Castolin Eutectic®
Eutectic Castolin

Atomized, Tin-Based, Powder
Suitable for use in Combustion
Thermal Spray Equipment

Eutalloy® CPW 1954

- For use with the TeroDyn® 2000 and 3000 systems
- May be used on a wide variety of bearings
- Alloy is similar to ASTM Grade II Babbitt
- Coatings are applied at low temperatures

Eutalloy® CPW 1954

Eutalloy CPW 1954 is an atomized Tin-based alloy powder suitable for coating applications using combustion thermal spray equipment such as the TeroDyn 2000 or TeroDyn 3000 systems when equipped with the specially designed low temperature LT Accessory Air Shroud Package. The Tin alloy is similar to SAE 23 type II Babbitt. It can be used for rebuilding most common tin based babbitt bearings. It is not recommended for those containing significant amounts of lead.

TECHNICAL DATA

Typical Powder Properties	
Hall Flow Rate:	17 seconds
Bulk Density:	4.0 g/cc
Powder Coverage:	0.06 lbs/ft² @ 0.001"
Melting Point:	466°F (241°C)
Typical Coating Properites	
Hardness:	Rockwell Y Scale 30
Max. Service Temperature:	250°F (121°C)
Bond Strength (ATSM C633):	Tinned with 157 PA: 7000 psi Bond coat - nickel/Al: 2000 psi
Density:	6.67 g/cc

PROCEDURE FOR USE

For Light-Duty Bearings and Thin Build-ups (<0.060 inch)

- Remove all old babbitt and fatigued material.
- Clean and degrease.
- Thread surface with a 90° tool, approximately 16 to 20 threads per inch or Grit blast with 24 grit angular aluminum oxide.
- Apply a bond coat of Eutectic 50000, 0.005 inch thick.
- Preheat to 250°F (121°C).* Apply using recommended parameters.

For Heavy-Duty Bearings

- Remove all old babbitt from the shell.
- Clean and degrease the surface.
- Machine the surface with fine threads no more than 8 hours before coating.
- "Tin" the shell using 157 PA or 157 rod with Eutectic Flux 157. Tinning is accomplished by coating the shell with a thin layer of the tin solder which is heated to its melting point. Apply heat from the back side of the shell.
- Wipe molten flux off surface with a wet natural bristle brush. This will spread the solder and remove any contaminants.
- With the tinned surface just molten, apply a thin coating of 1954. Allow the shell to cool down to about 250°F and apply coating to the final dimension. Begin using a discontinuous spray technique upon the first appearance of a brownish tint on the surface.

Contact Eutectic for more application procedures on rebuilding cast babbitt and applying on previously coated surfaces.

Recommended Parameters

TD 2000 (Acetylene Fuel)

Nozzle:	LT 250
LT Air Shroud:	30 psi
Module Adaptor:	Yellow/Red
Oxygen:	50 psi / 28 flow
Acetylene/Propylene*:	12 psi / 32 flow
T-Valve Setting:	13 clicks
Coating Rate:	20 lb/hr
Spray Distance:	7 - 9 inches

TD 2000 (Propylene Fuel)

Nozzle:	LT 260P
LT Air Shroud:	50 psi
Module Adaptor:	Yellow/Red
Oxygen:	80 psi / 24 flow
Acetylene/Propylene*:	30 psi / 24 flow*
T-Valve Setting:	10 clicks
Coating Rate:	20 lb/hr
Spray Distance:	10 - 12 inches

TD 3000

Nozzle:	LT 250
LT Air Shroud:	40 psi
Oxygen:	50 psi / 32 flow
Acetylene:	12 psi / 32 flow
Carrier Gas (Ar or Nit.):	55 psi / 40 flow
Coating Rate:	40 lbs/hr
Air Vibrator:	20 psi
Terometer**:	100

**Use Linde grade FG-2 or equivalent*
***Use slotted pick-up tube and a black 12' powder feed hose*

TYPICAL APPLICATIONS

- Heavy-Duty Bearings
- Turbine Bearings
- High Speed Bearings
- Split Bearings
- Drive Shaft Bearings

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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