



Gas Atomized Aluminum - Bronze
Alloy Powder Used in Both Plasma Spray
and Combustion Spray Processes

Eutectic[®]

29061



- High quality machinable coatings for soft bearing applications
- Repeatable, high integrity coatings with minimum operator training required
- May be used on steel and copper alloy parts to restore dimensions
- Excellent corrosion resistance in caustic solutions

Eutectic® 29061

Eutectic 29061 is a gas atomized aluminum bronze alloy powder designed to produce homogenous coatings with both Plasma spray and Combustion spray processes.

21061 meets the requirements of MIL-STD 1687.

Each lot of powder is subjected to extensive quality checks to insure a consistent particle size distribution, chemical composition and reliable coating performance. Coatings have exceptional cohesive strength that permits thick coatings to be applied.

TECHNICAL DATA

Machinability – High quality machinable coatings for soft bearing applications. Coatings applied to properly grit blasted parts can be machined to a feather edge without chipping.

Quality – High integrity coatings can be produced repeatedly with minimum operator technique dependence.

Versatility – Can be used on steel and copper alloy parts to restore dimensions, provides self-lubricating surface, and offers excellent corrosion resistance in caustic solutions.

Efficiency – Deposit efficiencies of 85 to 90% at 20 lbs/hr are normal when using the TeroDyn® System 2000 combustion spray torch.

Typical Powder Properties

Hall Flow Rate:	15 seconds
Bulk Density:	4.3 g/cc
Powder Coverage:	0.037 lbs/ft ² @ 0.001"

Typical Coating Properties

Hardness:	Rockwell B Scale 70
Max. Service Temperature:	700°F (371°C)
Bond Strength (ASTM C633):	3000 psi on LCS
Porosity:	Less than 5%
Surface Roughness:	As sprayed: 530 µin AA Finished: >15 µin AA

PROCEDURE FOR USE

Finishing Procedures

Recommended Method: Single Point Turning
Cutting Tool: Kennametal Type K7B or equivalent
Work Speed: Up to 200 SFPM

	Traverse Speed	In-Feed
Roughing	Up to 0.007 inches per revolution	Up to 0.030 inches
Finishing	0.002 inches per revolution	< 0.003 inches

Coolant: None*

*For immersion service coating should be sealed with SealTec LT or Rotoguard Solution. Sealing should be done prior to machining. A second coat of sealer may be applied after machining if desired. Machining should be done without coolant unless coating is sealed.

Recommended Parameters

TD 2000

Nozzle:	RL 200
RotoJet:	RSF-1 @ 15 psi
Module Adaptor:	5 (Yellow/Red)
Oxygen:	50 psi / 30 flow (FM-1 flowmeter)
Acetylene:	12 psi / 48 flow (FM-1 flowmeter)
T-Valve Setting:	14 - 18 clicks
Coating Rate:	20 lb/hr
Spray Distance:	7 to 9 inches
Deposit Efficiency:	90%

TD 3000

Nozzle:	RL 210W RPA-3 @ 20 psi air
RPA 3 RotoJet:	10 psi on Bond Pass; 30 psi on Build-Up
Oxygen:	50 psi / 38 flow (3110 flow meter)
Acetylene:	12 psi / 62 flow (3110 flow meter)
Carrier Gas:	(Ar or N ₂) 55 psi / 37 flow
Coating Rate:	5 lb/hr Bond Pass; 15 lb/hr Build-Up
Air Vibrator:	RPA-3 @ 30 psi
Terometer:	Adjust to achieve spray rate
Spray Distance:	8 to 11 inches
Deposit Efficiency:	90%

TYPICAL APPLICATIONS

- Reclaiming copper-base parts
- Diesel engine cooler element parts
- Transmission gear shafts and piston guides
- Shifter forks
- Worn bearing fits

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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