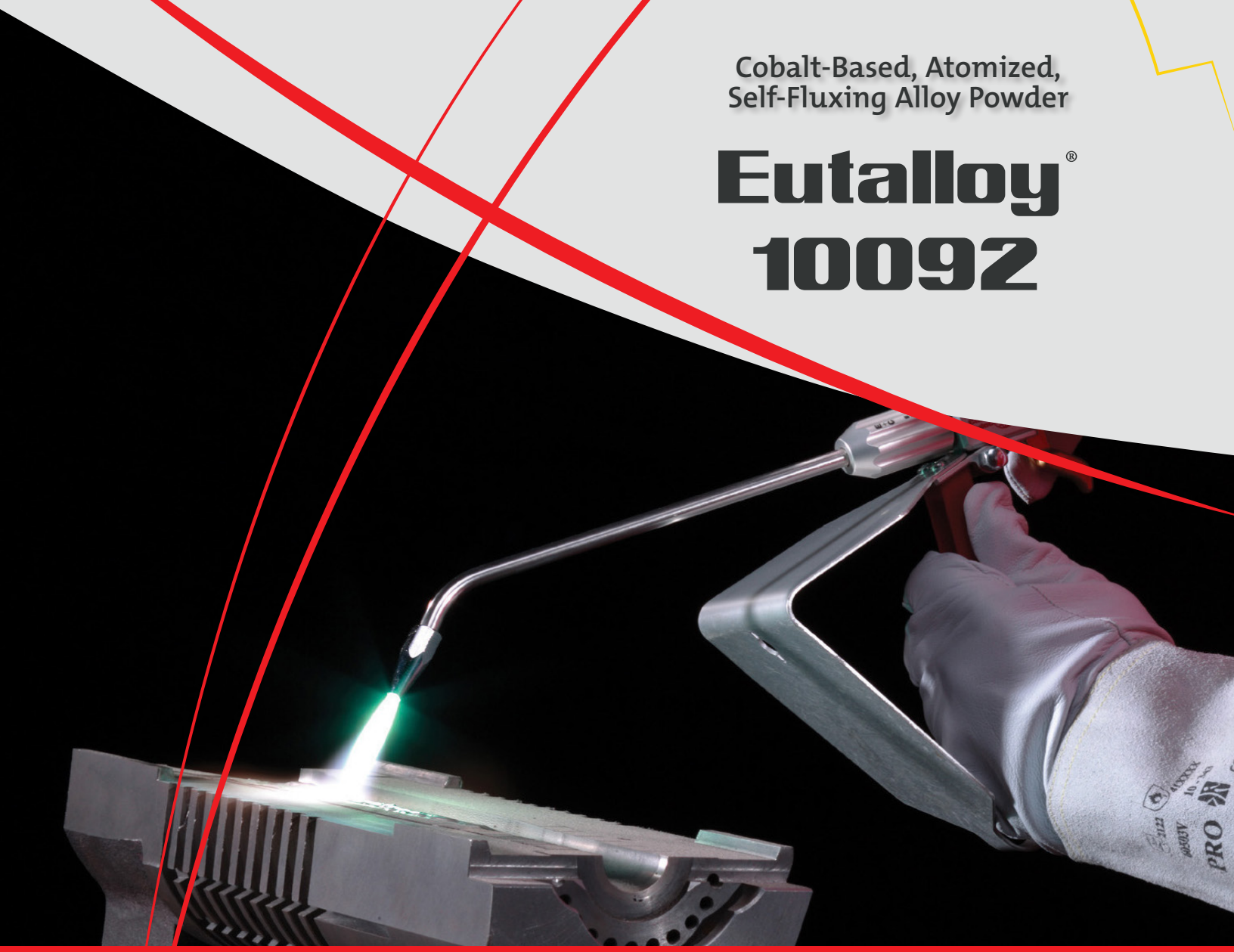
Castolin Eutectic®
Eutectic Castolin

Cobalt-Based, Atomized,
Self-Fluxing Alloy Powder

Eutalloy® 10092



- 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 thermal spray process

Eutalloy® 10092

Eutalloy 10092 is a cobalt based 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.

TECHNICAL DATA

Typical Coating Properties	
Hardness:	HRC 47 - 52
Density:	7.6 g/cc
Approx. Thermal Expansion:	200 - 1000°F 7.4 x $^{10\text{-}6}$/°F 1000 - 1400°F 7.2 x $^{10\text{-}6}$/°F 1400 - 1800°F 8.0 x $^{10\text{-}6}$/°F
Electrical Conductivity:	Should be similar to NiChrome (80/20) alloy
Maximum Service Temperature:	1550°F (843°C)
Typical Powder Properites	
Magnetic Properites:	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
Approx. Melting Range:	Solidus: 1750°F (954°C) Liquidus: 1950°F (1066°C)
Powder Coverage:	1 lb. per 50 in² @ 1/16"

PROCEDURE FOR USE

Finishing Procedures:

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	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

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.

TYPICAL APPLICATIONS

- Cams Screws
- Camshafts
- Plug Gauges
- Nozzles
- Tool Rests
- Tappets
- Ceramic Die Cutters
- Ball Joints
- Molds
- Mandrels
- Valves 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 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 website for Material Safety Data Sheet (MSDS) information. DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH.

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