

Pre-Alloyed, One-Step, Abrasion Resistant Coating

Proxon[®] 21041



COATING

- Self-bonding to most iron and nickel base metals
- Excellent resistance to mild abrasion and erosion
- Excellent resistance to corrosion
- Finish by grinding



DESCRIPTION:

Proxon 21041 is a self-bonding nickel chromium powder alloy with additions of boron and silicon to enhance wear properties. Proxon 21041 is a pre-alloyed, atomized powder and will produce homogeneous coatings using conventional combustion or plasma non-transferred arc processes.

The unique exothermic nature of the powder minimizes operator technique to obtain excellent quality coatings. A separate bond coat is not necessary but may be used when extremely thick coatings are applied.

Proxon 21041 has been formulated for use in applications where resistance to mild abrasion or mild abrasion coupled with a corrosion element. Coatings will exhibit excellent inter-particle and tensile bond strengths. The result is a moderately hard, tough coating with good overall engineering properties.

Coatings of Proxon 21041 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. In addition, problems such as nozzle loading frequently experienced with "composite" one-step powders is not an issue with Proxon 21041 due to its unique method of manufacture.

The recommended method of finishing is by grinding using coarse grained aluminum oxide or silicon carbide wheels. Typical machine settings would include a work speed of 70-100 surface feet per minute, a wheel speed of 5500 -6500 surface feet per minute, a traverse speed of 8-20 inches per minute for roughing and 5-10 inches per minute for finishing. Infeeds of 0.0005 – 0.001 inches per pass are recommended for optimum results.

For "wet" applications a sealer such as Sealtec® LT or RotoGuard® should be used.

APPLICATIONS:

- Wear Rings
- Seal Surfaces
- Bearing Fits
- Pump Shafts
- Fan Blades

TECHNICAL DATA:

Typical Coating Properties:

	Combustion	Plasma
Macrohardness:	HRC 32	HRC 36
Coating Density:	6.5 g/cc	6.7 g/cc
Coating Weight:	.034 lb/ft ² -0.001"	.035 lb/ft ² -0.001"
Porosity:	< 5%	< 3%
Bond Strength:	> 4,000 psi	> 5,000 psi
Thickness Limit:	0.100 inches	0.100 inches
Max. Service Temp:	1200°F (650°C)	1200°F (650°C)

Typical Powder Properties:

Typical Chemistry: Nickel/Chromium
Apparent Density: 2.4 g/cc
Hall Flow Rate: 33 sec. per 50 g

HEALTH & SAFETY:

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 TSS-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 web site for Material Safety Data Sheet (MSDS) information.

DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS



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