



Atomized Zinc Powder Suitable  
for use as an Anodic Coating to  
Resist Galvanic Corrosion

# **Eutectic<sup>®</sup>**

## **1960**



- High purity levels increase service life
- Excellent base for top coats of sealer or paint
- Greater coating thicknesses than galvanizing
- Sacrificial coatings in marine industrial environments

# Eutectic® 1960

Eutectic 1960 powder is a high purity atomized Zinc powder suitable for use as an anodic coating to resist galvanic corrosion on steel or to provide EMI / RFI shielding. Coatings are applied by thermal spray equipment such as the TeroDyn®2000 or TeroDyn 3000 systems when equipped with the low temperature LT Accessory Air Shroud Package.

1960 powder is suitable for use as specified in ASTM A780 "Standard Practice for Repair of Damaged Hot-Dip Galvanized Coatings". It will provide sacrificial protection in wet marine, industrial environments (PH 6 - 12) or immersion in water at temperatures less than 140°F (60°C).

For higher temperatures or immersion in salt water use Eutectic 1961 aluminum coatings. Zinc Powders are not self-bonding and require a SSPC 5 Blast finish using an angular aluminum oxide or chilled iron grit. A 24 to 40 grit size is usually capable of producing the 1 - 3 mil blast profile which is required for good mechanical bonding to the substrate. Zinc coatings are more resistant to hard water than soft water. Avoid use in strong acids or caustics. For best results seal coating with SealTec®-LT or RotoGuard® Solution.

## PROCEDURE FOR USE

### Spray Parameters

TD 2000	Acetylene	Propylene	Propane	Fan Attachment
Nozzles	LT 250	LT 260P	LT 260P	LT 250
LT Air Shroud	30 psi	50 psi	35 psi	45 psi
LT Fan	N/A	N/A	N/A	8" psi
Module Adaptor	Y/R	Y/R	Y/R	Y/R
Oxygen	50 psi / 28 flow	80 psi / 24 flow	80 psi / 30 flow	50 psi / 30 flow
Acetylene	12 psi / 32 flow	30 psi / 24 flow	15 psi / 24 flow	12 psi / 48 flow
T-Valve Setting	40 clicks	15 clicks	40 clicks	40 clicks
Coating Rate	20 lbs/hr	20 lbs/hr	20 lbs/hr	20 lbs/hr
Spray Distance	7 - 9 inches	10 - 12 inches	7 - 8 inches	7 - 9 inches

\*Provides a 3 - 4 inch wide spray pattern

TD 3000	
Nozzles	LT 250
LT Air Shroud	40 psi
Oxygen	50 psi / 30 flow
Acetylene	12 psi / 32 flow
Carrier Gas (Ar or Nit.)	55 psi / 50 flow
Terometer	150**
Coating Rate	20 lbs/hr
Air Vibrator	20 psi
Spray Distance	9 - 12 inches

\*\*Adjust as needed to achieve 20 lbs/hr

## TECHNICAL DATA

### Typical Powder Properties

Hall Flow Rate:	28 seconds
Bulk Density:	3.0 g/cc
Powder Coverage:	0.055 lbs/ft² @ 0.001 inch thickness

### Typical Powder Properties

Hardness:	Rockwell RH40
Dry Conditions:	230°F (110°C) max. service temp.
Wet Conditions	140°F (60°C) max. service temp.
Bond Strength:	> 1500 psi
Porosity:	5%
Surface Roughness:	500 - 800 Micro - Inches AA
Thickness Limit:	None
Density:	6.3 g/cc
Melting Point:	787°F (419°C)
Surface Resistivity @ 3-5 mil:	< 20 milliohms/ft² Signal attenuation reduction of 60 to 90 db

## ADVANTAGES VS HOT-DIP GALVANIZING

1) Coatings of 1960 provide longer service life because:

a) 1960 coatings have a higher purity level. Zinc coatings applied by hot-dip galvanizing have a lower zinc content due to significant iron contamination of the molten zinc. Higher purity levels produce a longer service life.

b) Coatings of 1960 can be applied to a greater thickness than galvanizing. Typically for cathodic protection of steel structures, zinc is applied to a thickness in the 8 to 10 mil range.

c) Coatings of 1960 provide an excellent base for subsequent topcoats of a sealer or paint system which are both decorative and provide an effective barrier to corrosion.

2) Galvanized surfaces do not provide a good base for subsequent paint or sealer systems. Thermal spray coatings of 1960 can be applied to large structures "in-situ": areas which cannot be galvanized without complete disassembly.

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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