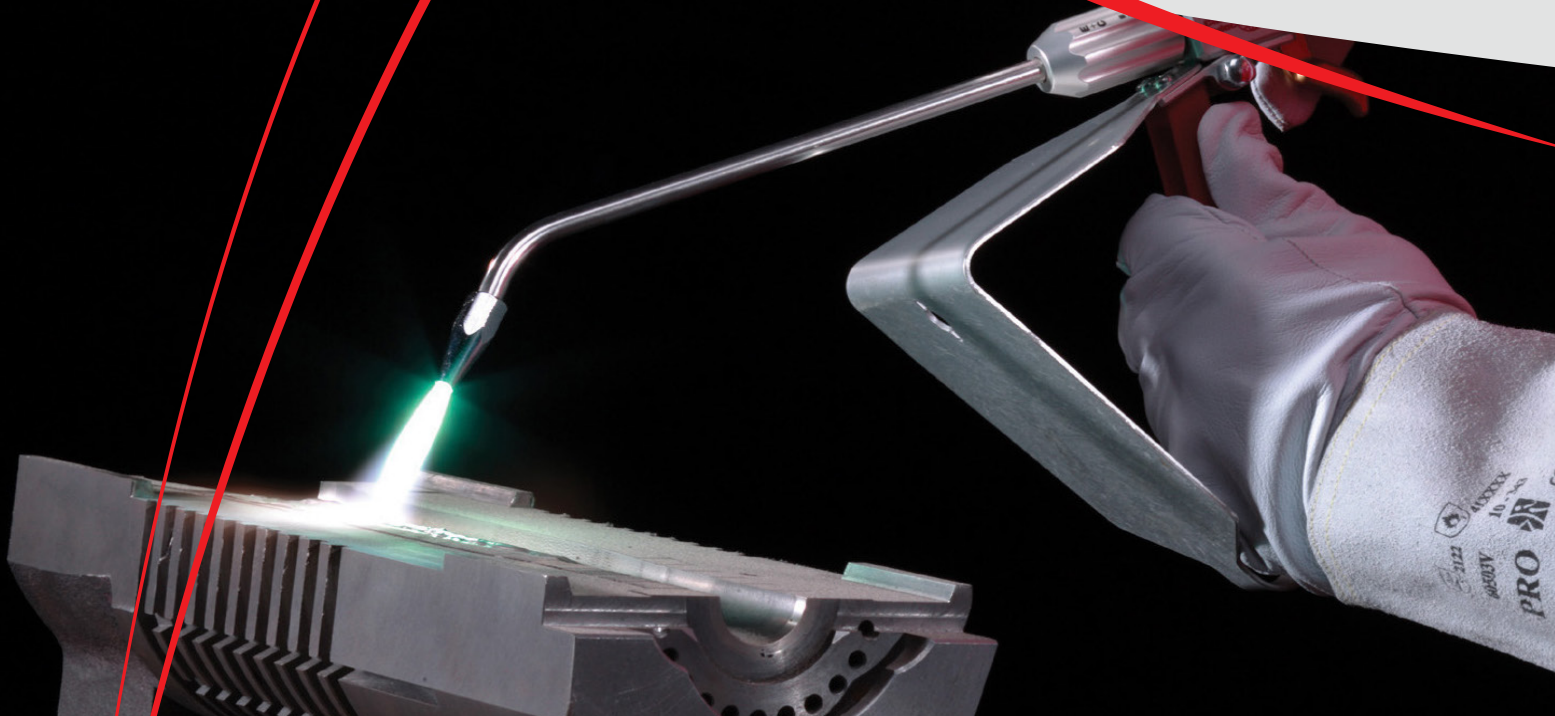




A Hot Process Multi-Component,
Nickel-Based Alloy Powder

Eutalloy® **10009**



- Non-magnetic and non-sparking deposits
- Excellent wear and corrosion control
- Precise particle sizing ensures consistent deposition, fusing and hardness
- Designed to be applied and fused using the Eutalloy Superjet thermal spray process

Eutalloy® 10009

Eutalloy 10009 is a multi-component nickel-based alloy powder used to produce hard, low friction overlay deposits for wear or corrosion control. Composition based on AMS 4775C and precise particle sizing ensures consistent deposition, fusing and hardness. It is a hot process powder designed to be applied and fused using the Eutalloy thermal spray process. For applications on surfaces of steels, stainless steels, cast irons and nickel-based alloys that are subject to abrasion, metal to metal wear or in some cases corrosion. Resists softening at elevated temperatures and will not scale even when subjected to "red heats". Exceptionally dense, smooth deposits permit very thin passes. Deposits are non-magnetic and non-sparking. For applications that require very heavy buildup Eutectic 10185 can be used as a cushion layer.

PROCEDURE FOR USE

Finishing Procedures:

Grinding Wheel Type: Green Silicon Carbide

Grit Size: 60 - 80

Grade: H (soft)

Structure: 5

Bond Type: Vitriified

Wheel Speed: Use Manufacturer's Recommendation

Work Speed: 50 - 65 surface feet per minute

	Traverse Speed	In-Feed
Roughing	5-15 inches per minute	0.001 inches per pass
Finishing	3-8 inches per minute	0.0005 inches per pass or less

Coolant: Flood coolant with rust inhibitors in 2-5% concentration

Notes:

1. Before grinding, all edges and ends of coating must be chamfer ground.
2. Frequently dress the grinding wheel face to reduce friction and heat.

TECHNICAL DATA

Typical Powder Properties	
Magnetic Properties:	This alloy contains enough Chromium, Boron, and Silicon to make it non-magnetic (ie: Primarily Austenitic Structure).
Hall Flow Rate:	15 seconds
Bulk Density:	4.3 g/cc
Approximate Melting Range:	Solidus, 1750°F (954°C) Liquidus, 1950°F (1066°C)
Powder Coverage:	1 lb. per 50 in ² @ 1/16"
Typical Coating Properties	
Typical Hardness:	HRC 59
Density:	7.6 g/cc
Approximate Thermal Expansion:	200 - 1000°F 7.4 x 10 ⁻⁶ /F 1000 - 1400°F 7.2 x 10 ⁻⁶ /F 1400 - 1800°F 8.0 x 10 ⁻⁶ /F
Electrical Conductivity:	Should be similar to NiChrome (80/20) alloy
Maximum Service Temperature:	1000°F (538°C)
Wear Resistance: (ASTM G-65 Schedule A volume loss)	20 - 35 mm ³

TYPICAL APPLICATIONS

- Cam Screws
- Camshafts
- Plug Gauges
- Nozzles
- Tool Rests
- Tappets
- Ceramic Die Cutters
- Ball Joints
- Molds
- Mandrels
- Valve Seats

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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