



Atomized Nickel-Chromium-Iron  
Alloy Powder

# Eutectic 19985



- Extremely strong under uniform compressive loads
- Designed to produce friction and corrosion resistant coatings
- Precise particle sizing ensures coating consistency
- Used for the reclamation of steel and alloy parts

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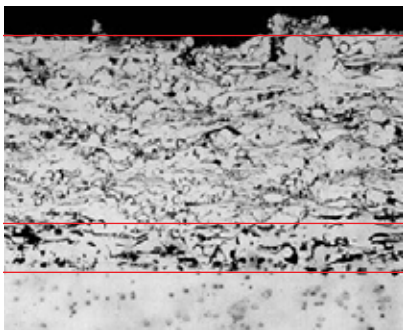
Eutectic 19985 is an atomized nickel, chromium, iron alloy powder designed to produce friction resistant coatings with conventional combustion thermal spray processes. This corrosion resistant, machinable nickel-base alloy coating is used in the reclamation of steel and alloy parts. Finish by machining with carbide tools. Each lot of powder is subjected to extensive quality checks to insure a consistent particle size distribution, chemical composition and reliable coating performance. Coatings have high strength under uniform compressive loads. A bond coat such as Eutectic 50000 is required.

## TECHNICAL DATA

Typical Values	
Typical Macrohardness:	82-84 HRB
Typical Porosity:	6%
Max. Service Temperature:	1200°F (649°C)
Coating density:	8.4 g/cc
Bulk density:	3.3 g/cc
Powder coverage:	0.046 lb/ft <sup>2</sup> @ 0.001"
Hall flow rate:	22 seconds

## PROCEDURE FOR USE:

Machine using conventional carbide tooling. Use flood coolant where possible.



Eutectic 19985 coating

50 000 bond coat

Base metal

*Photomicrograph of Eutectic 19985. Oxides promote resistance to frictional wear. Semi-melted particles promote machinability. Interconnected porosity provides a reservoir for oil in lubricated applications and allows good penetration of sealer when used in corrosive environments.*

### Recommended Coating & Spray Parameters:

#### TD 2000

Nozzle: RL 200  
RPA-3: 30 psi air pressure  
Module Adaptor: Yellow/Red  
Oxygen: 50 psi / 35 flow (FM-1 flowmeter)  
Acetylene: 12 psi / 75 flow (FM-1 flowmeter)  
T-Valve Setting: 20-22 clicks  
Coating Rate: 20 lb/hr  
Spray Distance: 7 to 8 inches  
Deposit Efficiency: 90%

## TYPICAL APPLICATIONS

- Motor shafts
- Chemical pump sleeves
- Journals
- Reclaim nickel-alloy parts

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 T5S-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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