



High Performance, Atomized
Nickel-Alloy Powder

Eutectic[®]

12494



- Extremely durable coatings with a variety of uses
- Controlled composition based on AWS A5.13
- Precise particle sizing ensures coating consistency

Eutectic® 12494

Eutectic 12494 is a high performance atomized nickel alloy powder optimized to produce durable, abrasion, and friction resistant coatings with a multitude of thermal spray process equipment.

Controlled composition based on AMS 4775C and precise particle sizing ensures consistent deposition, fusing and hardness.

TECHNICAL DATA

Powder Properties

Melting range: Solidus; 1790°F (977°C)
Liquidus; 1950°F (1065°C)
Furnace Fusing; 2170°F (1188°C)

Hall Flow Rate: 18 seconds

Bulk Density: 4.1 g/cc

Powder Coverage: 0.042 lbs/ft² @ 0.001"

Coating Properties

Typical Macro-Hardness: Rockwell C Scale, 36

Typical Density: 7.6 g/cc

Approx. Thermal Expansion: 200°F - 1000°F: 7.4x¹⁰-6/°F

1000°F - 1400°F: 7.2x¹⁰-6/°F

1400°F - 1800°F: 8.0x¹⁰-6/°F

PROCEDURE FOR USE

Grinding Wheel Type: Green Silicon Carbide

Grit Size: 60 - 80

Grade: H (soft)

Structure: 5

Bond Type: Vitrified

Wheel Speed: Use Manufacturer's Recommendation

Work Speed: 50 -65 surface feet per minute

Coolant: Flood coolant with rust inhibitors in 2-5% concentration

	Traverse Speed	In-Feed
Roughing	5-15 inches per minute	0.001 inches per pass
Finishing	3-8 inches per minute	0.0005 inches per pass or less

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.

TYPICAL APPLICATIONS

- Shafts
- Gears
- Tools
- Gauges
- Feed Rolls
- Molds
- Keyways

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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