



Press Release

EOS Expands Industrial 3D Printing Solutions for Oil and Gas & Semiconductor Industries with Two New Metal Materials

- **NEW** EOS NickelAlloy IN718 API – high-strength, corrosion resistant, and American Petroleum Institute (API) compliant
- **NEW** EOS Nickel NiCP – 99% commercially pure Nickel with high ductility and corrosion resistance

TURKU, Finland, March 6, 2025 – EOS, a leading supplier of responsible manufacturing solutions for industrial 3D printing, today announced the availability of two new metal additive manufacturing (AM) materials: **EOS NickelAlloy IN718 API** and **EOS Nickel NiCP** – both delivering excellent performance and part properties for EOS Laser Powder Bed Fusion (LPBF) 3D printing technology.

EOS NickelAlloy IN718 API: Ideal for high-performance oil and gas applications with API 6ACRA standard requirements. This nickel-based material combines high-impact toughness at low temperatures and excellent corrosion resistance for high-stress oil and gas applications. With a tensile strength of 878 MPa and 27% elongation, when combined with a specific heat treatment, this material meets the requirements for API 6ACRA standardization, opening the door for oil and gas manufacturers to use AM for downhole, injection and fixture, and fastener applications, among others.

A leading inflow control technology organization provided an early test case for EOS NickelAlloy IN718 API, producing a flow module component meeting API standardization and high-strength performance while being subjected to the corrosive environment of oil and gas equipment.

“Additive manufacturing has previously been out of reach as a solution for demanding downhole applications due to the stringent requirements of the oil and gas industry,” said the inflow control EOS customer. “With the development of EOS NickelAlloy 718 API, we are now able to evaluate industrial 3D printing’s business case for our manufacturing needs, while ensuring all facets of part performance remain unchanged.”

EOS Nickel NiCP: Ideal for semiconductor and chemical applications requiring Nickel purity, corrosion resistance and ductility. This material provides a tensile strength of 400 MPa and 49% elongation, making it an ideal candidate for applications like gas injectors, wall liners, and volume reducers.



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Traditionally manufactured applications in the semiconductor equipment industry often include electroless nickel plating to increase the corrosion resistance in chemically harsh conditions. Parts can now be manufactured entirely with EOS Nickel NiCP, eliminating the need for plating and thereby extending the life of the consumable.

“By additively manufacturing these parts, manufacturers can maximize machine uptime and availability, which in turn increases overall throughput of the wafer fabrication process and benefits the end user’s revenue,” said Sophia Heyl, EOS product specialist. “Eliminating the electroplating process that generates hazardous waste offers a cleaner, more sustainable manufacturing process for the future.”

“EOS Nickel NiCP has already been successfully deployed in production settings, demonstrating its reliability and performance,” said Dr. Ankit Saharan, EOS director of metals technology. “By making it more broadly available, we continue to strengthen our engagement with the semiconductor industry and our dedication to advancing their applications through innovative materials and processes. We look forward to working with our partners to push the boundaries of what’s possible with NiCP in additive manufacturing.”

EOS NickelAlloy IN718 API is available for all metal EOS systems with standard EOS IN718 parameter processes. EOS Nickel NiCP is now commercially available for EOS M 290 and EOS M 400-4 systems.

About EOS

[EOS](#) provides responsible manufacturing solutions via industrial 3D printing technologies to organizations around the world. Since 1989, EOS has shaped the future of manufacturing by enabling its customers to innovate and differentiate through expert guidance, technology and services, leveraging its end-to-end additive manufacturing (AM) industry partnerships. From strategy to education to production, EOS is the leading global partner for both metal and polymer AM solutions, accelerating time-to-market for its customers through high-quality production efficiencies and sustainable solutions.

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