



A Self-Bonding  
Nickel Aluminum Alloy Powder

# **ThermoTec®**

## **18995**



- Suitable for use with Plasma Non-Transferred Arc and combustion thermal spray systems
- Self bonding to most conventional iron and nickel base alloys
- Meets PWA specification 1380
- Meets GE specification B50TF56 Class B
- Excellent high temperature oxidation resistance

# ThermoTec® 18995

ThermoTec 18995 is a pre-alloyed nickel aluminum powder suitable for use with conventional plasma non-transferred arc and high energy combustion spray systems. The powder undergoes an exothermic reaction during spraying and, as a result, produces coatings that are self-bonding to conventional iron and nickel base alloys.

## TECHNICAL DATA

| Powder Properties           |   |
|-----------------------------|---|
| Melting Point:              | 2620°F (1438°C)                                 |
| Apparent Density:           | 2.8 g/cc  |
| Hall Flow Rate:             | 29 seconds/50 grams                             |
| Coating Properties          |   |
| Macro Hardness:             | 65 HRB  |
| Coating Density:            | 7.2 g/cc (combustion)<br>7.4 g/cc psi (plasma)  |
| Bond Strength (ASTM C-633): | 5000 psi (combustion)<br>6000 psi (plasma)      |
| Max. Service Temperature:   | 1200°F (650°C)                                  |
| Surface Roughness:          | As-Sprayed 200 µin AA<br>As-Ground 10-20 µin AA |

## PROCEDURE FOR USE:

ThermoTec 18995 is typically used as a bond coating for metals, ceramics and abradable top coatings. The powder can also be used as a single coating for build-up and general restoration applications.

ThermoTec 18995 is a premium grade, high performance powder suitable for use in aircraft related applications. It meets several aircraft specifications including GE B50TF56 Class B and Pratt & Whitney 1380.

Coatings may be finished by machining with carbide tools or grinding.

## TYPICAL APPLICATIONS

- Cylinder Liners
- Expansion Joints
- Compressor Air Seals
- Pump Components
- Flap Tracks

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.



**Eutectic Corporation:**  
N94 W14355 Garwin Mace Dr.  
Menomonee Falls WI, 53051 USA  
+1 800. 558. 8524 • eutectic.com

**Eutectic Canada:**  
428, rue Aimé-Vincent Vaudreuil-Dorion,  
Québec J7V 5V5 Canada  
+1 800. 361. 9439 • eutectic.ca



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