Rev.V03/5-22

METALS FOR PRINTING

Product list

Metal powder for additive manufacturing
Laser Powder Bed Fusion | L-PBF

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Base	Material Class	Product Name	Material Properties
Al	Aluminium	**m4p™ AlSi10Mg**	Standard cast aluminium alloy with good weldability.
		m4p™ AlSi9Cu3	Aluminium alloy with an advantageous combination of high thermal conductivity and good strength and corrosion properties.
		m4p™ AlSi7Mg	Compared to AlSi10Mg with reduced mechanical properties.
		m4p™ PureAl	Aluminium alloy with lowest alloy content and therefore high conductivity. Has a very high ductility.
		m4p™ StrengthAl	High strength, anodisable aluminium alloy.
Cu	Copper alloys	**m4p™ PureCu**	High purity copper powder for applications with highest electrical and thermal conductivity; purity >99.95%Cu.
		m4p™ CuNiSiCr	Age-hardenable, copper-based high-performance material, with high electrical and thermal conductivity at high hardness and strength levels up to 42% IACS with good processability in LPBF.
		m4p™ CuCrZr	Age-hardenable copper-based high-performance material with high electrical and thermal conductivity and high softening temperature; up to 80% IACS.
		m4p™ Brz10	Bronze/ structural material; tin bronze with good mechanical strength properties and best corrosion resistance.
		m4p™ Al-Brz8,5	Aluminium bronze; copper material with high mechanical strength and high wear resistance. Traditionally the applications are in the maritime sector.
		m4p™ CuZn42	Brass powder for additive manufacturing - for decorative and industrial applications (fittings).
Fe	Stainless steels	**m4p™ 316l**	Corrosion-resistant, austenitic alloy with good deformation properties for a wide range of applications.
		m4p™ Fe-4542	Also known as 17-4PH (AISI standard), it is an age-hardenable stainless steel alloy with good mechanical properties.
		m4p™ Fe-4828	Heat-resistant, austenitic CrNi steel. Standard grade for furnace construction and high temperature applications.
		m4p™ Fe-4011	Ferritic, stainless chrome steel with good workability. Especially for the production of ferromagnetic components and prototypes.
		m4p™ Fe-4021	Martensitic chrome steel, with good corrosion resistance. Base material for prototypes produced in the binder- jetting process.
		m4p™ type13-X	Corrosion resistant alloy with very good thermal shock resistance. Also suitable for applications requiring a higher level of hardness.
Fe	Maraging steels	**m4p™ Fe-2709**	Tool steel with excellent mechanical properties and very high achievable strengths or high hardness values after heat treatment (490°C/6h)
		m4p™ CXplus	Stainless and well polishable maraging steel of medium to high hardness, especially for stainless tools and moulds.
Fe	Wear resistant steels	**m4p™ Fe-2343**	Tough and heat-resistant steel for tool and mould making with high "as-built" hardness (48 HRC), also known as H11 (AISI-Norm).
		m4p™ Fe-2344	Versatile hot work tool steel, also known as H13 (AISI-Norm).
Fe	Case hardening steel	**m4p™ Fe-7131**	Tough and hard case hardening steel with good workability for machine parts and gears; similar to 16MnCr5/ 20MnCr5.
Fe	Mild steel	**m4p™ Fe-545**	Low-alloyed fine-grained steel with high strain capability, comparable with S355 / 1.0545.

Base	Material Class	Product Name	Material Properties
Fe	Tempering steels	**m4p™ CH100-Fe**	Exceptional combination of strength and ductility - predestined for general engineering applications such as machine elements or gear components.
		m4p™ Fe-7225	Versatile heat-treatable steel for highly stressed applications – Also known as 42CrMo.
Fe	Soft magnetic materials	**m4p™ PureFe**	Pure iron material.
		m4p™ FeSi2,9	Fe-based soft magnetic material with good processability and ductility, characterized by high saturation induction.
		m4p™ FeSi6,5	Soft magnetic material characterized by a balanced ratio of high saturation induction and high specific electrical resistance with lowest magnetostriction.
		m4p™ FeCo49V2	Soft magnetic material with highest saturation polarization.
		m4p™ FeCo50	Soft magnetic material with high saturation polarization.
Fe	Heat resistant steel	**m4p™ type59-HR**	Heat-resistant steel alloy for applications up to 1050 °C. High scaling resistance and high corrosion resistance.
Fe	Duplex and Super Duplex steels	**m4p™ type62-DX**	A duplex steel with composition as per the DIN 1.4462. Achieves pitting corrosion resistance >32-39 and suitable for use in Oil & Gas industry.
		m4p™ type10-SDX	A duplex steel with composition as per the DIN 1.4410. Achieves pitting corrosion resistance >40 due to high Cr and Mo content along with N. It is suitable for use in Oil & Gas industry.
Ni	Nickel alloys	**m4p™ PureNi**	Pure nickel material.
		m4p™ Ni-718	Nickel alloy with high corrosion and oxidation resistance combined with high temperature strength (700°C) and good fatigue behaviour.
		m4p™ Ni-625	Nickel alloy with excellent resistance to oxidising and reducing conditions.
		m4p™ Ni-X	Nickel alloy with high resistance to corrosion and oxidation, especially exceptional high temperature strength
		m4p™ Ni-247LC	Nickel alloy with excellent creep resistance. Particularly suitable for stationary turbine components.
W	Tungsten	**m4p™ PureW**	Pure Tungsten powder.
		m4p™ Hart12	Carbide powder. As a basis for wear-resistant prototypes produced in the binder-jetting process.
		m4p™ Hart17	Ductile carbide powder. As a basis for wear-resistant prototypes produced in the binder-jetting process.
		m4p™ sWC	Ultra-hard hard material; as a basic component for very abrasion-resistant prototypes in the binder-jetting process.
Ti	Titanium	**m4p™ PureTi**	Pure Titanium powder.
		m4p™ Ti64 grade5	Versatile Ti alloy with high specific strength and best corrosion resistance.
		m4p™ Ti64 grade23	Also known as Ti64 ELI, has a high specific strength. Compared to the m4p™ Ti64 grade5 with higher purity.
Mo	Molybdenum	**m4p™ PureMo**	Pure Molybdenum powder.
Co	Cobalt	**m4p™ CoF75**	Cobalt-chrome alloy according to ASTM F75. Wear resistant and biocompatible for industrial and medical applications
Ta	Tantalum	**m4p™ PureTa**	Pure Tantalum powder.

PSD – individually tailored to all standard laser-based PBF production systems
SLM | DMLS | LC | LMF | LM

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