

# EOS Materials Metal 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 H13**	ASTM A681	Hot working applications, forgings, die casting tools, hot extrusion tools
	EOS CaseHardeningSteel 20MnCr5**	EN 10084	Automotive and general engineering applications, gears, spare parts
	EOS StainlessSteel GP1	Stainless steel 17-4 / 1.4542	Functional prototypes and series-production parts, mechanical engineering and medical technology
	EOS StainlessSteel PH1	1.4540, UNS S15500	Functional prototypes and series production parts, mechanical engineering parts
	EOS StainlessSteel 316L	1.4441, UNS S31673, 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, UNS17400, A564M	Acid and corrosion resistant engineering parts, medical instruments (surgical tools, orthopedic instrumentation)
Nickel alloys	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
	EOS NickelAlloy HX	UNS N06002, AMS 5390	High temperature applications requiring excellent oxidation resistance up to 1.200 °C

\* Material in accordance with respective standard

\*\* Currently under development



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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
	EOS CobaltChrome SP2	"Type 4" CoCr dental material as per ISO 22674	Class IIa medical device in accordance with annex IX rule 8 of the MDD 93/42/EEC
	EOS CobaltChrome RPD	"Type 5" CoCr dental material as per ISO 22674	Class IIa medical device in accordance with annex IX rule 8 of the MDD 93/42/EEC (series production)
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 5822-2	Series production parts in medical (e.g. trauma plates, CMF implants, etc.)
Aluminum	EOS Aluminium AlSi10Mg	AlSi10Mg	Functional prototypes and series production in mechanical engineering, automotive, hydraulics and aerospace industries
	EOS Aluminium AlF357	AlSi7Mg0,6, SAE AMS 4289	Aerospace and automotive industries structural components requiring high strength
Refractive Metals	EOS Tungsten W1	Pure tungsten	Thin walled parts for use in guidance structures in x-ray imaging such as anti-scatter grids

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\*\* Currently under development

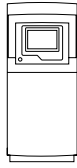
Detailed information: [www.eos.info/material-m](http://www.eos.info/material-m)





# Compatibility of Metal Materials and Systems



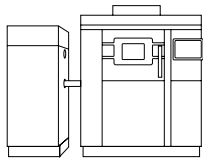
Product name  
Layer thickness








-  EOS CobaltChrome SP2  
20 µm
-  EOS StainlessSteel 316L  
20 µm

-  EOS Titanium Ti64  
20 µm
-  EOS Tungsten W1  
20 µm

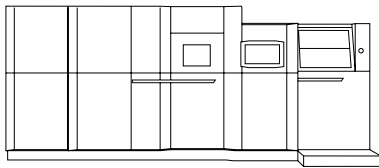
EOS M 100





-  EOS Aluminium AlF357  
30 µm
-  EOS Aluminium AlSi10Mg  
30 | 60 µm
-  EOS CaseHardeningSteel 20MnCrZr  
30 µm
-  EOS CobaltChrome MP1  
20 | 40 | 50 µm
-  EOS Copper Cu  
20 µm
-  EOS MaragingSteel MS1  
20 | 40 | 50 µm
-  EOS NickelAlloy HX  
20 | 40 µm
-  EOS NickelAlloy IN625  
20 | 40 µm
-  EOS NickelAlloy IN718  
20 | 40 µm
-  EOS NickelAlloy IN939  
40 µm

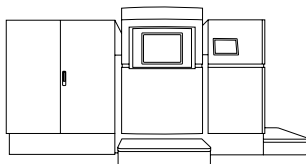
-  EOS StainlessSteel 17-4PH  
20 | 40 µm
-  EOS StainlessSteel 316L  
20 | 40 µm
-  EOS StainlessSteel 316L VPro  
60 µm
-  EOS StainlessSteel CX  
30 µm
-  EOS StainlessSteel PH1  
20 µm
-  EOS Titanium Ti64  
30 | 60 µm
-  EOS Titanium Ti64ELI  
30 µm
-  EOS Titanium Ti64 Grade 23  
40 µm
-  EOS Titanium Ti64 Grade 5  
40 | 80 µm
-  EOS Titanium TiCP Grade 2  
30 µm
-  EOS ToolSteel 1.2709  
40 µm




EOS M 290



-  EOS MaragingSteel MS1  
50 µm
-  EOS NickelAlloy IN718  
40 µm

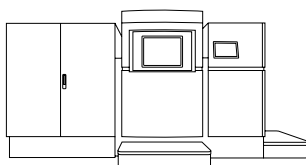
EOS M 300-4



-  EOS Aluminium AlF357  
60 µm
-  EOS Aluminium AlSi10Mg  
90 µm
-  EOS CopperAlloy CuCrZr  
80 µm

-  EOS MaragingSteel MS1  
50 µm
-  EOS NickelAlloy IN718  
40 µm
-  EOS Titanium Ti64  
30 µm
-  EOS Titanium Ti64ELI  
30 µm

EOS M 400



-  EOS Aluminium AlSi10Mg  
30 | 80 µm
-  EOS MaragingSteel MS1  
40 µm
-  EOS NickelAlloy HX  
40 µm
-  EOS NickelAlloy IN718  
40 µm

-  EOS StainlessSteel 316L  
40 µm
-  EOS Titanium Ti64  
60 µm
-  EOS Titanium TiCP Grade 2  
30 µm
-  EOS Titanium Ti64 Grade 5  
80 µm

EOS M 400-4