



# PRODUCT GUIDE: ZINC-RICH COATINGS

Version: 08.07.17



# PRODUCT DATA

## 305

### Zinc Rich Epoxy Polyamide Primer

**Description:** 305 is a user friendly zinc-rich epoxy primer formulated for use as a primer under acrylic, epoxy, and urethane finish coats.

**Typical Uses:** Zinc-rich epoxy primer to applied over abrasive blast cleaned surfaces or as a field maintenance primer. May be used to repair itself or inorganic zinc primers. Zinc pigment provides cathodic protection and film undercutting resistance to corrosion. Performance similar to hot-dipped galvanizing.

**Dry Temperature Limits:** 225 deg.F

**Surface Cleanliness:** NACE No.3/SSPC-SP 6 Commercial Metal Blast

**Profile Depth:** average 1.5 to 2.0 mils (visual comparator), maximum 2.3 mils (Testex replica tape)

**Profile Texture:** sharp and angular (viewed under magnification)

**Mixing:** Mix only complete units. Power mix the activator and base separately, then combine. After mixing activator and base gradually sift in the zinc dust portion under constant agitation. Never dump the zinc dust portion into the activator as it will lump up and be unusable. Do not thin until all components have been mixed together thoroughly. Strain through 30 to 60 mesh screen into agitator-equipped container and immediately turn agitator on at slow speed. Maintain constant agitation during use.

**Application Equipment:** Airless or conventional spray using agitated containers. Conventional Spray: Binks Model 18 Gun with 67 Fluid Nozzle, 67PB Air Nozzle, and 67 Needle. Airless Spray: Minimum 30:1 ratio pump with teflon packings, a 60 mesh filter and .017" to .019"(432-483 microns) orifice tip on gun. Supply lines should not exceed 50 feet. For longer supply lines use 1/2" I.D. airless lines

**Application Conditions:**

- Noncontaminated profile (pretreat and blast contaminated surfaces)
- Dry, dust-free metal surface
- Metal temperature above 60 deg.F
- Metal temperature at least 5 deg. above the dew point
- Ambient temperature above 50 deg.F
- Humidity less than 90%
- Material temperature between 70 and 90 deg.F

**Primer:** n/a

**Thinner:** T-35 Thinner up to 1/2 pint per gallon

**Safe Application Conditions:** Consult MSDS for proper handling, cleanup, disposal, and use of personal protective equipment. Circulate sufficient air to maintain working environment below the PEL and LEL. Apply according to local, state, and federal (OSHA) regulations.

**Finish:** matte

**Color:** reddish gray

**Volume Solids:** 54% +/- 2%, (mixed)

**VOC:** 3.2 lbs./gal. (374 g/l), (mixed)

**Mixing Ratio:** mix only complete units

**Dry Film Thickness:** 2.5 mils

**Wet Film Thickness:** 4-1/2 mils

**Theoretical Coverage:** 866 sq.ft./gal. @ 1 mil

**Induction Time:** none required

**Pot Life Time:** 7 hours @ 77 deg.F

**Shelf Life Time:** 1 year

**Dry Time:** @ 77 deg.F (25 deg.C)

Dry to Touch	15 min.s
Dry to Handle	1 to 2 hours
Dry to Recoat	2 to 8 hours, varies with temperature

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## PRODUCT DATA

# 1312

## Zinc-Rich Ethyl Silicate Primer

**Description:** 1312 is a two component, zinc-rich ethyl silicate primer formulated for use as a primer for galvanic (cathodic) protection of ferrous surfaces. The zinc pigment sacrificially oxidizes to protect iron in ferrous substrates.

**Typical Uses:** zinc-rich primer to protect ferrous surfaces, such as bridges, tanks, and structural steel. Zinc pigment provides cathodic protection and film undercutting resistance to corrosion. Performance similar to hot-dipped galvanizing.

**Special Qualifications:** n/a

**Dry Temperature Limits:** 750 deg.F

**Surface Cleanliness:** for atmospheric exposure abrasive blast clean to NACE No.3/SSPC-SP 6 Commercial Metal Blast Cleaning, for immersion service abrasive blast clean to a NACE No. 2/SSPC-SP 10 Near-White Metal Blast Cleaning. For salt contaminated surfaces best results are obtained by first pressure washing the surface using a commercially available chloride remover.

**Profile Depth:** average 1.5 to 2.0 mils (visual comparator), maximum 2.3 mils (Testex replica tape)

**Profile Texture:** sharp and angular (viewed under magnification)

**Mixing Instructions:** Stir liquid portion first using mechanical agitation (jiffy power mixer). Discard the desiccant bag from the zinc powder, gradually stir the zinc dust into the liquid component under constant agitation. Filter through a 50 mesh screen after mixing. Never add the liquid portion to the zinc dust component. Continuous agitation is required.

**Application Equipment:** 45:1 ratio pump with 0.017 (617) to 0.019 (619) inch diameter orifice for airless spray gun tip at a 2,400 psi recommended minimum fluid pressure at tip to obtain proper atomization. For whip lines greater than 50 feet, use 1/2 inch I.D. Flush all equipment with thinner to remove any moisture that may be present. An artist brush can be used for touchup of small repair areas less than 1 square foot.

**Application Conditions:**

- Noncontaminated profile (pretreat and blast contaminated surfaces)
- Dry, dust-free metal surface
- Metal temperature above 20 deg.F
- Metal temperature at least 5 deg. above the dew point
- Ambient temperature above 20 deg.F
- Humidity less than 95% but greater than 40%
- Material temperature above 20 deg.F

**Safe Application Conditions:** Consult MSDS for proper handling, cleanup, disposal, and use of personal protective equipment. Circulate sufficient air to maintain working environment below the PEL and LEL. Apply according to local, state, and federal (OSHA) regulations.

**Finish:** Flat Gloss

**Color:** gray/green

**Volume Solids:** 77% (void content method)

**Zinc Content:** 85% zinc in dry film

**Zinc Type:** ASTM D-520, Type II (98% zinc in powder component), or Type III (99% zinc in powder component) when specified

**VOC:** 3.4 lbs./gal. (420 g/l), (mixed)

**Flash Point:** 66 deg.F

**Dry Film Thickness:** 2 to 4 mils

**Theoretical Coverage:** 1232 sq.ft./gal.@ 1 mil

**Induction Time:** none required

**Pot Life Time:** 8 hours @ 75 deg.F

**Shelf Life Time:** 1 year, if stored indoors at 65 to 85 deg.F

**Dry Time:** @ 75 deg.F

Set to Touch 20 min.

Dry to Handle 2 to 4 hours

Recoat generally 5 to 18 hours, depending on temperature and relative humidity, although may be topcoated, when dry film will pass a 50 MEK rub test without removing any zinc.

**Thinner:** T-67

**Clean Up Solvent:** T-40 MEK

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## PRODUCT DATA

# TT-P-641G

## Zinc Dust Metal Primer

**Description:** An alkyd zinc dust primer, which exhibits excellent protection of ferrous and hot-dipped galvanized metal surfaces. Contains in excess of 65% metallic zinc in the dry film.

**Typical Uses:** A primer for ferrous and hot-dipped galvanized surfaces. May be topcoated with alkyd and acrylic coatings.

**Special Qualifications:** Federal Specification TT-P-641G Type II, and ASTM A 780

**Dry Temperature Limits:** 250 deg.F

**Surface Preparation:** Surfaces should be clean and dry. Remove all oil, grease, mildew or other contamination by solvent or detergent cleaning or other effective means.

**Thinner:** T-160 Thinner

**Mixing:** Mix liquid portion with an agitator before slowly adding the zinc dust. Mix thoroughly. Do not pour liquid portion into the dust portion. Mix complete units only.

**Application Equipment:** brush, roller, or airless spray using a 45:1 ratio pump with 0.017 (617) to 0.019 (619) inch diameter orifice for airless spray gun tip at a 2,400 psi recommended minimum fluid pressure at tip to obtain proper atomization. An artist brush can be used for touchup of WFT marks and other small repair areas.

### Application Conditions:

- Noncontaminated profile (pretreat and blast contaminated surfaces)
- Dry, dust-free metal surface
- Metal temperature above 40 deg.F
- Metal temperature at least 5 deg. above the dew point
- Ambient temperature above 40 deg.F
- Humidity less than 90%
- Material temperature between 40 and 90 deg.F

**Safe Application Conditions:** Consult MSDS for proper handling, cleanup, disposal, and use of personal protective equipment. Circulate sufficient air to maintain working environment below the PEL and LEL. Apply according to local, state, and federal (OSHA) regulations.

**Finish:** semi-gloss

**Color:** light gray

**Volume Solids:** 49.4 +/- 2%

**VOC:** 3.27 lbs./gal. (392 g/l), (mixed)

**Flash Point:** 105 deg.F

**Dry Film Thickness:** 2 mils

**Wet Film Thickness:** 4 mils

**Theoretical Coverage:** 792 sq.ft./gal. @ 1 mil

**Dry Time:** @ 77 deg.F (25 deg.C)

Dry to Touch 9 hours

Dry to Recoat 24 hours

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## PRODUCT DATA

# P-139

Low V.O.C.

Inorganic Zinc Primer

**Description:** P-139 is a two component, zinc-rich ethyl silicate primer formulated for use as a primer for galvanic (cathodic) protection of ferrous surfaces. The zinc pigment sacrificially oxidizes to protect iron in ferrous substrates.

**Typical Uses:** zinc-rich primer to protect ferrous surfaces, such as bridges, tanks, and structural steel. Zinc pigment provides cathodic protection and film undercutting resistance to corrosion. Performance similar to hot-dipped galvanizing.

**Special Qualifications:** AASHTO M-300, Types I & IA, and for high-strength bolts (ASTM B-490, Class B) slip coefficient of 0.59

**Dry Temperature Limits:** 750 deg.F

**Surface Cleanliness:** for atmospheric exposure abrasive blast clean to NACE No.3/SSPC-SP 6 Commercial Metal Blast Cleaning, for immersion service abrasive blast clean to a NACE No. 2/SSPC-SP 10 Near-White Metal Blast Cleaning. For salt contaminated surfaces best results are obtained by first pressure washing the surface using a commercially available chloride remover.

**Profile Depth:** average 1.5 to 2.0 mils (visual comparator), maximum 2.3 mils (Testex replica tape)

**Profile Texture:** sharp and angular (viewed under magnification)

**Mixing Instructions:** Stir liquid portion first using mechanical agitation (jiffy power mixer). Discard the desiccant bag from the zinc powder, gradually stir the zinc dust into the liquid component under constant agitation. Filter through a 50 mesh screen after mixing. Never add the liquid portion to the zinc dust component. Continuous agitation is required.

**Application Equipment:** 45:1 ratio pump with 0.017 (617) to 0.019 (619) inch diameter orifice for airless spray gun tip at a 2,400 psi recommended minimum fluid pressure at tip to obtain proper atomization. For whip lines longer than 50 feet, use 1/2 inch I.D. Flush all equipment with thinner to remove any moisture that may be present. Striping must be done following spray application. Thin 50% for touchup and striping.

### Application Conditions:

- Noncontaminated profile (pretreat and blast contaminated surfaces)
- Dry, dust-free metal surface
- Hot metal temperatures will retard cure.
- Metal temperature at least 5 deg. above the dew point
- Ambient temperature above 50 deg.F
- Humidity greater than 40% and less than 90%
- Material temperature between 50 and 90 deg.F

**Safe Application Conditions:** Consult MSDS for proper handling, cleanup, disposal, and use of personal protective equipment. Circulate sufficient air to maintain working environment below the PEL and LEL. Apply according to local, state, and federal (OSHA) regulations.

**Finish:** Flat

**Color:** gray/green

**Volume Solids:** 80% (void content method)

**VOC:** 3.4 lbs./gal. (404 g/l), (mixed)

**Flash Point:** 56 deg.F

**Dry Film Thickness:** 3 mils

**Wet Film Thickness:** 4 mils

**Theoretical Coverage:** 1291 sq.ft./gal.@ 1 mil

**Induction Time:** none required

**Pot Life Time:** 8 hours @ 75 deg.F

**Shelf Life Time:** 9 months. Do not use past nine months.

**Dry Time:** @ 75 deg.F

Set to Touch 15 min.

Recoat generally 24 hours, depending on temperature and relative humidity, although may be topcoated, when dry film will pass a 50 MEK rub test without removing any zinc.

**Thinner:** T-163

**Clean Up Solvent:** T-40

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**Special Qualifications:** Federal Specification TT-P-641G Type II, and ASTM A 780

**Dry Temperature Limits:** 250 deg.F

**Surface Preparation:** Surfaces should be clean and dry. Remove all oil, grease, mildew or other contamination by solvent or detergent cleaning or other effective means.

**Thinner:** T-160 Thinner

**Mixing:** Mix liquid portion with an agitator before slowly adding the zinc dust. Mix thoroughly. Do not pour liquid portion into the dust portion. Mix complete units only.

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