

Cobalt-Based, Atomized, Self-Fluxing Alloy Powder

Eutalloy[®] 10092



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 or Ultrajet Eutalloy thermal spray processes



DESCRIPTION:

Eutalloy 10092 is a cobalt base atomized powder designed for use with the one-step, spray and fuse process. Alloying additions of chromium and tungsten allow the coating to be used where the following properties are required

- Oxidation Resistance to 1800° F
- Hot Hardness to 1500° F
- Hot Corrosion Resistance
- Room Temperature Corrosion Resistance

The elevated temperature properties of 10092 make it suitable for a wide range of applications including the repair of hot metal working tools such as punches and ingot tongs. In addition, cobalt chromium alloys such as 10092 have given good performance on valves, valve trim and various parts used to convey sewage.

APPLICATIONS:

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

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.

HEALTH & SAFETY:

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 web site for Material Safety Data Sheet (MSDS) information. DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH

TECHNICAL DATA:

Powder 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/inch² per pound @ 1/16" thickness.

Coating Properties

Hardness: Rockwell C scale 59
Density: 7.6 g/cc
Approximate Thermal Expansion: 200-1000° F $7.4 \times 10^{-6}/F$
1000-1400° F $7.2 \times 10^{-6}/F$
1400-1800° F $8.0 \times 10^{-6}/F$
Electrical Conductivity: Should be similar to NiChrome (80/20) alloy
Maximum Service Temperature: 1550°F (843°C)

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