

ZINC RICH PRIMER

Anti-Corrosive Polyester Zinc Phosphate Powder Primer

TDS for ZINC PRIMER

DESCRIPTION

Genesis Zinc Rich Primer is an anti-corrosive thermosetting powder primer described in the source TDS as a polyester zinc phosphate system for steel substrates. It is formulated to improve adhesion and corrosion protection and to provide a passivating effect on the prepared steel surface. The primer is intended for use beneath compatible powder topcoats.

USES

- Prepared steel components requiring an anti-corrosive primer layer
- Fabricated steel and general industrial steel substrates
- Primer layer beneath polyester and super durable polyester topcoats
- Primer layer beneath compatible polyurethane or PVDF systems

ADVANTAGES

- Corrosion-protection primer for steel substrates
- Passivating effect on the prepared steel surface
- Suitable for corona electrostatic spray application
- Compatible with the topcoat systems stated in the source TDS
- Light grey standard colour, with other colours available to order

COMPLIANCE & CERTIFICATIONS

Product grade: Polyester zinc phosphate anti-corrosive primer.
Referenced test methods: ASTM methods stated in this TDS.
Supporting documents: Current TDS and MSDS/SDS.
Zinc content / approvals: Not stated in the source TDS.

TYPICAL PROPERTIES

Product family	Anti-Corrosive Primer
Chemical type	Polyester zinc phosphate
Color	Light Grey
Film thickness	30-40 microns
Gloss @ 60 deg	60 +/- 10%
Particle size	Electrostatic spray
Density	1.6 +/- 0.1 g/cm3
Shelf life	12 months
Storage	<25 deg C, RH below 65%
Coverage	7-9 m2/kg
VOC	Not stated

CURE PARAMETERS

Substrate / object temperature	Curing time
180 deg C	15-20 minutes
190 deg C	13-18 minutes
200 deg C	10-15 minutes
Object temperature and full cure should be verified according to part geometry and oven conditions.	

PERFORMANCE TESTS

Adhesion (D-3359-93)	0
Pencil hardness (D-3363-00)	H to 3H
Impact (D-2794-93)	Pass
Flexibility (D-522-93a)	Pass
Salt spray (B-117-97)	Pass, 1000 hrs
Acetic acid salt spray	Pass, <16 mm2 / 10 cm
Constant humidity (D-2247-93)	Pass
Overbake stability (D-2454-93)	Very Good

Salt spray result includes no corrosion creep and less than 1/16 inch undercoating after 1000 hours exposure. Constant humidity result includes no corrosion area greater than 1 mm from the scribe.

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SURFACE PREPARATION

For maximum adhesion, remove grease, rust and other contamination. The source TDS recommends solvent or chemical degreasing followed by grit blasting to minimum Sa 2.5, with Rz 35-65 microns and Ra 6-10 microns, and/or degreasing and zinc phosphating. Follow the pretreatment supplier recommendations.

Steel	Degrease, grit blast Sa 2.5 or zinc phosphate
Zinc coated steel	Zinc phosphate or chromate
Aluminum	Chromate conversion
Final rinse	Normal water

The object should be tested at 20 deg C. Pretreatment quality directly affects coating performance.

APPLICATION METHOD

- Apply by corona manual or automatic electrostatic spray equipment.
- Apply an even primer dry film thickness of 30-40 microns. Minimum 30 microns is recommended in the source TDS.
- Unused powder may be reclaimed using suitable equipment and recycled through the coating system.
- Ensure the substrate is clean, dry and free from grease, rust and loose contamination before coating.

RECOMMENDED SYSTEM

Substrate prep.	Degreased / grit blasted
Powder coating	Genesis Zinc Rich Primer
Recommended DFT	30-40 microns
Topcoat / curing	60-80 micron topcoat

SAFETY PRECAUTIONS

- Do not eat, drink or smoke while using the product.
- Avoid breathing dust. Use suitable respiratory protection where ventilation is insufficient.
- Use safety eyewear, protective clothing and suitable industrial gloves.
- Prevent dust concentrations above flammable, explosive or occupational exposure limits.
- Keep away from heat, sparks, open flame and direct sunlight.

STORAGE & SHELF LIFE

- Store in dry and cool conditions below 25 deg C.
- Keep containers closed and protect the powder from heat, moisture and contamination.
- Shelf life is 12 months when stored under the recommended conditions.
- Reseal opened containers carefully before storage.

TRANSPORT & ENVIRONMENTAL INFORMATION

Hazard classification	Refer to MSDS/SDS
Environmental classification	Refer to MSDS/SDS
Ignition temperature	Not stated
Transport	Refer to MSDS/SDS
Drain precaution	Refer to MSDS/SDS

NOTE

The information in this Technical Data Sheet is based on current product data and experience and is not exhaustive. Use for purposes not specifically recommended requires written confirmation from Genesis. Final performance depends on substrate quality, pretreatment, application and curing conditions. Product information may be updated as part of continuous development. Refer to the current MSDS/SDS for safety information.

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