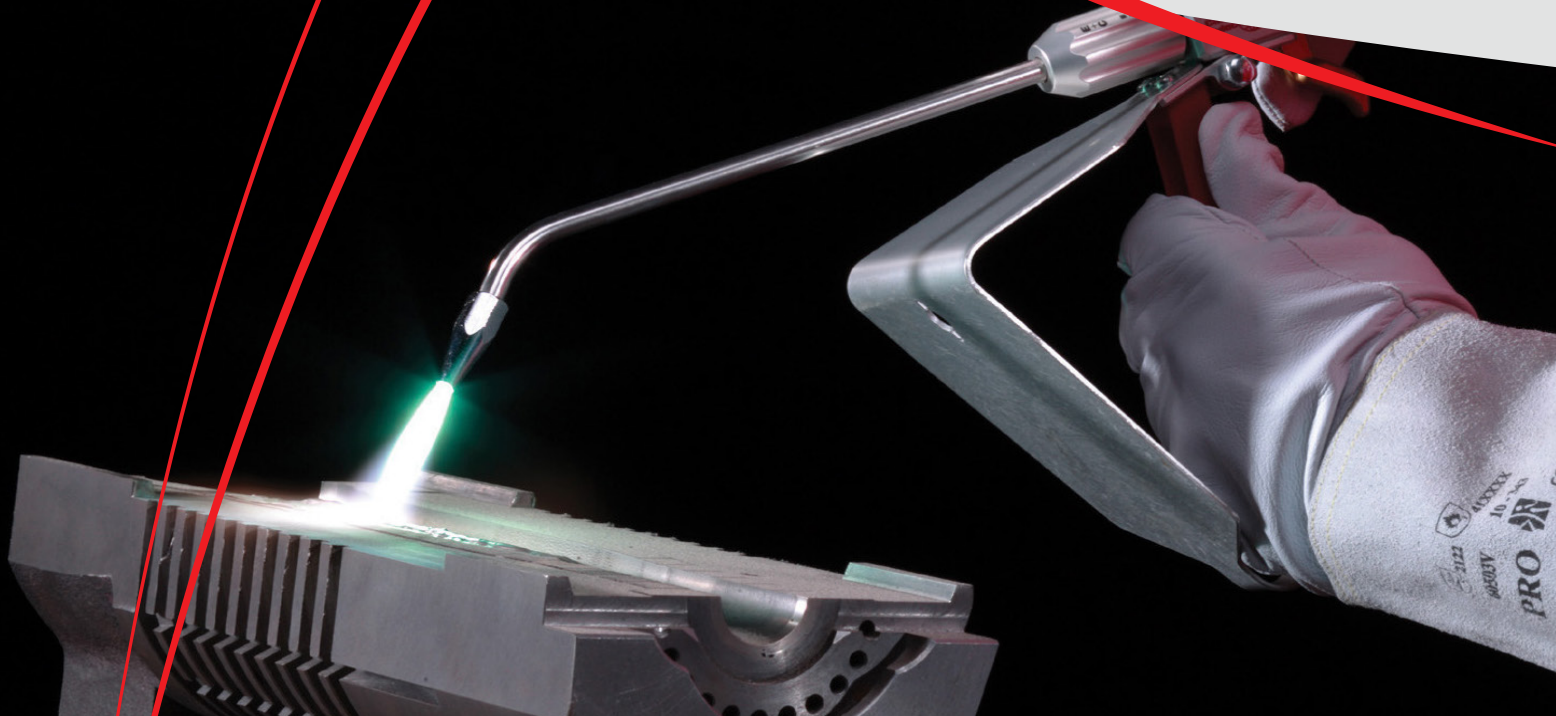




Nickel-Based Alloy Recommended  
for Cast Iron Protection and Repair

# **Eutalloy®**

## **10680**



- Deposits are easily machinable and porous-free
- Compressive strength - resists deformation at high temperatures
- No deposition scaling with increased temperatures
- Precise deposition with minimal overspray

# Eutalloy® 10680

Eutalloy 10680 is a premium nickel-based alloy powder designed to provide easy build-up on cast iron parts with excellent machinability. Machined deposits are bright and porosity free. The hardness of this alloy promotes good edge integrity while not detracting from its machinability. The high compressive strength of this alloy resists deformation at elevated temperatures. Deposits will not scale even at elevated temperatures. The Eutalloy process permits precise deposition with a minimal amount of overspray. Thin, tough overlays can be applied and dimensional tolerances maintained.

### Equipment:

Eutalloy 10680 may be applied by the SuperJet S Eutalloy torch using acetylene as the fuel gas.

## TECHNICAL DATA

Typical Powder Properties	
Nominal Composition:	Nickel, Boron, Silicon
Hall Flow Rate:	14 seconds
Bulk Density:	4.8 g/cc
Typical Coating Properties	
Tensile Shear Strength:	75,000 psi
Hardness:	HRB 95
Maximum Service Temperature:	1200°F (649°C)
Thickness Limit:	None

## 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 thicknesses 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.

## TYPICAL APPLICATIONS

General-purpose build-up and dimensional restoration for cast iron and steel parts such as:

- Gear Shafts
- Clutches
- Patterns
- Templates

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 T5S-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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