

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

CorResist[®] 29230



COATING

- 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



DESCRIPTION:

CorResist 29230 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. 29230 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.

TECHNICAL DATA:

Powder Properties

Hall Flow Rate: 28 seconds

Bulk Density: 3.0 g/cc

Powder Coverage: 0.055 lbs/ft² @ 0.001 inch thickness

Coating Properties

Typical Hardness: Rockwell RH40

Dry Conditions: 230°F (110°C) max. service temperature

Wet Conditions: 140°F (60°C) max. service temperature

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 CorResist 29230 provide longer service life because:

- 29230 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.
- Coatings of 29230 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.
- Coatings of 29230 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 29230 can be applied to large structures "in-situ": areas which cannot be galvanized without complete disassembly.

RECOMMENDED COATING AND SPRAY PARAMETERS:

TD 2000					TD 3000	
TD 2000	Acetylene Fuel	Propylene Fuel	Propane Fuel	Fan Attachment	TD 3000	
Nozzle	LT 250	LT 260P	LT 260P	LT 250	Nozzle	LT 250
LT Air Shroud	30 psi	50 psi	35 psi	45 psi	LT Air Shroud	40 psi
LT Fan	na	na	na	8* psi	Oxygen	50 psi / 30 flow
Module Adaptor	5	5	5	5	Acetylene	12 psi / 32 flow
Oxygen	50 psi / 28 flow	80 psi / 24 flow	80 psi / 30 flow	50 psi / 30 flow	Carrier Gas (Ar or Nit.)	55 psi / 50 flow
Acetylene	12 psi / 32 flow	30 psi / 24 flow	15 psi / 24 flow	12 psi / 48 flow	Terometer	150**
T-Valve Setting	40 clicks	15 clicks	40 clicks	40 clicks	Coating Rate	20 lbs/hr
Coating Rate	20 lbs/hr	20 lbs/hr	20 lbs/hr	20 lbs/hr	Air Vibrator	20 psi
Spray Distance	7-9 inches	10-12 inches	7-8 inches	7-9 inches	Spray Distance	9-12 inches

*Provides a 3-4 inch wide spray pattern

**Adjust as needed to achieve 20 lbs/hr

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