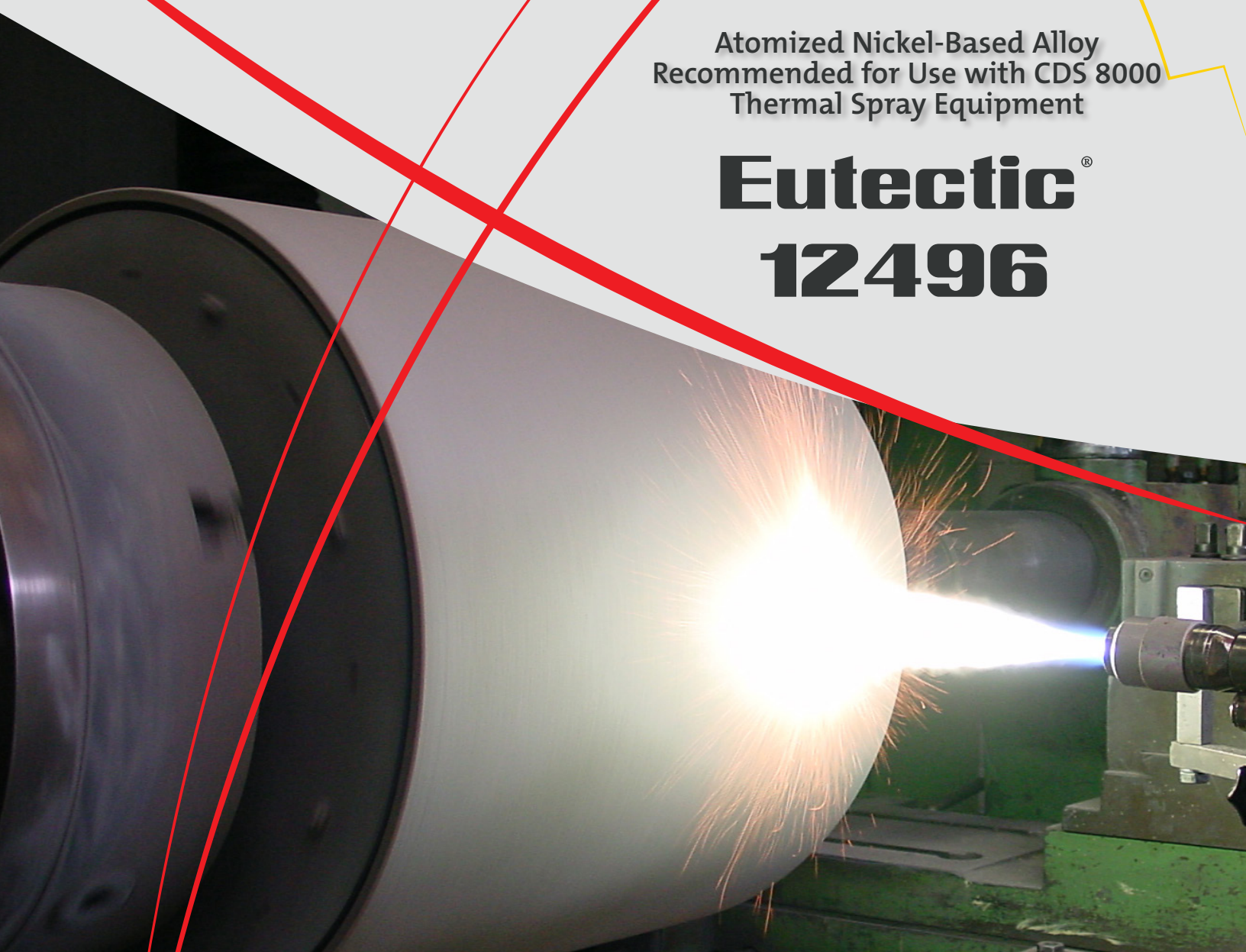




Atomized Nickel-Based Alloy  
Recommended for Use with CDS 8000  
Thermal Spray Equipment

# **Eutectic®**

# **12496**



- Exceptionally hard deposits have high resistance to abrasion and friction
- May be used in a wide variety of thermal spray processes
- Non-magnetic alloy

# Eutectic® 12496

Eutectic 12496 is a high performance atomized nickel alloy powder optimized to produce hard, durable, abrasion, and friction resistant coatings. Controlled composition and precise particle sizing ensures consistent deposition, fusing and hardness.

Eutectic 12496 is primarily for use with air assisted combustion torch systems and is also well suited for use with the CDS 8000 / SF Lance.

## TECHNICAL DATA

### Powder Properties

Melting range: Solidus; 1750°F (954°C)  
Liquidus; 1950°F (1065°C)  
Furnace Fusing; 2170°F (1188°C) (set point)

Hall Flow Rate: 17 seconds  
Bulk Density: 4 g/cc  
Magnetic Properties: Non-Magnetic  
Chemistry: Nickel, Chromium Fusible Alloy

### Coating Properties

Typical Hardness: 59 HRC  
Density: 7.6 g/cc  
Shrinkage on Fusing: 17-20 %  
Coating Coverage: 0.042 lbs/ ft<sup>2</sup> @ 0.001"  
Maximum Service Temperature: 1200° F (650° C)

## 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

- Brake drums for centrifugal separators
- Super heated nozzels • Pump impellers
- Pump seal areas

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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