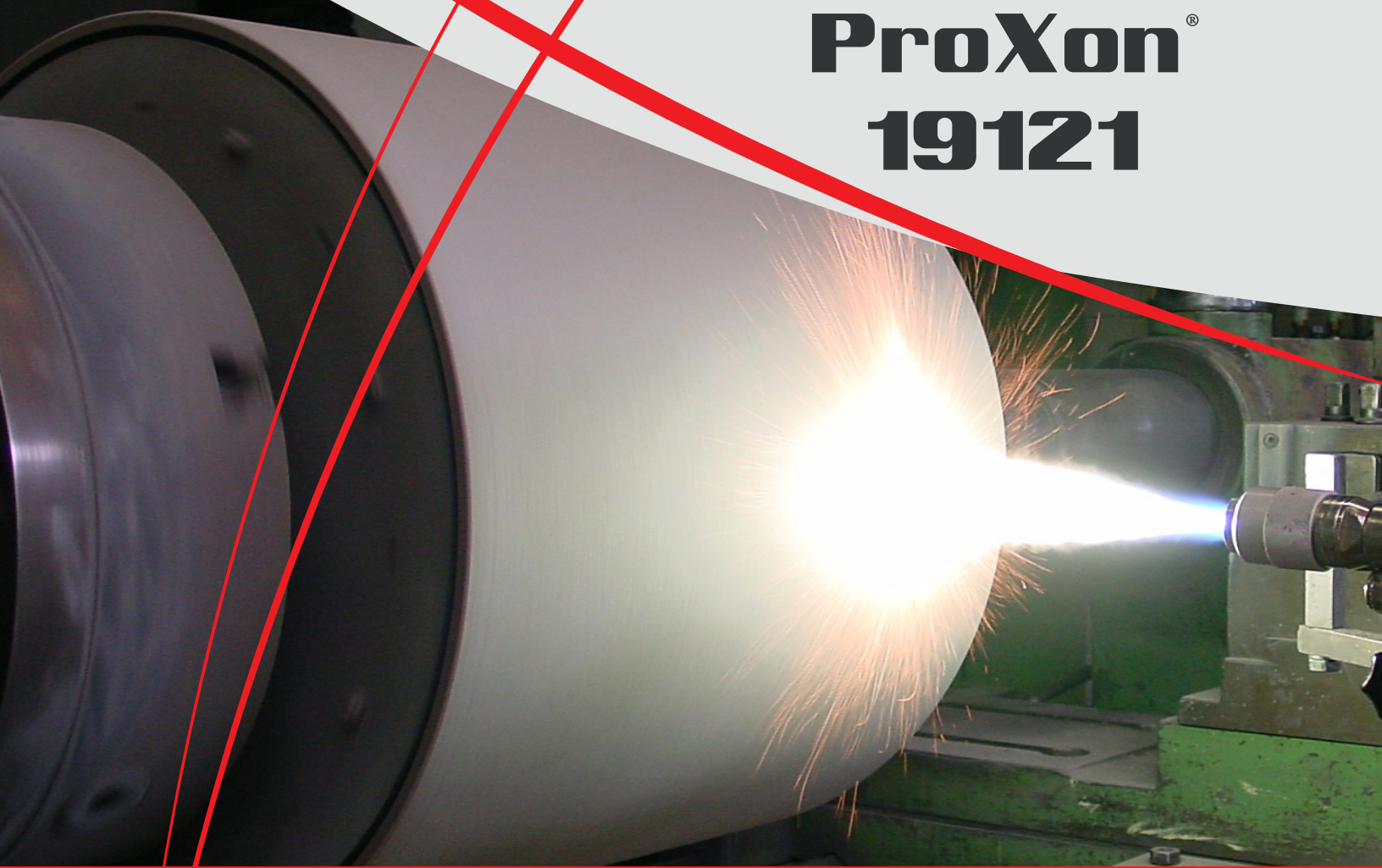




Pre-Alloyed, Self-Bonded Powder  
for Combustion or Plasma  
Thermal Spray Equipment

# **ProXon®**

## **19121**



- 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® 19121

ProXon 19121 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.

19121 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.

## TECHNICAL DATA

Typical Powder Properties		
Melting Point:	2500°F (approx. 1371°C)	
Typical Coating Properties		
	Combustion	Plasma
Macrohardness:	78 HRB	84 HRB
Microhardness:	175 DPH	215 DPH
Coating Density:	7.0 g/cc	7.3 g/cc
Coating Weight (lb/ft <sup>2</sup> @0.001"):	0.040	0.044
Interconnected porosity:	<5%	<3%
Bond Strength:	>5000 psi	>6000 psi
Maximum Service Temp:	1200°F (650°C)	
Thickness Limit:	>0.125"	

## PROCEDURE FOR USE

### Finishing Procedures

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 19121, nozzle build-up and loading, frequently a problem with composite self-bonding powders, is eliminated.

ProXon 19121 can be finished by machining or by grinding using a coarse grain, low-bond strength silicon carbide wheel. Good machined finishes can be obtained using carbide tools such as "D" shaped, 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 should be avoided unless the coating is first treated with a sealer such as Rotoguard or Sealtec-LT.

## TYPICAL APPLICATIONS

- Crankshafts
- Timing Gear Fits
- Pulley Fits
- Thrust Faces
- Pump Shaft Bearing Fits
- 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.



**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



Follow Us On...

