



Pre-Alloyed, Self-Bonded Powder which
Produces Homogenous Coatings
with Conventional Combustion or
Plasma Thermal Spray Equipment

ProXon®

21021



- 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

ProXon® 21021

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.

Coatings 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.

TECHNICAL DATA

Typical Values	Combustion	Plasma
Typical Macrohardness:	78 HRB	84HRB
Typical Microhardness:	175 DPH	215 DPH
Coating Density:	7.0 g/cc	7.3 g/cc
Consumption (lb/ft ² @0.001"):	0.040	0.044
Interconnected Porosity:	<5%	<3%
Bond Strength:	>5000 psi	>6000psi
Max. Service Temperature:	1200°F (649°C)	
Thickness Limit:	>0.125"	
Melting Point:	2500°F (1371°C)	

Typical Composition:

Aluminum, Molybdenum, Nickel

PROCEDURE FOR USE:

Good machined finishes can be obtained using carbide tools such as D shape, K68 and low turning speeds in the range of 50 to 80 surface feet per minute. Roughing can be done at 0.004 inch per revolution crossfeed with infeed of 0.010 to 0.030 inch. 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 unless the coating is first treated with a sealer such as RotoGuard® or SealTec®-LT.

TYPICAL APPLICATIONS

Transportation:

Crankshafts, Timing Gear Fits, Pully Fits, Thrust Faces

Pulp and Paper:

Pump Shaft, Bearing Fits

General:

Dimensional Restoration, Hydraulic Cylinder Cases

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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