



Gas Atomized, High Speed Steel  
Alloy Powder for the  
Laser Cladding Process

# **LaserClad®**

## **41606**



- Excellent wear resistance for abrasion, impact and fatigue.
- Good behavior under combined wear, at elevated temperatures up to 600°C
- Great edge retaining ability
- Excellent welding properties with nice and smooth deposit

# LaserClad® 41606

LC 41606 has been specially developed to meet the metallurgical and physical standards of the laser cladding process.

High speed steel base, with martensitic structure embedded with vanadium carbide particles, gives this alloy a very high resistance to abrasion and fatigue at elevated temperatures.

The spherical shape and the grain-size distribution of the particles ensures a regular flow of powder through the equipment.

## TECHNICAL DATA

Typical Values	
Apparent density:	~ 4.6 g/cm <sup>3</sup>
Melting Range:	~ 1475 - 1530°C
Hardness*:	typ. 64 HRC

\*Hardness depends on welding parameters and may vary

Nominal Composition: Mo, Cr, W, V, C, Mn, Si

Grain size: 150 / 53 µm

## PROCEDURE FOR USE:

Remove damaged and fatigued areas by disc grinding.

Preheat according to base metal type.

Set welding parameters according to base metal thickness and type.  
Minimum dilution is desired.

Maintain preheat and interpass temperature during welding.  
The degree is dependent on the shape and dimensions of the part and the thickness of the deposit.

Allow work piece to cool slowly.

Please contact your Eutectic Surface Coatings Specialist for more information.

## TYPICAL APPLICATIONS

- Repair of temperature-stressed dies and mandrels, of cutting and forming tools
- Coating of screws for injection moulding
- Protection of drawing dies, forging inserts and valves

