

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: Vitriified
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.

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

Typical Hardness: 49 HRC

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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