008

Table 2 – Chemical composition (%) according to UNS number N06699

VDM® Powder 699 XA contains low amounts of oxygen of up to 0.03 %.

Physical properties

Density	Melting range
8.0 g/cm ³ at 20 °C (68 °F)	1,370-1,390 °C
0.29 lb/in ³ at 68 °F	(2,498-2,534 °F)

Microstructural properties

VDM® Powder 699 XA has an austenitic microstructure.

Corrosion resistance

As a result of the high chromium and aluminum content, conventionally manufactured VDM® Alloy 699 XA has very good metal dusting corrosion and oxidation resistance.

Applications

Due to its excellent metal dusting corrosion and oxidation resistance, VDM® Powder 699 XA is intended for the use in the petrochemical industry.

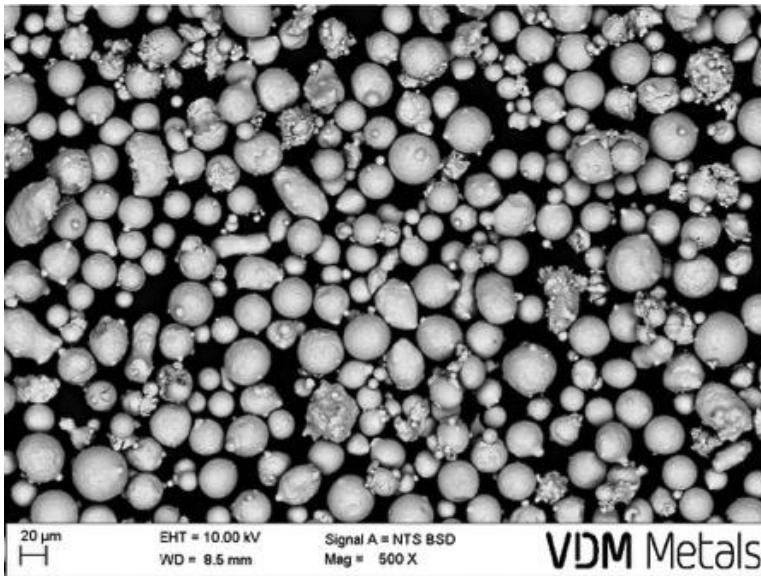
Availability

According to the AM process requirements of our customers, VDM® Powder 699 XA is available in a wide range of particle fractions from 15 to 250 µm.

Standard particle fractions

Particle size distribution µm	Oxygen content %	Porosity < 10µ (pore area) %
15-53	< 0.03	< 0.5
53-150		

Additional particle fractions are available on request. Please contact us.



The picture shows a typical micrograph of VDM® Powder 699 XA as an example.

Legal notice

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Disclaimer

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