



Gas Atomized Nickel Alloy Powder
for the Laser Cladding Process

LaserClad®

41625



- Spherically shaped without satellites and without internal pores, providing consistent melt characteristics and porosity free coatings
- Free flowing through all powder feed systems achieving consistent high productivity
- Excellent resistance to acid corrosion
- Used exclusively with Laser systems

LaserClad® 41625

LC41625 is specifically designed for use with the laser cladding process. The powder is manufactured by gas atomization. As a result, the particle shape is spherical, without satellites, and with minimal oxygen content. These characteristics ensure good flow through all powder feed systems to produce high quality, porosity free deposits. The particle size range is carefully controlled to enhance these characteristics.

Coatings of LC 41625 are suitable for a wide range of applications where resistance to acid corrosion (ex. phosphoric, sulfuric, organic) or high temperature oxidation are required. The high chromium and molybdenum content of the powder make LC 41625 coatings extremely resistant to stress cracking in caustic environments. Laser clad surfaces exhibit high corrosion resistance that are stable against intercrystalline, pitting and crevice corrosion in a wide range of media.

In addition, LC 41625 can be used to provide a "buttering" layer for subsequent top-coating with a more crack sensitive coating.

PROCEDURE FOR USE:

For some applications a modest pre-heat may be required. The degree is dependent on the shape and dimensions of the part and the thickness of the deposit.

Coatings of LC 41625 can be machined using carbide tool bits. Coatings can also be ground and polished.

Please contact your Eutectic Surface Coatings Specialist for more information.

TECHNICAL DATA

Typical Values	
Hardness:	25 HRC
Coating Density:	8.44 g/cc (0.305 lb/in ³)
Melting Point Range:	1290°C - 1350°C (2350°F - 2460°F)
Max. Service Temperature:	900°C (1650°F)
Max. Coefficient of Thermal Expansion	7.3 x 10 ⁻⁶ in/in-°F (13.1 x 10 ⁻⁶ m/m-°C)

Nominal Composition: Ni, Cr, Mo, Fe, Nb, Si, C

TYPICAL APPLICATIONS

LC 41625 coatings are suitable for use on a wide range of parts (fittings) common to chemical plants, paper mills and fertilizer plants.

Examples:

- Valve Seats
- Chemical Pump Liners
- Kneader Blades
- Chemical Mixer Blades
- Mining Pump Shafts
- Valve Trim
- Hydrocarbon processing from oil-sand and oil-shale recovery equipment

