

MetcoClad materials for laser cladding

Optimum materials... Dependable quality... Excellent value

Our new MetcoClad™ portfolio of powder materials are designed to meet the exacting requirements needed for laser cladding applications. Oerlikon Metco has been a trusted supplier of materials for demanding industries that include aerospace, power generation, mining, petrochemical and oil/gas exploration, and for more than 75 years. For exceptional quality, excellent reproducibility and superior performance, MetcoClad is the brand you can depend on for your laser cladding applications.

MetcoClad 316L-SI

Fe 12Ni 17Cr 2.5Mo 2.3Si 1Mn 0.03C

MetcoClad 316L-SI is an inert gas-atomized version of 316L austenitic steel compatible with AISI Type 316L (UNS S31603). The low carbon content of MetcoClad 316L results in deposits with no grain boundary carbide precipitation and a refined microstructure that is often better than 316L bulk materials. Choose MetcoClad 316L-SI for its impact, creep and stress rupture resistance at elevated temperatures and its corrosion resistance in chloride environments that resists pitting and crevice corrosion.

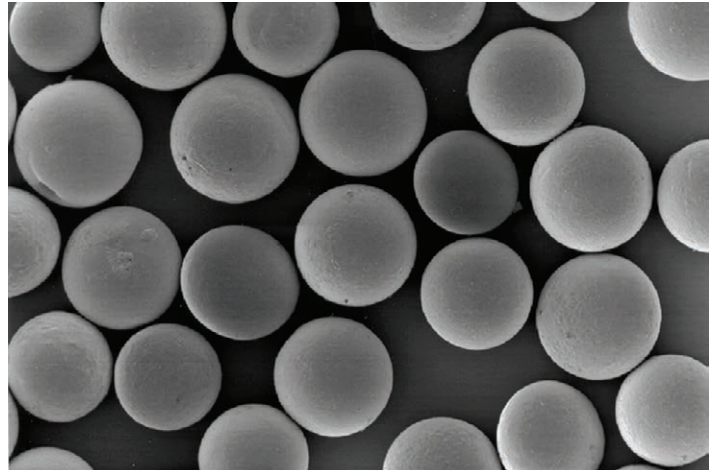
Order No. 1079454, Datasheet DSMW-0017

MetcoClad C-276

Ni 15Cr 16Mo 5Fe 4W

MetcoClad C-276 is an inert gas-atomized, nickel-based superalloy, similar to Hastelloy C-276, with excellent general corrosion resistance and good welding characteristics. Use MetcoClad C-276 to resist corrosion in environments such as hot contaminated mineral acids, organic and inorganic chloride-contaminated media, chlorine, formic acid, acetic acid, acetic anhydride, seawater or brine solutions. MetcoClad C-276 is resistant to both general and localized corrosion, including pitting, crevice corrosion and stress corrosion cracking.

Order No. 1069333, Datasheet DSMW-0002



MetcoClad 52001, a specialized spherical, fused tungsten carbide that produces deposits with excellent properties for laser cladding or PTA applications.

MetcoClad 625

MetcoClad 625F

Ni 21.5Cr 8.5Mo 3.5Nb 3Fe

MetcoClad 625 and MetcoClad 625F are inert gas-atomized nickel-based superalloy powders that are similar in composition to Inconel 625. MetcoClad 625 and MetcoClad 625F produce overlays with outstanding strength and toughness that are nonmagnetic, corrosion resistant and oxidation resistant. They can be used at a wide range of temperatures from cryogenic to 1093 °C (2000 °F). These alloys have excellent fatigue strength and stress-corrosion cracking resistance in chloride environments, which makes them good choices for use for in applications where salt water corrosion is a factor. MetcoClad 625F has a fine particle size (-53 +20 µm) whereas MetcoClad 625 is a standard size powder (-90 +45 µm).

MetcoClad 625 – Order No. 1075751, Datasheet DSMW-0002

MetcoClad 625F – Order No. 1077674, Datasheet DSMW-0002

MetcoClad 718

Ni 19Cr 18Fe 3Mo 0.5Al 5Nb 1Ti 0.05C

MetcoClad 718 is an inert gas-atomized, nickel-based superalloy, similar in composition to Inconel 718, with excellent corrosion resistance at temperatures up to 700 °C (1290 °F). Deposits of MetcoClad 718 resist creep and stress rupture at elevated temperatures. Use MetcoClad 718 to repair and restore nickel-based or steel components, or for laser additive manufacturing applications.

Order No. 1079455, Datasheet DSMW-0002

MetcoClad 6

MetcoClad 6F

Co 28Cr 4W 3Ni 3Fe 1.5Si 1C 1Mo

MetcoClad 6 and MetcoClad 6F are inert gas-atomized versions of the most generally useful cobalt alloy. Similar to Stellite 6, they have excellent resistance to many forms of mechanical and chemical degradation over a wide temperature range. Overlay deposits of MetcoClad 6 and MetcoClad 6F have outstanding self-mated anti-galling properties, which result in their wide use as a valve seat materials. Deposits also exhibit high temperature hardness and high resistance to cavitation erosion. These alloys are ideally suited to a variety of hardfacing processes. MetcoClad 6F has a fine particle size distribution (-53 +20 µm). MetcoClad 6 is a standard size powder (-106 +45 µm).

MetcoClad 6 – Order No. 1075747, Datasheet DSMW-0003

MetcoClad 6F – Order No. 1077214, Datasheet DSMW-0003

MetcoClad 21

Co 27Cr 5.5Mo 3Ni 0.25C

MetcoClad 21 is an inert gas-atomized, cobalt-based superalloy, similar in composition to Stellite 21. An excellent choice for dynamically active environments, overlays of MetcoClad 21 offer excellent resistance to abrasion and galling and exhibit a low coefficient of friction between mating components. MetcoClad 21 also provides excellent corrosion resistance, particularly in reducing environments.

Order No. 1083480, Datasheet DSMW-0003

MetcoClad 23

Co 25Cr 5Mo 2.5W 2Ni

MetcoClad 23 is an inert gas-atomized, cobalt-chromium-molybdenum alloy similar to Ultimet. It is designed for good wear and corrosion resistance and excellent laser cladability. It has excellent work hardening characteristics which offers a better protection against high stress abrasion. When laser clad, MetcoClad 23 exhibits almost no porosity and excellent wear resistance. The product can also be used for PTA processes.

Order No. 1089348, Datasheet DSMW-0003

MetcoClad 52001

W 3.5C

MetcoClad 52001 is a special grade of Oerlikon Metco's spherical, fused tungsten carbide. These carbides have a fine non-acicular structure with greater hardness than conventional fused and crushed tungsten carbide. Increased apparent density and improved flowability raise the amount of hard phase present in wear resistant coatings. This material can be blended with a nickel-based alloy matrix material for laser cladding or PTA welding applications.

Order No. 1075603, Datasheet DSMW-0015

MetcoClad 52052

WC 40(NiCrBSi)

MetcoClad 52052 is a blend of spherical fused tungsten carbide and a self fluxing alloy matrix with a matrix hardness of 40 HRC. This combination can be applied to many substrates with minimal porosity and cracking. It is usually used as applied, however the deposits can be finished with diamond abrasives to final dimension and finish requirements.

Order No. 1075604, Datasheet DSMW-0014

Contact us for more information on our MetcoClad products.

Don't see the laser cladding material you need for your application? Talk to us!

Chances are we can supply exactly what you need.

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Inconel is a registered trademark of Huntington Alloys Corporation
Stellite is a registered trademark of Deloro Stellite Holdings Corporation

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