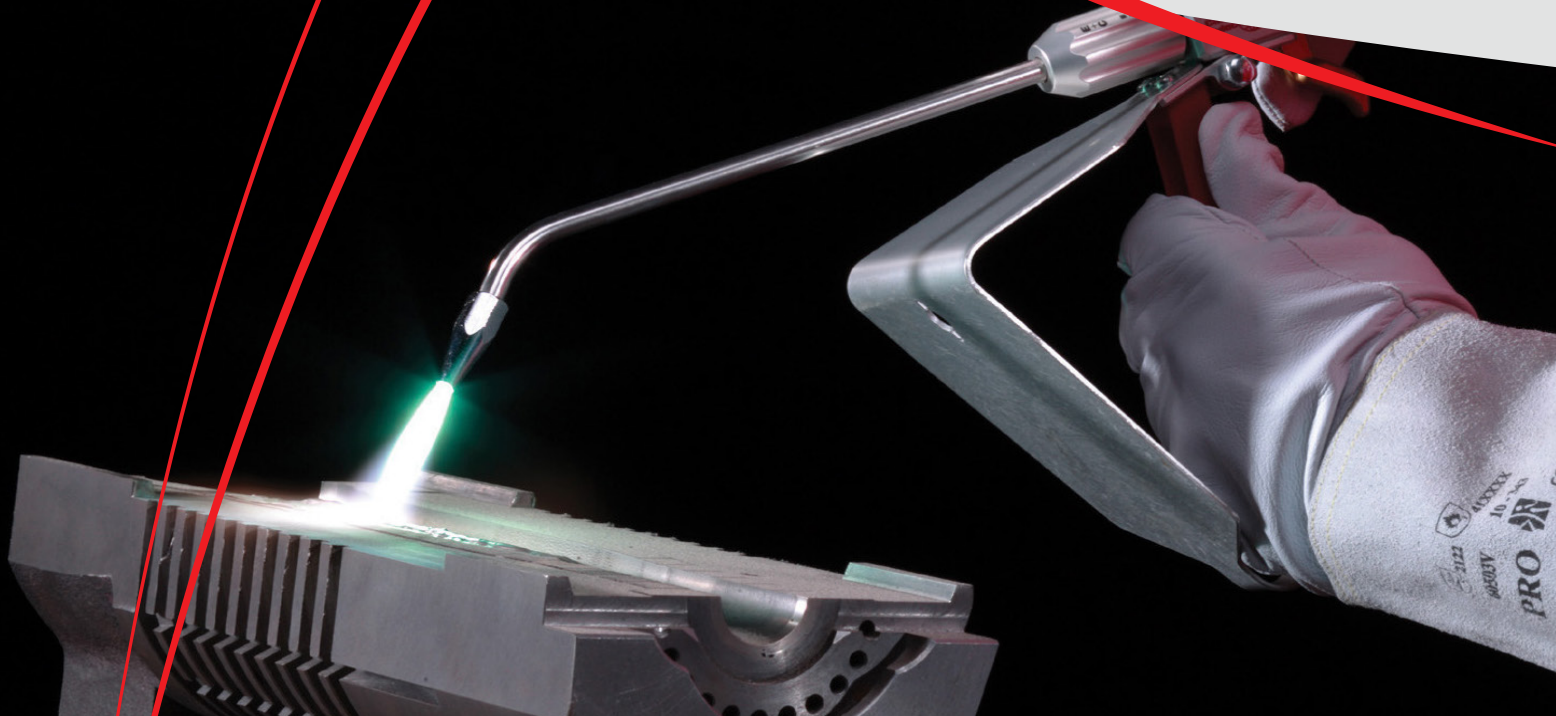




Nickel-Based Alloy Recommended  
for Cast Iron Protection and Repair

# **Eutalloy®**

## **10224**



- 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® 10224

Eutalloy 10224 (NiTec) 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 and wear resistance properties which make it ideal for protection against metal-to-metal friction. It is also exceptionally heat resistant.

Eutalloy 10224 is manufactured by a process of atomization, designed to ensure both optimum spheroidization and controlled granulometry. This in turn ensures trouble-free fusion of the alloy using our SuperJet Eutalloy torch. Eutalloy 10224, applied with a Eutalloy system, produces smooth and uniform quality coatings.

This maintenance-engineered coating technology increases the value and reliability of treated parts with results far superior to conventional repair processes.

## TECHNICAL DATA

Typical Values	
Typical Hardness:	HRB 90
Melting Range:	1920 - 2330°F (1049 - 1277°C)
Density:	0.293 lb/in <sup>3</sup>
Heat-stability:	1112°F (600°C)
Metal-to-metal Friction Property:	Excellent
Corrosion Resistance:	Very Good
Machinability:	Excellent, with normal cutting tools
Base Materials:	For steels, cast irons, and nickel alloys
Gases:	Oxygen-acetylene
Torches:	Eutalloy B and SuperJet-S

Eutalloy 10224 is recommended for rectifying both machining and casting defects, as well as for protective coatings against oxidation, with a considerable gain in service life for a number of parts.

## 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 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 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

Recommended for corrosion and wear resistant coatings on journals, gearwheels and exhaust manifolds. Also, for repair of casting and machining defects and for repair of worn areas of deep-drawing dies.

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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