TECHNICAL DATA SHEET

MIL-DTL-24441/19C (REVISION D)
FORMULA 159, TYPE-III
EPOXY POLYAMIDE ZINC PRIMER

DESCRIPTION/CONFORMANCE: 
This Epoxy-Polyamide two component Zinc Rich Coating is designed to conform the specific composition and performance requirement of Federal Specification MIL-DTL-24441/19C (SH) Formula-159, Type-III (Revision D) and is recommended to be used for painting land and marine structures.

PRINCIPAL CHARACTERISTICS:
- Excellent rust preventative properties in adverse or chemically polluted atmospheres.
- Easy application by airless spray up to 4.0 mils (100 Microns) dry film thickness.
- Good adhesion properties on sandblasted steel where a hard durable chemical resistant nonporous coating is desired.
- Excellent water and weather resistance for interior and exterior use.
- Good impact resistance

TECHNICAL DATA

COLOR AND FINISH: Gray, Flat
MASS DENSITY (MIXED): Approx. 24.0 lbs./gallon
SOLIDS BY VOLUME: Approx. 65.0%
ZINC DUST PIGMENT (ASTM D520, TYPE-I): 86%
VOC (BEFORE THINNING): 2.48 lbs./gal. , 297 g/l
THEORETICAL SPREADING RATE: @ 1 MIL DFT: 1040 sq. ft. /gal.
RECOMMENDED DRY FILM THICKNESS: 3-4 Mils (75-100 Microns)
TOUCH DRY AFTER: 2 Hrs.
DRY HARD AFTER: 6 Hrs.
MAX. INTERVAL BEFORE OVERCOATING: 7 Days
FULL CURE AFTER: 7 Days
TEMPERATURE RESISTANCE (DRY): 250ºF (121ºC)
SHELF LIFE (COOL & DRY PLACE): Subject to re inspection after 12 months.
FLASH POINT (TCC): Base 108ºF (42ºC)
Hardener 96ºF (36ºC)
PACKAGE: A two Component material with base and curing agent supplied in 1-Gallon Kit and 2.5-Gallon Kit. Mix ratio 4:1 by volume.
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**RECOMMENDED SUBSTRATE CONDITIONS:**
Steel: Blast cleaned to a minimum grade SSPC-SP10 (SA2 ½) The surface must be perfectly dry.

**MIXING & INDUCTION TIME REQUIREMENT:**
During application and the first 24 hours of curing, the substrate temperature must be above 41ºF (5ºC) and at least 5ºF (3ºC) above the dew point. The temperature of the mixture of base and hardener during mixing and application should be above 59 ºF (15ºC), otherwise more solvents must be used to obtain application viscosity. This results in lower sag resistance and slower cure. If thinner is used, it should only be added after mixing the components.

Using the proportion of 4:1 of Component B (Primer) to Component A (Hardener/Activator), do the following: Agitate Component B by itself with a hand spatula, and then slowly pour in Component A (Hardener/Activator) and mix till mixture is smooth and uniform. At a temperature range of 70 ºF – 80 ºF, let mixture stand for 15 - 20 minutes after mixing both components and before application. Colder temperatures will require a longer induction time.

**POTLIFE:**
4 Hours At 73ºF

**CONVENTIONAL SPRAY**
- **Manufacturer:** DeVilbiss
- **Gun Model:** MBC or JGA
- **Tip-Air Cap Combination:** 704E 66PE
- Fluid hose should be 3/8” I.D. with a maximum length of 50 feet. Pot should always have dual regulation and be kept at same elevation as spray gun.

**AIRLESS SPRAY**
- **Manufacturer:** Graco
- **Gun Model:** 205-590
- **Pump:** Bulldog
- **Manufacturer:** Binks
- **Gun Model:** Model 500
- **Pump:** Mercury 5C
- **Manufacturer:** DeVilbiss
- **Gun Model:** JGN-501
- **Pump:** QFA-519
- Hose should be 3/8” I.D. minimum, but ¼” whip end section may be used for ease of application. A maximum length of 100 feet is suggested. Best results will be obtained using a .018”-.021” tip at 2400-2700 p.s.i.
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THINNING REQUIREMENT:

Recommended Thinner: MIL-T-81772, Type-II Epoxy Thinner
Airless Spray: 0-10% by Volume
Conventional Spray: 5-15% by Volume
Clean-up Thinner: MIL-T-81772, Type-II Epoxy Thinner

CAUTION:
Contains flammable solvents. Keep away from sparks and open flames. Use only grounded explosion proof equipment in accordance with the National Electric Code. Workmen must use nonferrous tools, wear non-conductive and non-sparking shoes in areas where explosion hazards exits. In confined areas, workmen must wear fresh airline respirators, protective clothing and gloves. Avoid contact with skin, breathing of vapor or spray mist ingestion. Keep out of reach of children.

NON-WARRANTY:
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