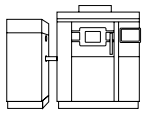


# COMPATIBILITY OF METAL MATERIALS AND SYSTEMS

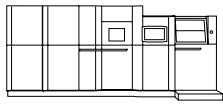
Product name  
Layer thickness

\* for AMCM M 290 1kW



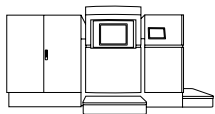
EOS M 290

EOS Aluminium AlF357 30 µm	EOS NickelAlloy HX 20   40 µm	
EOS Aluminium AlSi10Mg 30   60 µm	EOS NickelAlloy HAYNES® 282® 40   80 µm	EOS StainlessSteel PH1 20   40   80 µm
EOS Aluminium Al2139 AM 60 µm	EOS NickelAlloy IN625 20   40   80 µm	EOS StainlessSteel SuperDuplex 40   80 µm
EOS Aluminium Al5X1 40 µm	EOS NickelAlloy IN718 20   40   80 µm	EOS Titanium Ti64 30   60 µm
EOS CaseHardeningSteel 20MnCr5 40   80 µm	EOS NickelAlloy IN939 40 µm	EOS Titanium Ti64ELI 30 µm
EOS CobaltChrome MP1 20   40   50 µm	EOS StainlessSteel 17-4PH 20   40   80 µm	EOS Titanium Ti64 Grade 23 40   80 µm
EOS Copper Cu 20 µm	EOS StainlessSteel 254 40   60 µm	EOS Titanium Ti64 Grade 5 40   80 µm
EOS Copper CuCP 40 µm*	EOS StainlessSteel 316L 20   40   80 µm	EOS Titanium TiCP Grade 2 30 µm
EOS CopperAlloy CuCrZr 80 µm*	EOS StainlessSteel 316L VPro 60 µm	EOS ToolSteel 1.2709 40 µm
EOS MaragingSteel MS1 20   40   50 µm	EOS StainlessSteel CX 30   40   80 µm	EOS ToolSteel CM55 40   80 µm



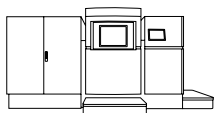
EOS M 300-4

EOS Aluminium AlSi10Mg 60 µm	EOS NickelAlloy IN718 40   80 µm	EOS StainlessSteel 17-4PH 40 µm
EOS MaragingSteel MS1 50 µm	EOS NickelAlloy IN625 40 µm	EOS StainlessSteel 316L 40 µm
		EOS Titanium Ti64 60 µm



EOS M 400

EOS StainlessSteel 316L 40   80 µm	EOS CopperAlloy CuCrZr 80 µm	
EOS Aluminium AlF357 60 µm	EOS MaragingSteel MS1 50 µm	EOS Titanium Ti64 30 µm
EOS Aluminium AlSi10Mg 90 µm	EOS NickelAlloy IN718 40 µm	EOS Titanium Ti64ELI 30 µm



EOS M 400-4

EOS Aluminium Al2139 AM 50 µm	EOS CaseHardeningSteel 20MnCr5 40   80 µm	
EOS Aluminium AlSi10Mg 40   80 µm	EOS NickelAlloy Haynes® 282® 40   80 µm	EOS MaragingSteel MS1 40 µm
EOS StainlessSteel 17-4PH 40   80 µm	EOS NickelAlloy HX 40 µm	EOS Titanium Ti64 60 µm
EOS StainlessSteel CX 40   80 µm	EOS NickelAlloy IN718 40   80 µm	EOS Titanium Ti64 Grade 23 40   80 µm
EOS StainlessSteel 316L 40   80 µm	EOS NickelAlloy IN625 80 µm	EOS Titanium Ti64 Grade 5 40   80 µm
EOS StainlessSteel PH1 20   40   80 µm	EOS NickelAlloy IN939 40 µm	EOS Titanium TiCP Grade 2 30 µm

# EOS METAL MATERIALS PORTFOLIO OVERVIEW

Product class	Product name	Material type*	Typical applications
Steels	EOS MaragingSteel MS1	AMS6514, 18Ni300	Series injection molding tools, mechanical engineering parts
	EOS ToolSteel 1.2709	EN 1.2709	Series injection molding tools, mechanical engineering parts
	EOS ToolSteel CM55	Cobalt-free, ultra high-strength steel	Cold working tools, hot working tools, mechanical engineering parts, drive train components
	EOS CaseHardeningSteel 20MnCr5	1.7147	Automotive and general engineering applications, gears, spare parts
	EOS StainlessSteel PH1	1.4540, UNS S15500	Functional prototypes and series production parts, mechanical engineering parts
	EOS StainlessSteel 254	EN 1.4547	Chlorinated seawater handling equipment, pulp and paper manufacturing devices, chemical handling equipment
	EOS StainlessSteel 316L	1.4441, UNS S31673, ASTM F138	Engineering parts for corrosive environments, can be used for medical parts, e.g. endoscopy and orthopedics
	EOS StainlessSteel 316L VPro	1.4404, UNS S31603	Press-and-sinter applications which require high productivity
	EOS StainlessSteel CX	Precipitation hardening tool steel	Series injection molding tools for corrosive plastic and rubber, mechanical engineering parts
	EOS StainlessSteel 17-4PH	1.4542, UNS 17400, ASTM A564M	Acid and corrosion resistant engineering parts, medical instruments (surgical tools, orthopedic instrumentation)
	EOS StainlessSteel SuperDuplex	Austenitic-ferritic duplex stainless steel	Oil and gas industry, pulp and paper manufacturing devices, mining and off-shore equipment
Nickel alloys	EOS NickelAlloy HAYNES® 282®	AMS5951 Rev. A Section 3.1, UNS N07208	Components in the aviation, aerospace, oil and gas industries
	EOS NickelAlloy HX	UNS N06002, AMS 5390	High temperature applications requiring excellent oxidation resistance up to 1 200 °C
	EOS NickelAlloy IN718	UNS N07718, AMS 5662, AMS 5664, 2.4668, NiCr19Fe19NbMo3	Load-bearing components for high temperature applications up to 700 °C, good potential for cryogenic applications
	EOS NickelAlloy IN625	UNS N06625, AMS 5666, AMS 5599, 2.4856, NiCr22Mo9Nb	Components for service in corrosive environments, good potential for cryogenic applications
	EOS NickelAlloy IN939	Inconel™ 939	Engineering parts requiring excellent mechanical properties (fatigue, creep) and corrosion and oxidation resistance up to 850 °C
Cobalt chrome	EOS CobaltChrome MP1	UNS R31537, ISO 5832-4, ASTM F75, ISO 5832-12, ASTM F1537	Medical implants with high wear and corrosion resistance, high temperature components in aerospace

\* Material in accordance with respective standard

# EOS METAL MATERIALS PORTFOLIO OVERVIEW

Product class	Product name	Material type*	Typical applications
Copper	EOS Copper Cu	High purity copper	Heat exchangers, electronics, variety of industry applications requiring good conductivity
	EOS Copper CuCP	Commercially pure copper	Electrical motors, inductors, variety of industry applications requiring excellent conductivity
	EOS CopperAlloy CuCrZr	C18150, CW106C	Rocket engine parts, heat exchangers, induction coils
Titanium	EOS Titanium Ti64 EOS Titanium Ti64 Grade 5	Ti6Al4V, ISO5832-3, ASTM F1472, ASTM F2924, ASTM F3302	Series production parts in aerospace, medical and automotive
	EOS Titanium Ti64ELI EOS Titanium Ti64 Grade 23	Ti6Al4V ELI, ASTM F136, ASTM F3001, ASTM F3302	Series production parts in medical (spinal cages, tibial trays, patella, etc.)
	EOS Titanium TiCP	ASTM F67, ISO 5832-2	Series production parts in medical (e.g. trauma plates, CMF implants, etc.)
Aluminum	EOS Aluminium Al5X1	Aluminum-magnesium alloy designed for AM	Applications in aerospace and automotive industries. Lightweight parts in many industries, including ones requiring high visual quality and anodization, for example consumer electronics.
	EOS Aluminium AlSi10Mg	AlSi10Mg	General engineering components and parts subject to high loads in aerospace and automotive industries, substitution of cast AlSi10Mg parts
	EOS Aluminium AlF357	AlSi7Mg0,6, SAE AMS 4289	Structural components in aerospace and automotive industries requiring balanced mechanical properties
	EOS Aluminium Al2139 AM	Aluminum Association Teal Sheet for Al2139 modified for DMLS	Production parts in aerospace & space, racing, transportation & mobility, lightweight designs
Refractory metals	EOS Tungsten W1	Pure tungsten	Thin walled parts for use in guidance structures in x-ray imaging such as anti-scatter grids

\* Material in accordance with respective standard

Detailed information: [www.eos.info/material-m](http://www.eos.info/material-m)