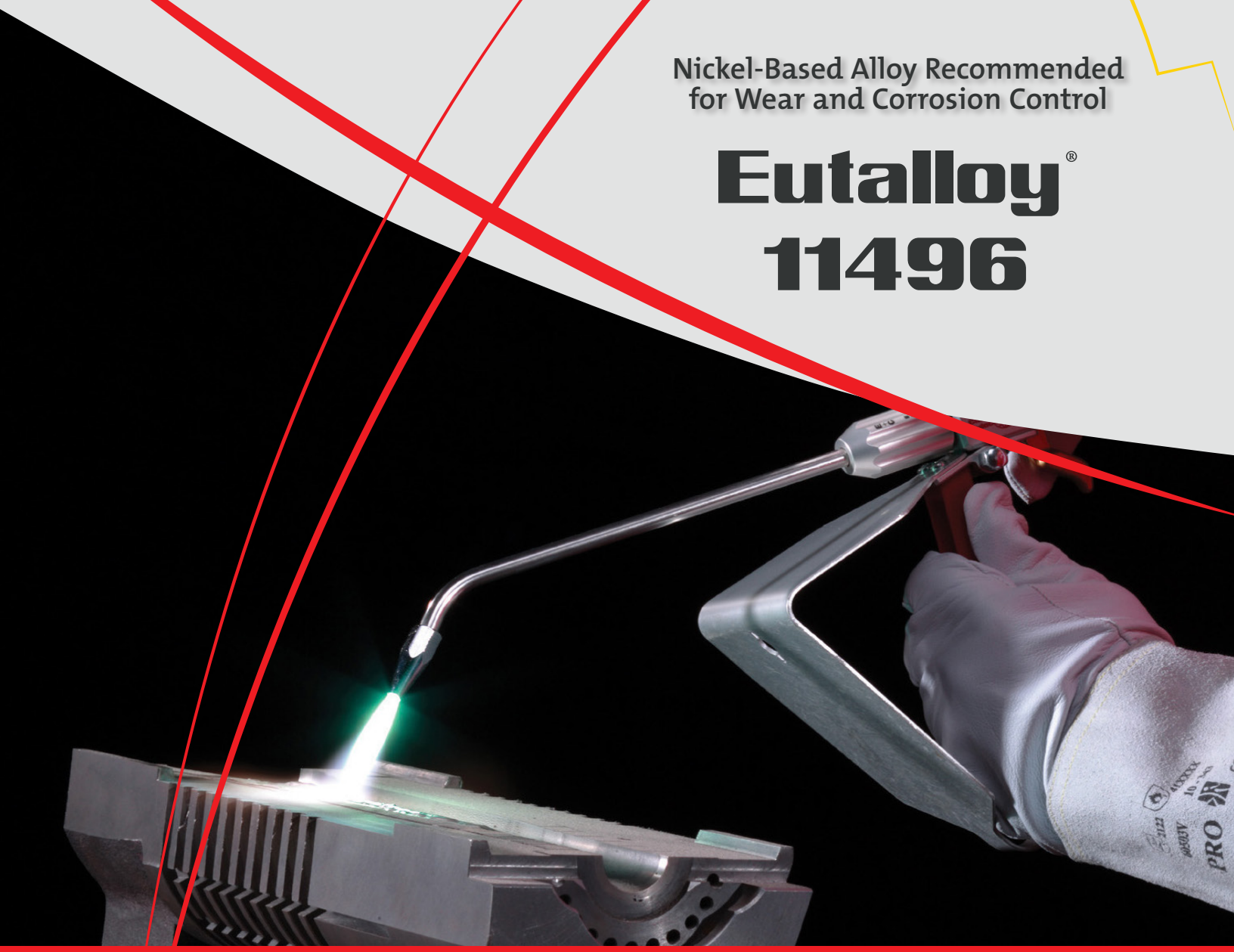
Castolin Eutectic®
Eutectic Castolin

Nickel-Based Alloy Recommended
for Wear and Corrosion Control

Eutalloy® 11496



- Ideal for protective coating, joining and cladding applications
- The deposit is easy to machine with standard cutting tools
- Exceptionally heat resistant
- Ideal for protection against metal-to-metal friction

Eutalloy® 11496

Eutalloy 11496 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 a "puddle type" torch such as the SuperJet S. 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.

TECHNICAL DATA

Typical Powder Properties	
Nominal Composition:	Nickel, Chromium, Boron, Silicon, Iron & Carbon
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 (955°C) Liquidus: 1950°F (1065°C)
Powder Coverage:	50 in^2 per lb @ 1/16"
Typical Coating Properties	
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

PROCEDURE FOR USE

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	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.

TYPICAL APPLICATIONS

- Cams 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 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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