

MIMETE Grade	MARS 431	Reference Standard	ASTM A276
C	≤ 0,20	Si	≤ 1,00
Cr	15,0 ÷ 17,0	S	≤ 0,030
Fe	bal	P	≤ 0,040
Mn	≤ 1,00	Ni	1,25 ÷ 2,50

MARS 431



INTRO

MIMETE's plant has been specifically designed to serve the additive market. A VIGA (vacuum induction melting inert gas atomization) ensures high purity and spherical powders. Moreover, thanks to tailored post-processing facilities and a fully equipped in-house laboratory, MIMETE is able to guarantee to its customers the highest quality standards and full process control. Every step of the process is conducted under inert gas and it is fully monitored and traced through the latest software application.

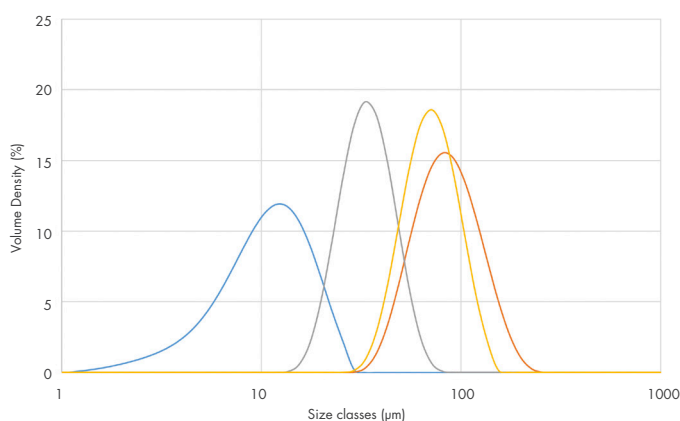
Through co-design solutions, we stand out from the others: by working in close relationship with customers, we achieve a level of understanding of the final application. This process enables us to develop the perfect combination of properties and therefore to produce the most performing metal powder available on the market.

This datasheet describes standard product and properties guaranteed on powder available on stock, it might be considered just a mere guide to introduce you to what MIMETE can offer.

Customization is our expertise.

all features can be customized

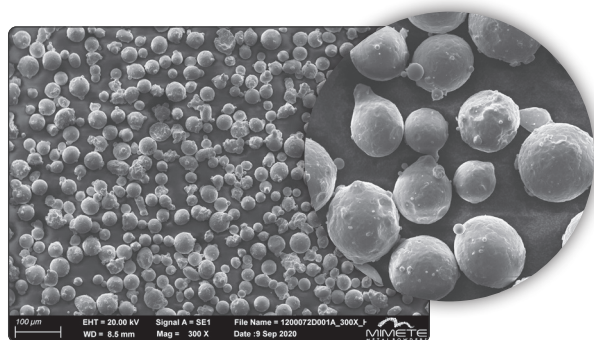
PRODUCT	MARS 431 - UNS S43100 according to ASTM A276 Martensitic stainless steel with high Cr and proper Ni content. It shows high strength and toughness; good corrosion resistance is also ensured.
PRODUCTION PROCESS	Vacuum inert gas atomization
PARTICLE SHAPE	Spherical
PACKAGING	10 kg plastic sealed bottle with silica bag



PSD
Nominal standard ranges

- <20 µm
- 15-45 µm
- 50-100 µm
- 50-150 µm

Depending on your specific requirements, MIMETE can provide any particle size



TECHNOLOGICAL PROPERTIES

- Flowability (Hall Flowmeter): ≤ 30 s/50g
- Apparent Density: 4,0 g/cm³

Typical values for 15-45 powder size

Enhanced powders to achieve higher performances

MIMETE Grade	Al	C	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	Nb+Ta	Reference Standard
MARS 17-4 PH		≤ 0,07		16,25	4,00	bal	≤ 1,00		4,00	≤ 1,00			0,30	ASTM A564
MARS 316L		≤ 0,03		17,00		bal	≤ 2,00	2,50	12,00	≤ 1,00				ASTM F3184
MARS M300	0,10	≤ 0,03	9,00			bal	≤ 0,10	4,90	18,00	≤ 0,10	0,80			ASTM A579
MARS H13		0,40		5,10		bal	0,40	1,45		1,00		1,00		ASTM A681

OTHER STAINLESS STEEL ALLOYS AVAILABLE LIKE **AISI 415** (1.4313), **AISI 431** (1.4057), **AISI 420** (1.4034), **A182 F51** (UNS S31803), **A182 F53** (UNS S32750)

MIMETE Grade	Al	C	Co	Cr	Fe	Mo	Nb	Ni	Ti	W	Nb+Ta	Reference Standard
VENUS 718	0,50	≤ 0,08	≤ 1,00	19,00	19,00	3,05		bal	0,90		5,15	ASTM F3055
VENUS 625	≤ 0,40	≤ 0,10	≤ 1,00	21,50	≤ 5,00	9,00	3,65	bal	≤ 0,40			ASTM F3056
VENUS X		0,10	1,50	21,80	18,50	9,00		bal		0,60		ASTM B435

MIMETE Grade	C	Co	Cr	Fe	Mn	Mo	Ni	Si	W	Reference Standard
NEPTUNE 75	≤ 0,35	bal	28,50	≤ 0,75		6,00	≤ 0,50	≤ 1,00	≤ 0,20	ASTM F75
NEPTUNE *06	1,15	bal	29,00	≤ 3,00	≤ 0,50	≤ 1,00	≤ 3,00	≤ 2,00	4,50	AMS 5788G