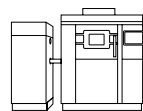
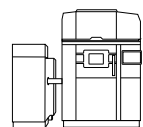


# COMPATIBILITY OF METAL MATERIALS AND SYSTEMS

Product name  
Layer thickness



EOS M 290



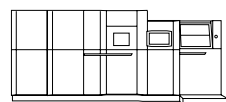
EOS M 290-2

- EOS Aluminium AlF357  
30 µm
- EOS Aluminium AlSi10Mg  
30 | 60 µm
- EOS Aluminium Al2139 AM  
60 µm
- EOS Aluminium Al5X1  
40 µm
- EOS CaseHardeningSteel 20MnCr5  
40 | 80 µm
- EOS CobaltChrome MP1  
20 | 40 µm
- EOS Copper CuCP  
40 µm\*
- EOS CopperAlloy CuCrZr  
80 µm\*
- EOS CopperAlloy CuNi30  
60 µm
- EOS MaragingSteel MS1  
20 | 40 | 50 µm

- EOS Nickel NiCP  
80 µm
- EOS NickelAlloy HAYNES® 282®  
40 | 80 µm
- EOS NickelAlloy HX  
20 | 40 µm
- EOS NickelAlloy IN625  
20 | 40 | 80 µm
- EOS NickelAlloy IN718\*\*  
20 | 40 | 80 µm
- EOS NickelAlloy IN738  
40 µm
- EOS NickelAlloy IN939  
40 µm
- EOS NickelAlloy K500  
60 µm
- EOS StainlessSteel 17-4PH  
20 | 40 | 80 µm
- EOS StainlessSteel 254  
40 | 60 µm
- EOS StainlessSteel 316L  
20 | 40 | 80 µm

\* for EOS M 290 1kW  
\*\* all IN718 processes are applicable to IN718 API

- EOS StainlessSteel CX  
30 | 40 | 80 µm
- EOS StainlessSteel PH1  
20 | 40 | 80 µm
- EOS StainlessSteel SuperDuplex  
40 | 80 µm
- EOS Titanium Ti64  
30 | 60 µm
- EOS Titanium Ti64ELI  
30 µm
- EOS Titanium Ti64 Grade 23  
40 | 80 µm
- EOS Titanium Ti64 Grade 5  
40 | 80 µm
- EOS Titanium TiCP Grade 2  
30 µm
- EOS ToolSteel 1.2709  
40 µm
- EOS ToolSteel CM55  
40 | 80 µm



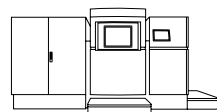
EOS M 300-4 1kW

- EOS Aluminium AlSi10Mg  
60 | 80 µm\*
- EOS CobaltChrome MP1  
40 µm
- EOS MaragingSteel MS1  
50 µm

- EOS NickelAlloy IN718  
40 | 80 µm
- EOS NickelAlloy IN625  
40 µm
- EOS StainlessSteel 17-4PH  
40 µm
- EOS StainlessSteel 316L  
40 µm

\* for EOS M 300-4 1kW

- EOS Titanium Ti64  
60 µm
- EOS Titanium Ti64 Grade 23  
40 µm
- EOS Titanium Ti64 Grade 5  
40 µm

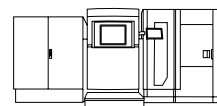


EOS M 400

- EOS Aluminium AlF357  
60 µm
- EOS Aluminium AlSi10Mg  
90 µm
- EOS CobaltChrome MP1  
40 µm

- EOS CopperAlloy CuNi30  
60 µm
- EOS CopperAlloy CuCrZr  
80 µm
- EOS MaragingSteel MS1  
50 µm
- EOS NickelAlloy IN718  
40 µm

- EOS StainlessSteel 316L  
40 | 80 µm
- EOS Titanium Ti64  
30 µm
- EOS Titanium Ti64ELI  
30 µm



EOS M 400-4

- EOS Aluminium Al2139 AM  
50 µm
- EOS Aluminium AlSi10Mg  
40 | 80 µm
- EOS CaseHardeningSteel 20MnCr5  
40 | 80 µm
- EOS CopperAlloy CuNi30  
60 µm
- EOS MaragingSteel MS1  
40 µm

- EOS Nickel NiCP  
80 µm
- EOS NickelAlloy Haynes® 282®  
40 | 80 µm
- EOS NickelAlloy HX  
40 µm
- EOS NickelAlloy IN718  
40 | 80 µm
- EOS NickelAlloy IN625  
80 µm
- EOS NickelAlloy IN939  
40 µm
- EOS StainlessSteel 17-4PH  
40 | 80 µm

- EOS StainlessSteel CX  
40 | 80 µm
- EOS StainlessSteel 316L  
40 | 80 µm
- EOS StainlessSteel PH1  
20 | 40 | 80 µm
- EOS Titanium Ti64  
60 µm
- EOS Titanium Ti64 Grade 23  
40 | 80 µm
- EOS Titanium Ti64 Grade 5  
40 | 80 µm
- EOS Titanium TiCP Grade 2  
30 µm

# EOS METAL MATERIALS PORTFOLIO OVERVIEW

Product class	Product name	Chemical Composition Standard	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 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 Nickel NiCP	ASTM B162, SAE AMS5553	Semiconductor manufacturing parts, chemical industry parts
	EOS NickelAlloy HAYNES <sup>®</sup> 282 <sup>®</sup>	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 IN718 API	API 6ACRA	Piping, tubing, and manifolds for downhole applications, pumping, separation, and injection equipment, fixtures and fasteners
	EOS NickelAlloy IN738	Based on AMS 5410C	Gas turbine components, rocket engine turbo pumps, marine and automotive turbochargers
	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 <sup>™</sup> 939	Engineering parts requiring excellent mechanical properties (fatigue, creep) and corrosion and oxidation resistance up to 850 °C
	EOS NickelAlloy K500	UNS N05500	Aerospace, marine, industrial applications

# EOS METAL MATERIALS PORTFOLIO OVERVIEW

Product class	Product name	Chemical Composition Standard	Typical applications
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
Copper	EOS Copper CuCP	Commercially pure copper	Electrical motors, inductors, variety of industry applications requiring excellent conductivity
	EOS CopperAlloy CuNi30	UNS 96400	Pumps and impellers, marine applications
	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 used in guide structures for X-ray imaging, e.g. X-ray grids

\* Material in accordance with respective standard

Detailed information:

<https://www.eos.info/en-us/metal-solutions/metal-materials>

