

m4p type750-NM

Fe-base for Laser Powder Bed Fusion

Description, properties and applications

m4p type750-NM is a **non-magnetic** nickel-chromium-molybdenum alloy developed for demanding applications where both high **mechanical strength** and **corrosion resistance** are critical. This alloy is characterized by its outstanding resistance to chloride-containing environments and acid corrosion, which makes it particularly suitable for use in aggressive media such as those found in the **oil and gas industry**.

The non-magnetic, **fully austenitic** material m4p type750-NM, whose metallurgy has been tailored to **welding suitability** in order to ensure both processing using L-PBF and subsequent assembly joining. The non-magnetic properties of the material are retained even under extreme loads, making it ideal for applications in **surveying technology** and sensitive **electronic devices** where **magnetic interference** must be avoided.

Due to its unique combination of non-magnetic properties combined with high strength, corrosion resistance and high temperature resistance, m4p type750-NM is primarily used in the oil and gas industry.

Powder characteristics

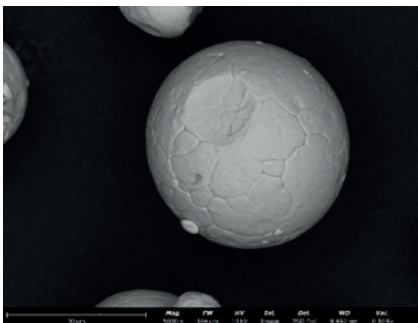


Image: SEM image of an m4p type750-NM powder particle

Chemical analysis [wt%]		
Element	Min	Max
C		0.03
Si	0.10	0.40
Mn	1.50	3.00
Cr	26.50	29.50
Mo	2.00	4.00
Ni	28.00	31.50
Fe	Base	

Other limited elements: O, N, P, S

Additive manufacturing and material characteristics

(rel. density >99.9%; volume rate 14.4 cm³/h; layer thickness 40µm; EOS M290)

	Tensile strength Rm [N/mm ²]	Yield strength Rp0.2 [N/mm ²]	Elongation at break A ₅ [%]	PREN-Value [-]
as-built sample orientation ↓ ↔	> 850	> 650	> 22	~ 44

www.metals4printing.com	GERMANY m4p material solutions GmbH · Germany Mittelweg 13, 39130 Magdeburg T +49 391 72149-40 E sales@metals4printing.com	AUSTRIA / INTERNATIONAL m4p material solutions GmbH · Austria Gewerbestraße 4, 9181 Feistritz i. R. T +43 4228 93053-0 E sales@metals4printing.com
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