



An Easy-to-Machine, One-Step, Multi-  
Component Nickel-Base Alloy Powder

# **ProXon<sup>®</sup>** **21022**



- Outstanding machinability
- Separate bond coat is not required
- High quality coatings with minimum operator technique dependence
- Excellent for general purpose build-up and for use on bearing fit applications

# ProXon® 21022

ProXon 21022 is a machinable, one-step powder which consistently produces high quality coatings with minimum operator technique dependence. Designed for Eutectic TeroDyn® Systems 2000 and 3000, it can also be applied with RotoTec® Systems and conventional plasma non-transferred arc systems. A separate bond coat is not required.

An outstanding feature of 21022 is its machinability. Traditional, composite, one-step materials produce coatings which are difficult to machine, cause excessive tool wear and particle pull-out which leaves and irregular surface texture. Coatings produced with 21022, a multi-component nickel base powder, can be machined to excellent finishes with a minimum of tool wear.

ProXon 21022 is recommended for general purpose build-up and bearing fit applications, especially where surface finish is critical. Coatings exhibit good wear resistance and do not contain any free (unalloyed) elements.

## TECHNICAL DATA

| Typical Values                  | Combustion                  | Plasma   |
|---------------------------------|-----------------------------|----------|
| Typical Macrohardness:          | 85 HRB                      | 80 HRB   |
| Typical Microhardness:          | 220 DPH                     | 200 DPH  |
| Coating Density:                | 6.9 g/cc                    | 7.2 g/cc |
| Coating Weight (lb/ft²@0.001"): | 0.037                       | 0.035    |
| Interconnected Porosity:        | <5%                         | <3%      |
| Bond Strength:                  | >4500 psi                   | >5000psi |
| Max. Service Temperature:       | 1200°F (649°C)              |          |
| Thickness Limit:                | >0.125"                     |          |
| Melting Point:                  | 1950°-2500°F (1054°-1352°C) |          |

## PROCEDURE FOR USE:

ProXon 21021 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

### 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 T5S-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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