

Nickel-Based Alloy Recommended for Cast Iron Protection and Repair

Eutalloy® 10680



COATING

- 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



DESCRIPTION:

Eutalloy 10680 is a premium nickel base alloy powder designed to provide easy build-up on cast iron parts and 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.

TECHNICAL DATA:

Powder Properties

Nominal Composition: Nickel, Boron, Silicon
Hall Flow Rate: 14 seconds
Bulk Density: 4.8 g/cc

Coating Properties

Hardness: Rockwell C scale 21
Maximum Service Temperature: 1000° - 1400°F
538° - 760° C
Thickness Limit: Unlimited

APPLICATIONS:

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

- Gears Shafts
- Patterns
- Clutches
- Templates

EQUIPMENT:

Eutalloy 10680 may be applied by either the Eutalloy B torch or the UltraJet Eutalloy torch using acetylene as the fuel gas.

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 Eutalloy B or 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 .25 - .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

HEALTH & SAFETY:

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 web site for Material Safety Data Sheet (MSDS) information.

DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS



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