MIMETE® N 75

FOMAS Group's metal powder plant has been specifically designed to serve the additive manufacturing market. A VIGA, Vacuum Induction melting Inert Gas (argon or nitrogen) Atomization, ensures high purity and spherical powders.

FOMAS Group's guarantees the properties of the standard powder "N 75" set forth in the datasheet included in this page, which is available on stock.

PRODUCT	MIMETE® N 75	*According to UNS F1537 and EN 5832-12*
CoCrMo alloy characterized by high stiffness and wear resistance, elevated mechanical properties at high temperature.		
Production process	*Vacuum Inert Gas Atomization*	
Packaging	*10 kg plastic sealed bottle or 100 kg steel drum, with silica bags*	

CHEMICAL PROPERTIES [1,2]									
MIMETE® N 75	C	Cr	Co	Fe	Mn	Mo	N	Ni	Si
MIN	*0*	*26,0*	*bal*	*0*	*0*	*5,0*	*0*	*0*	*0*
MAX	*0,14*	*30,0*		*0,75*	*1,0*	*7,0*	*0,25*	*1,0*	*1,0*

[1] *Minor element ranges, even if not explicitly listed in the table, comply with both UNS and EN standards.*
[2] *MIMETE® powders are supplied to a tighter specification to minimise batch-to-batch variations.*

PHYSICAL PROPERTIES [3]		Sampling / Analysis Methods
Nominal particle range	*15-45 (max 5% over size)*	*ASTM B215 / ASTM B822 / B214*

[3] *Other standard particle ranges (i.e. 0-20, 50-100 and 50-150 µm) available on request.*

The production plant has also a testing laboratory accredited by ACCREDIA in compliance with the requirements of the ISO/IEC 17025 international standard.

Unless provided otherwise hereto, terms and conditions ruling the offer of MIMETE® apply.

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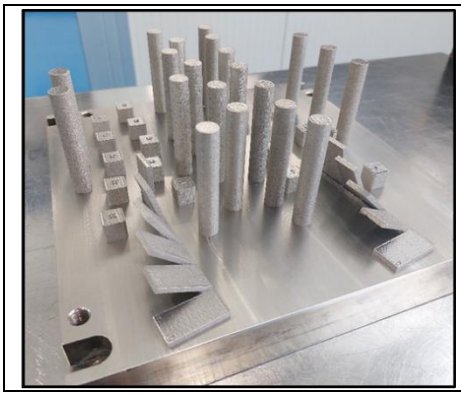
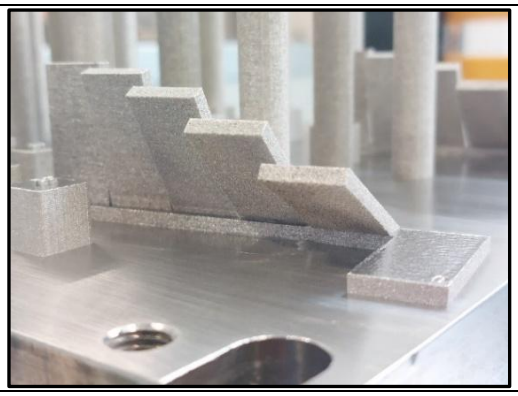
MIMETE® N 75

LEGAL DISCLAIMER

All data included in following pages are for reference purposes only. They are not sufficient for designing or certifying components and no warranties or guarantees are expressed against these results. However, psd and chemical composition of the powder lot 8240433D002 are compliant to allowable limits reported on page 1.

INSPECTION CERTIFICATE TYPE 3.1 ACCORDING TO EN10204.

POWDER LOT	*8240433D002*
PRINTER - SOFTWARE	*EOS M290 – EOSPrint 2.13 (MP1_PerformanceM291_1.12)*
INERT GAS	*Nitrogen*
RECOATER BLADE	*HSS*
LAYER THICKNESS	*40 µm*
VOLUME RATE	*4.2 mm^3/s (15.2 cm^3/h)*

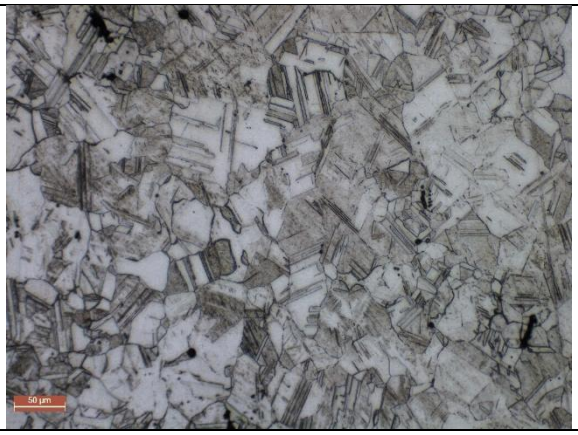

PROPERTIES (as built, AVG)	*Test Standard*	F3213-17	**N 75**
Hardness HRC	*UNI EN ISO 6508-1*	NA	39
Hardness HBW	*UNI EN ISO 6506-1*	NA	383
Yield strength (vertical) [MPa]	*ISO 6892-1:2019*	NA	718
Tensile strength (vertical) [MPa]		NA	1213
Elongation at break (vertical) [%]		NA	22,9
Reduction of area (vertical) [%]		NA	21,6

HEAT TREATMENT	According to section 12.2.1 of ASTM F3213-17
Solution annealing: under Nitrogen in the range of 1200°C to 1230°C; hold at the selected temperature within (±15°C) for 120min (±15min), followed by rapid inert gas cool at a minimum cooling rate of 220°C per minute to 540°C and 80°C per minute from 540°C to ambient.	

PROPERTIES (heat treated, AVG)	*Test Standard*	F3213-17	**N 75**
Hardness HRC	*UNI EN ISO 6508-1*	NA	33
Hardness HBW	*UNI EN ISO 6506-1*	NA	313
Yield strength (vertical) [MPa]	*ISO 6892-1:2019*	≥ 450	635
Tensile strength (vertical) [MPa]		≥ 655	1176
Elongation at break (vertical) [%]		≥ 8	37,6
Reduction of area (vertical) [%]		≥ 8	33,1

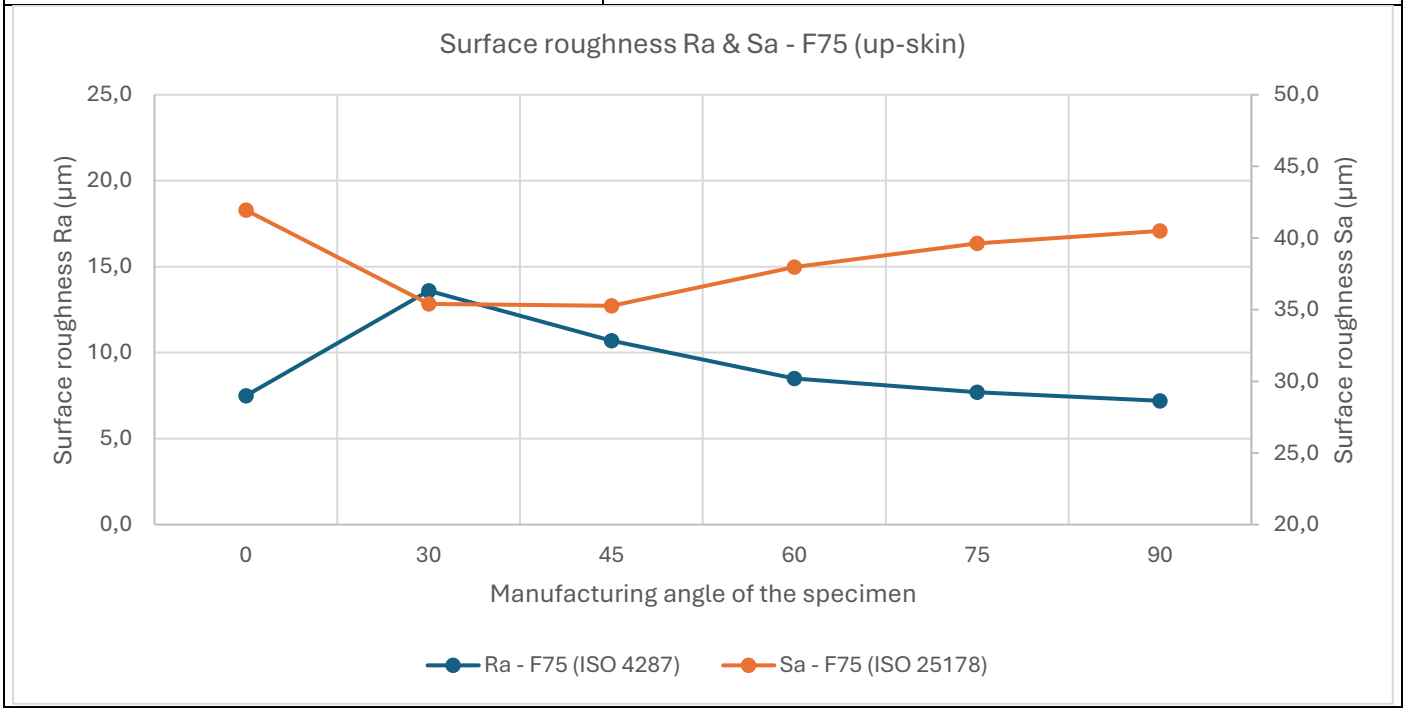
ASTM F3213-17: Standard for Additive Manufacturing - Finished Part Properties – Standard Specification for Cobalt-28 Chromium-6 Molybdenum via Powder Bed Fusion (Table 4)

MIMETE® N 75

HEAT TREATED MICROSTRUCTURE	*Etched according to ASTM E407-23 with Aqua regia reagent.*
	
Section_XY_200x	*Section_YZ_200x*

PROPERTIES	*Test Standard*	**N 75**
Density [g/cm^3]	*UNI EN ISO 3369-2010*	8,33
Avg. Defects [%]	*ASTM E3-11(2025)*	0,07

SURFACE ROUGHNESS	*Ra according to ISO 4287. Sa according to ISO 25178*



Manufacturing angle: 0° is the horizontal printing plane.