



## **AMTEC PRO 3000 BOND COAT LOW TEMPERATURE SPRAY POWDER**

### **PRIMARY COATING FOR BONDING STRENGTH**

#### **General Characteristics**

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**Amtec PRO 3000 Bond Coat is a special “inert gas atomized” powder used as a preliminary coating of 0.005” to 0.010” thickness, applied before putting on a finish coating. It can easily bond to clean oxide-free smooth surfaces, giving a bonding strength of over 3000 PSI. Higher bond strengths are obtained on surfaces that are blast cleaned with angular grit, or machined down with a threaded undercut. The bonded coating of PRO 3000 is left in the as-sprayed condition to facilitate bonding of the finishing coat of the selected build-up powder. The particle size distribution in the powder is designed to eliminate fuming during the spraying process.**

#### **Procedure**

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**Follow the operating instructions for the Amtec PRO TORCH exactly for easy and successful results. Do not overheat the part being built up over 500°F, or the powder may crystallize and the process may fail. Use a 500°F Tempel Stick to check your heat input, and if it gets to the above temperature range, let the part rotate in the lathe until it cools, then continue with the build-up.**

#### **Application**

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**Amtec PRO 3000 Bond Coat is used primarily as an initial or primary bond coat on any type of shafting material except pure copper. The low temperature spray process was designed primarily to rebuild worn areas on shafts. Areas are worn due to loose bearing races, abrasion from packing glands, scars from bearings and bearing seals, or any area that wears from friction. The amazing thing about the low temperature process is that a worn shaft can be placed in a lathe, prepared, sprayed, machined, and put back in service in less than one-half hour, and the part never gets warmer than 500°F. What makes this process so unique, is the bonding application which is critical to a successful build-up. The heated bond particles are transferred by flame to the shaft and a molecular bond is formed by small particles fusing with the many surfaces created by the threading process. This forms a strong enough bond for the finish coats to be applied on top of the bond coat for a successful build-up.**

#### **Typical Properties**

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<b>Nominal Chemistry:</b>	<b>Nickel 5.0, Aluminum 95.0</b>
<b>Bond Strength:</b>	<b>3500 PSI</b>
<b>Deposit Density:</b>	<b>7.3 g/cc</b>
<b>Particle Size:</b>	<b>-140+325 mesh</b>
<b>Melting Temperature: Aluminum</b>	<b>1220°F</b>
<b>Nickel</b>	<b>2650°F</b>
<b>Packaging:</b>	<b>Available in 1 lb. and 5 lb. containers</b>

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