



A Multi-Component, Prealloyed,
Nickel-Base Alloy Powder

Eutectic®

29029



- High bond strength for improved service performance
- Pre-alloyed Proxon technology for consistent deposition
- Rougher coating texture for improved final coat adhesion
- Clean, low-oxide deposits
- Wide application range without appreciable loss in bond strength

Eutectic® 29029

Eutectic 29029 is formulated to produce a reliable high strength bond coating offering the best protection against coating failure. Eutectic 29029 is a multi-component, prealloyed, nickel-base alloy powder which was developed utilizing patented ProXon® technology. When introduced into the torch flame, each particle undergoes an exothermic reaction, releasing heat energy.

This additional energy enhances micro-welding of the alloy particles to the part and to each other. The result is a homogenous, well bonded coating with an ideal surface for the final coating build-up. Eutectic 29029 can be applied by using the TeroDyn® 2000 and 3000 systems.

TECHNICAL DATA

Powder Properties

Nominal Particle Size:	-140 micron + 325 mesh
Approx. Melting Point	2500°F (1352°C)
Maximum Service Temp.	> 1200°F (649°C)

For temperatures in the 1200°F to 1800°F (649°C - 973°C) range or for use on stainless steel base metals Eutectic 21031 powder is recommended.

Coating Properties

To provide realistic bond strength, ASTM C633 is used, specifying a ground surface. Using a ground surface rather than a blasted surface simulates the worst-case scenario. Abrasive blasting offers the best reliability and safety factor. Threading offers advantages over grinding. Rough grinding can and does provide for adhesion of the bond coat. However, part geometry and temperature become critical since they add stress and effectively subtract from the bond strength. *(Better surface preparation equals better adhesion which in turn yields better reliability when the coated part is put into service.)*

PROCEDURE FOR USE

Recommended Surface Preparation

Preparation	Surface Roughness Mitutoyo Surfest (Micro-Inch)	ASTM C633 Bond Strength (PSI on 1020 Steel)
Ground	25 - 50	4500 ± 900
Ground	50 - 100	5100 ± 800
Abrasive Blasted	>300	7600 ± 750

Recommended Parameters

TD 2000

Nozzle:	RL 210 or RL210W
RotoJet:	RPA 3 @ 20 psi air
Module Adaptor:	Yellow/Red
Oxygen:	50 psi / 35 flow (FM-1 flowmeter)
Acetylene:	12 psi / 75 flow (FM-1 flowmeter)
T-Valve Setting:	8 clicks
Spray Rate:	8 lbs/hr ±10%
Spray Distance:	6 to 8 inches

TD 2000 (Alternate Parameters)

Nozzle:	RL 200
RotoJet:	None (RPA-2 option @ 20 psi)
Module Adaptor:	Yellow/Red
Oxygen:	50 psi / 35 flow (FM-1 flowmeter)
Acetylene:	12 psi / 75 flow (FM-1 flowmeter)
T-Valve Setting:	5 clicks
Spray Rate:	6 lbs/hr ±10%
Spray Distance:	5 to 7 inches

TD 3000

Nozzle:	RL 210 or RL 210W
RotoJet:	RPA-3 @ 10 psi air
Oxygen:	50 psi / 38 flow (FM-1 flowmeter)
Acetylene:	12-15psi / 60 flow (FM-1 flowmeter)
Carrier Gas:	Nit. or Ar @ 55 psi / 37 flow
Terometer:	Adjust for spray rate
Spray Rate:	8 lbs/hr ±10%
Spray Distance:	7 to 9 inches

TYPICAL APPLICATIONS

- Shafts
- End bell housings
- Pump Sleeves
- Mis-machined parts and castings
- Fan blades
- Rolls
- Chutes

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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