Castolin Eutectic®
Eutectic Castolin

Gas Atomized,
Aluminum-Bronze Alloy Powder

# Eutectic® 29079

- High quality, machinable coatings
- Repeatable coatings with minimal operator training required
- May be used on steel and copper parts to restore dimensions
- Offers excellent corrosion resistance in caustic solutions

# Eutectic® 29079

Eutectic 29079 is a gas atomized modified aluminum bronze alloy powder designed to produce homogeneous coatings with both Plasma spray and Combustion spray processes. Modification by the addition of nickel to the alloy enhances bearing properties, raises coating hardness, and improves resistance to many types of wear. 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, provide self-lubricating surface, and offers excellent corrosion resistance in caustic solutions.*

(*Contact Eutectic Technical Services for further information concerning corrosion applications.)

| Powder Properties | |
|---|---|
| Hall Flow Rate: | 15 seconds |
| Bulk Density: | 4.3 g/cc |
| Powder Coverage: | 0.047 lbs/ft² @ 0.001" |
| **Coating Properites** | |
| Typical Hardness: | Rockwell B Scale 84 |
| Max. Service Temperature: | 700°F (378°C) |
| Bond Strength (ASTM C633): | > 3000 psi on Ultrabond 50000 |
| Porosity: | Less than 5% |
| Typical Surface Roughness: | As-sprayed: 600 µin AA<br>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 |
| Module Adaptor: | 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 8 inches |
| Deposit Efficiency: | 90% |

## TYPICAL APPLICATIONS

- Bearing surfaces
- Drive Shafts
- Piston guides
- Pump Shafts

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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