



Nickel Chromium Alloy Powder for
Resistance to High Temperature Oxidation
and Corrosive Gases

ThermoTec

18923



- Excellent resistance to corrosive gases and oxidizing atmospheres at elevated temperatures
- Self bonding with good bond strength
- Produces smooth, dense coatings
- Coatings are readily machinable

ThermoTec 18923

ThermoTec 18923 is an atomized, pre-alloyed powder which produces homogenous coatings when applied via the combustion or plasma non-transferred arc thermal spray process.

ThermoTec 18923 plasma powder has the same chemical composition as ThermoTec 18930 but is of a different particle size distribution. ThermoTec 18923 should be used where thin, smooth, hard and very dense deposits are required.

ThermoTec 18923 is especially suited for high temperature applications requiring resistance to oxidizing atmospheres and corrosive gases.

TECHNICAL DATA

Typical Values	Combustion	Plasma
Macrohardness:	90 HRB	95 HRB
Density:	7.2 g/cc	7.5 g/cc
Coating Weight (lb/ft ² @0.001"):	0.037	0.039
Interconnected Porosity:	<5%	<2%
Max. Service Temp.:	1800°F	1800°F
Bond Strength*:	6500 Psi	
Particle Size Distribution:	-230 + 10µm	

* Bond strength based on ASTM C633 procedure. Actual values will vary depending on method of surface preparation.

Composition: Nickel (80%), Chromium (20%)

PROCEDURE FOR USE:

Made for use with Castolin Eutectic's TeroDyn TD 2000/3000 high energy combustion system or conventional Plasma Spray equipments.

ThermoTec 18923 coatings should be applied to clean and rough surfaces for maximum bond strength. Grit blasting is the recommended surface preparation.

ThermoTec 18923 plasma powder can be used effectively in plasma arc flame spray system supplied by all leading manufacturers.

For more information and to determine which equipment is right for your coating needs, please contact Castolin Eutectic Technical Services.

TYPICAL APPLICATIONS

APPLICATIONS

Pumps, Plunger Rods

Annealing Pans, Heat Treating Fixtures

High temp bond coat for ceramic coatings. Dimensional restoration of Stainless and Ni base alloys

INDUSTRY

Oil & Gas

Steel

General

Observe normal spraying practices, respiratory protection and proper air flow pattern advised. For general spray practices, see AWS Publications AWS C2.1-73, "Recommended Safe Practices for Thermal Spraying and AWS TSS-85, "Thermal Spraying, Practice, Theory and Application." Thermal spraying is a completely safe process when performed in accordance with proper safety measures. Become familiar with local safety regulations before starting spray operations. DO NOT operate your spraying equipment or use the spray material supplied, before you have thoroughly read the equipment instruction manual. Refer to the Eutectic website for Material Safety Data Sheet (MSDS) information. DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH.



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