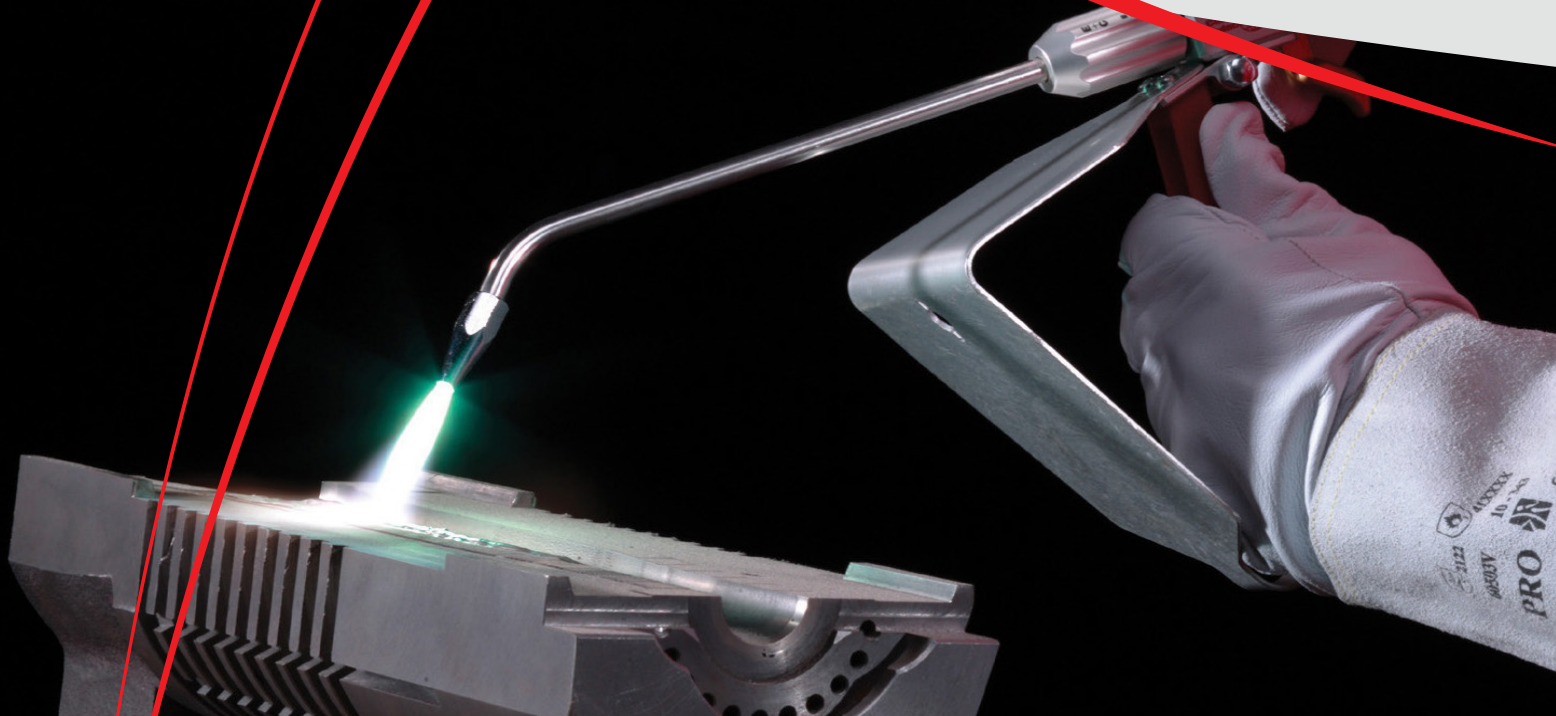




Nickel-Based Fusible Alloy
with Tungsten Carbide

Eutectic®

4550



- 60% cast and crushed tungsten carbide particles
- Excellent resistance to abrasion and erosion
- Coating can be finished by grinding

Eutectic® 4550

Eutectic 4550 is a nickel-based fusible alloy with 60% cast and crushed tungsten carbide particles. Coatings of 4550 offer exceptional resistance to abrasion and erosion and can be finished by grinding. Eutectic 4550 is manufactured by a process of atomization, designed to ensure both optimum spheroidization and controlled granulometry. This ensures trouble-free fusion of the alloy using our SuperJet S Eutalloy torch. This maintenance-engineered coating technology increases the value and reliability of treated parts and offers far superior results than conventional repair processes.

FINISHING PROCEDURE

Grinding Wheel Type: Green Silicon Carbide (Roughing)
Grit Size: 60 - 120
Grade: I - L
Structure: 5 - 6 - 7
Bond Type: Vitrified
Wheel Speed: 6500 ft. per minute
In-Feed: 0.001 in. per pass
Coolant: Flood coolant with rust inhibitors

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.

Grinding Wheel Type: Aluminum Oxide (Finishing)
Grit Size: 120 or finer
Grade: I - L
Structure: 7 - 8 - 9
Bond Type: Vitrified
Wheel Speed: 6500 ft. per minute
In-Feed: 0.0005 in. per pass, or less
Coolant: Flood coolant with rust inhibitors

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.

PROCEDURE FOR USE

Preparation and Powder Overlay: Clean the work piece and adjacent areas with Eutectic Rotoclean to remove all traces of grease, oil and surface contaminants.

Grit blast the surface to be coated with angular chilled iron grit (G16), or aluminum oxide grit, 16 - 24 media. Establish a surface finish of 2 - 3 mill profile and spray with Rotoclean again to remove any trace of contamination.

Pre-heat work piece to 350°F - 400°F (178°C - 204°C). Apply Eutectic 4550 Wc overlay powder to the desired thickness, allow 20% overspray at this point to accommodate coating shrinkage during the fusing process. Proceed to heat the workpiece uniformly to a "cherry red" temperature. Fuse from the leading edge of the coating advancing to complete the fusing of the sprayed area.

TECHNICAL DATA

Typical Values	
Matrix Hardness:	HRC 59
WC Hardness:	Vickers 1900
Maximum Operating Temp.:	1000°F (550°C)
Volume Loss (G-65):	10 - 12 mm ³
Matrix Chemistry:	Ni-Cr-B-Si-Fe

TYPICAL APPLICATIONS

Coating of machine parts used in the transport, handling, and processing of minerals:

- Ammonia Knives
- Clay Mixers
- Hay Cube Dies
- Augers
- Brush Hog Blades
- Pump Screws
- Fan Impellers
- Root Cutters

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 T55-85, "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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