

Proxon 21021

Pre-Alloyed, Self-Bonded Powder Which produces Homogenous Coatings With Conventional Combustion Or Plasma Thermal Spray Equipment

DESCRIPTION

ProXon 21021 is a pre-alloyed, self-bonding powder which produces homogenous coatings with conventional combustion or plasma thermal spray equipment. The unique exothermic nature of the powder minimizes dependence on operator technique to obtain excellent quality coatings. A separate bond coat material is not required.

21021 powder is specially designed to produce coatings for many applications involving wear due to abrasion, particle erosion, fretting and bearing-fit surfaces. Coatings exhibit excellent inter-particle and tensile bond strengths. This results in an extremely "tough" coating that will display excellent impact resistance for a thermal spray coating.

Coating can be deposited more economically than other conventional self-bonding materials, with all spray systems, due to higher spray rates, higher deposit efficiencies and greater coverage per pound. Additionally, because of the unique Manufacturing process used to produce Proxon 21021 nozzle build-up and loading, frequently a problem with composite self bonding powders, is eliminated.

Product Details:

- Minimal operator technique needed for excellent coatings
- Separate bond coating material is not required
- Excellent impact resistance for a thermal spray coating
- May be finished by machining

APPLICATIONS

Thickness Limit: >0.125 inch

Transportation:

Crankshafts, Timing Gear Fits, Pulley Fits, Thrust faces

Pulp and Paper: Pump Shaft, Bearing Fits General:

Dimensional Restoration, Hydraulic Cylinder cases.

PROCEDURE FOR USE:

Preparation:

Clean and preheat the spray areas to 50 – 150°C. Remove damaged material and round off edges.

Spraying:

Roughing can be done at 0.004 inch per revolution crossfeed with infeed of 0.010 to 0.030 inch.

Apply the powder in the preheated state to achieve the desired coating thickness. Maintain the spray layer temperature between 50°C and 200°C. Do not exceed a coating thickness of 2 mm.

Cooling: Allow the coating to cool in still air. Good machined finishes can be obtained using carbide tools with low turning speeds in the range of 50 to 80 surface feet per minute.

Finishing can be done at less than 0.004 inch per revolution crossfeed with infeed of less than 0.005 inch (turning speed can be increased somewhat for finishing). Coolants and applications involving corrosion should be avoided. Note: please refer the parameters given in operation manual.

TECHNICAL DATA

Values	Combustion	Plasma
Macrohardness:	78 HRB	84 HRB
Microhardness:	175 DPH	215 DPH
Bond Strength:	>5000 psi	> 6000 psi
Max. Service Temperature: 1200°F (649°C) Melting Point: 2500°F (1371°C)		