



Atomized Nickel-Chromium-Iron  
Alloy Powder

# **Eutectic®**

## **29096**



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

# Eutectic® 29096

Eutectic 29096 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.

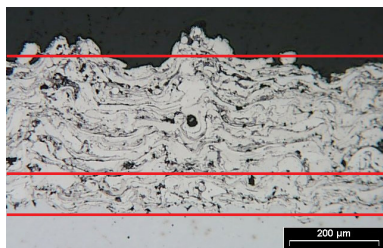
## TECHNICAL DATA

### Typical Coating Properties

Macro-Hardness:	Rockwell B Scale, 82 - 84
Porosity:	6%
Coating Density:	8.4 g/cc
Max. Service Temperature:	1200°F (649°C)

### Typical Powder Properties

Hall Flow Rate:	22 seconds
Bulk Density:	3.3 g/cc
Powder Coverage:	0.046 lbs/ft <sup>2</sup> @ 0.001"



Eutectic Coating

Bond Coat

Base Metal

*Photomicrograph of Eutectic 29096. 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.*

## PROCEDURE FOR USE

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

### Recommended 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
Spray Rate:	20.0 lb/hr
Spray Distance:	7 to 8 inches
Deposit Efficiency:	90%

## TYPICAL APPLICATIONS

- Motor shafts
- Journals
- Chemical pump sleeves
- 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 T55-85, "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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