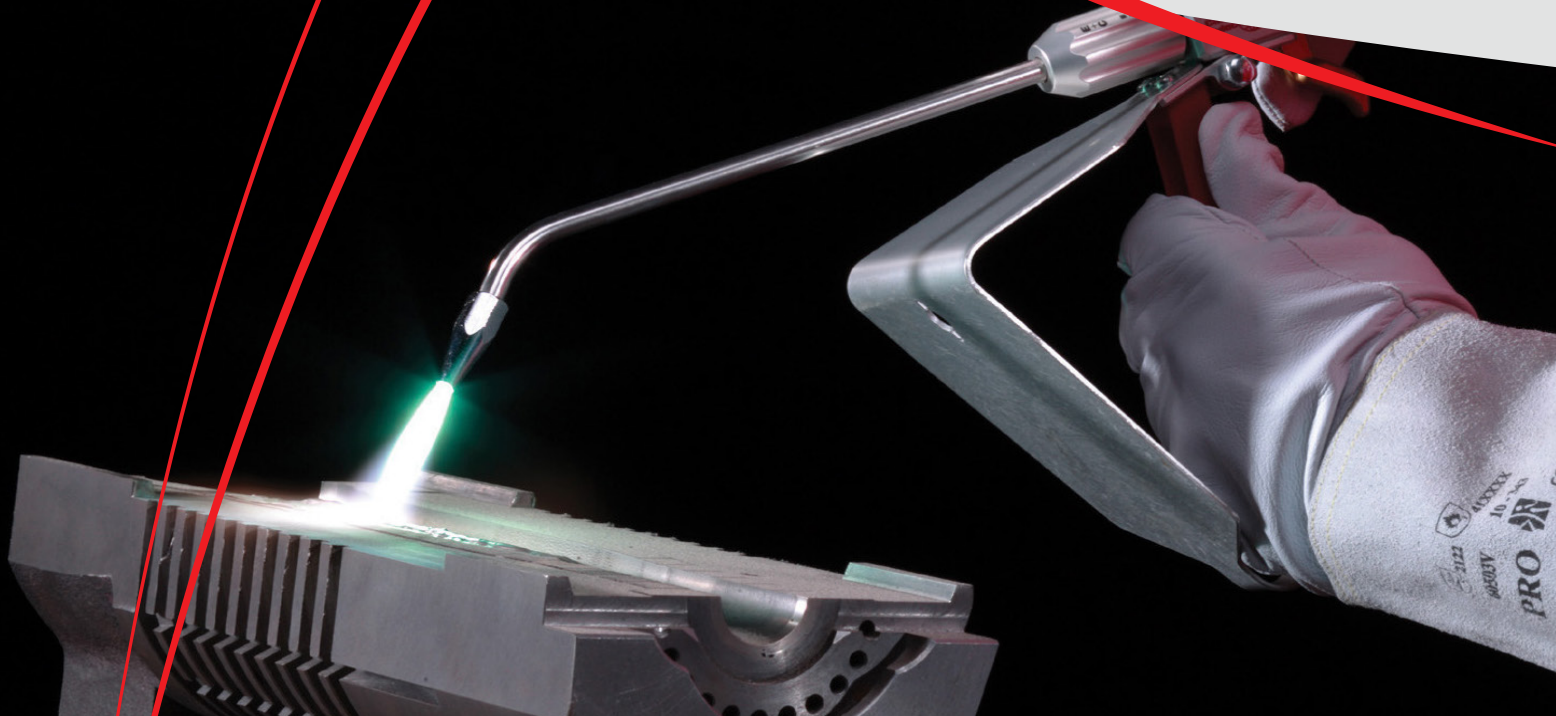




Nickel-Based Alloy Recommended
for Cast Iron Protection and Repair

Eutectic®

4510



- 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

Eutectic® 4510

Eutectic 4510 is a nickel-based alloy with properties which make it ideal for protective coating, joining and cladding applications on a variety of base metals including steels, cast irons and nickel alloys. The deposit is easy to machine with standard cutting tools, and has a low coefficient of friction. It's wear resistance properties make it exceptionally heat resistant and ideal for protection against metal-to-metal friction. Eutectic 4510 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.

PROCEDURE FOR USE

Preparation:

All surfaces to be coated should be thoroughly cleaned, removing all contaminants, oxides and grease. Thin surfaces and edges require no preheating. However, large, heavy and cast iron parts of all thickness should be heated to about 575°F (approx. 302°C) (blue hot).

Coating Instructions:

For coating operations the flame of the SuperJet S torch should be adjusted to neutral with the powder feed on. To prevent oxidation of the base material we recommend spraying a thin coat of Eutalloy 10224. A second coat is delivered in the following manner: preheat locally to fusion point (when the first coat becomes glazed in appearance), then spray and fuse the second coat simultaneously.

Move progressively along, spraying and fusing, until the entire surface is covered. Distance between the cone of the flame and the piece should be 0.25 - 0.75 inch. Leave the part to cool slowly and away from air currents. Where possible, place it in vermiculite or cover with a thermal blanket.

TECHNICAL DATA

Typical Powder Properties

Composition:	Alloys of Nickel, Silicon and Boron
Hall Flow Rate:	13-14 seconds
Apparent Density:	4.6 - 4.8 g/cc

Typical Coating Properties

Macro Hardness:	HRC 18
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TYPICAL APPLICATIONS

- Journals
- Exhaust Manifolds
- Machining Defects
- Deep-Drawing Die Repairs
- Gearwheels
- Casting Defects

Eutectic 4510 is recommended for rectifying both machining and casting defects and as protection against oxidation.

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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