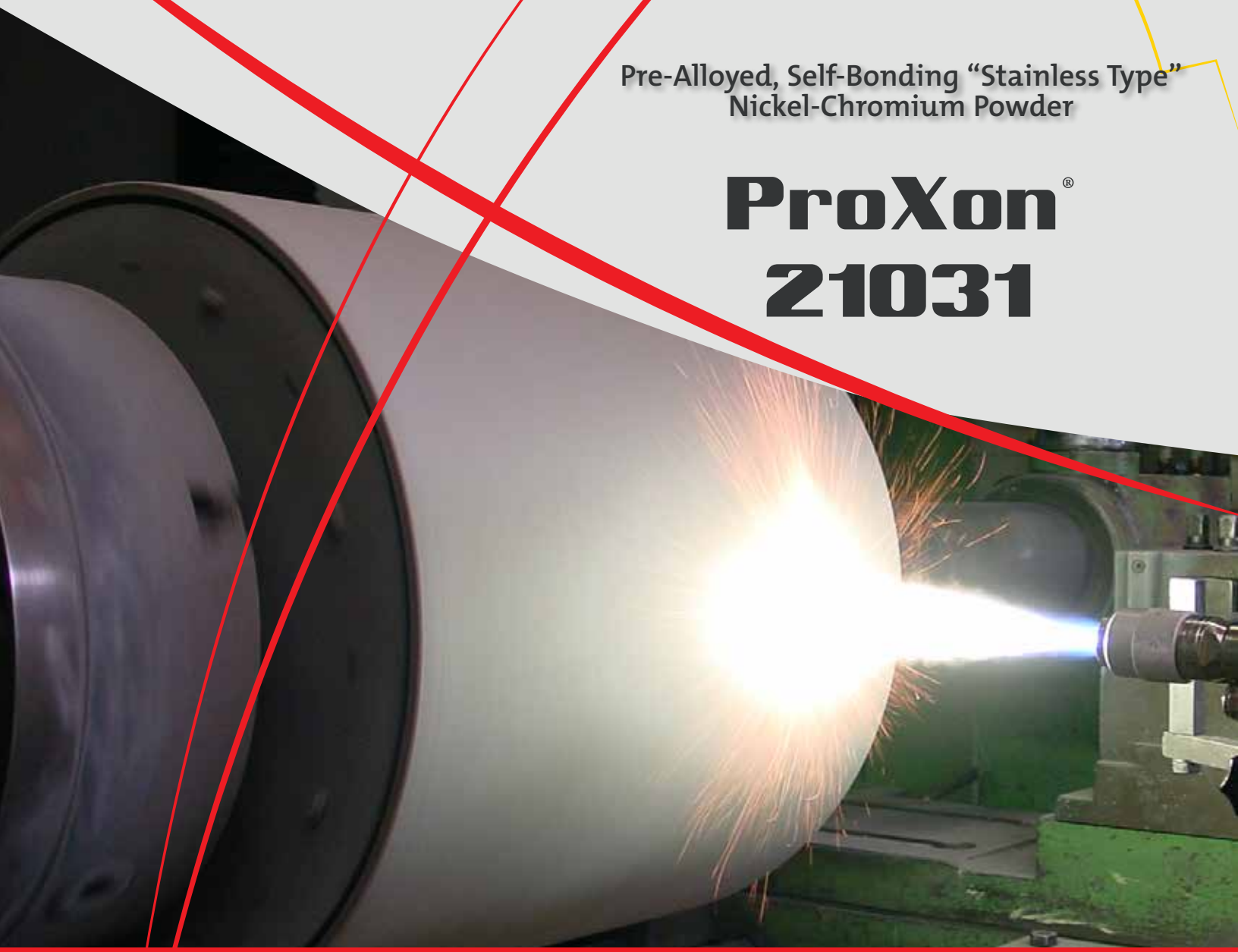
Castolin Eutectic®
Eutectic Castolin

Pre-Alloyed, Self-Bonding “Stainless Type”
Nickel-Chromium Powder

ProXon® 21031



- Excellent impact resistance
- Seperate bond coat is not required
- No nozzle build-up or loading
- Excellent for applications involving corrosion at high temperatures

ProXon® 21031

ProXon 21031 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. 21031 powder is a specially designed "stainless type" nickel-chromium powder particularly well suited for applications involving corrosion at high temperatures. 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 sprayed 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 21031, nozzle build-up and loading, frequently a problem with conventional self-bonding powders, is eliminated.

TECHNICAL DATA

Typical Values	Combustion	Plasma
Typical Macrohardness:	85 HRB	90 HRB
Typical Microhardness:	225 DPH	260 DPH
Coating Density:	6.6 g/cc	6.8 g/cc
Coating Weight (lb/ft²@0.001"):	0.039	0.041
Interconnected Porosity:	<5%	<3%
Bond Strength:	>4000 psi	>5000psi
Max. Service Temperature:	1600°F	1800°F
Coeff. of Thermal Conduct.:	0.25	0.27
Thickness Limit:	>0.125"	
Melting Point:	2550°F (1379°C)	

PROCEDURE FOR USE:

ProXon 21031 finishes best by grinding using coarse grain, low-bond strength corundum (alumina) or silicon carbide wheels. 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 should be avoided unless the coating is first treated with a sealer such as RotoGuard or Sealtec LT.

TYPICAL APPLICATIONS

Utilities:
Pump shaft bearing fit, pump pistons, impeller shafts

General:
Electric motor shafts, end bells, grinder spindle bearings, drill press quills

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 website for Material Safety Data Sheet (MSDS) information. DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH.

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