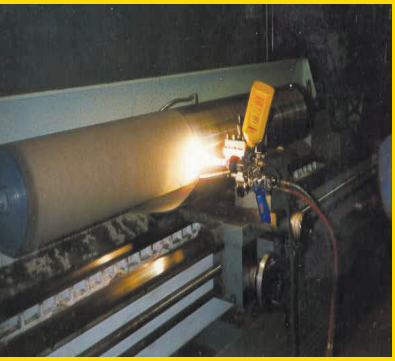
A Hot Process Multi-Component, Nickel-Base Alloy Powder

Eutalloy® 10009




COATING

- 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

Castolin Eutectic®
Eutectic Castolin

DESCRIPTION:

Eutalloy 10009 is a multi-component nickel-base 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 or Ultrajet Eutalloy thermal spray processes. For applications on surfaces of steels, stainless steels, cast irons and nickel-base alloy 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.

APPLICATIONS:

- Cams Screws • Ceramic die cutters • Camshafts
- Ball joints • Plug gauges • Molds Nozzles
- Mandrels Tool rests • Valve seats • Tappets

TECHNICAL DATA:

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: 50 $inch^2$ per pound, 1/16" thick

Coating Properties

Typical Hardness: Rockwell C scale 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

FINISHING PROCEDURE:

Grinding Wheel Type: Green Silicon Carbide
Grit Size: 60 - 80
Grade: H (soft)
Structure: 5
Bond Type: Vitrified
Wheel Speed: Use Manufacturer's Recommendation
Work Speed: 50 -65 surface feet per minute
Traverse Speed: Roughing, 5-15" per minute Finishing, 3-8" per minute
In-Feed: Roughing, 0.001"per pass Finishing, 0.0005" 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.

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EUTECTIC CORPORATION
N94 W14355 Garwin Mace Drive
Menomonee Falls, WI 53051 USA
Tel.: +1 (800) 558-8524
eutectic.com

EUTECTIC CANADA
428, rue Aimé-Vincent
Vaudreuil-Dorion, Québec
J7V 5V5 Canada
Tel.: +1 (800) 361-9439
eutectic.ca