KREVO Shield Zinc Primer

Inorganic zinc-rich primer | Galvanic corrosion protection | Industrial & marine steel

PRODUCT DESCRIPTION

KREVO Shield Zinc Primer is a solvent-based, inorganic zinc-rich protective coating for prepared steel. The zinc-rich film is designed to provide galvanic corrosion protection on structural steel used in industrial, marine and aggressive atmospheric environments. It can be used as a primer or as part of a compatible multi-coat protective system.

ADVANTAGES

- High zinc loading provides sacrificial galvanic protection to suitably prepared steel.
- Fast handling and curing under suitable ambient humidity and temperature conditions.
- Suitable for application using conventional or airless spray equipment.
- Good resistance to corrosion and salt contamination in demanding atmospheres.
- Can be overcoated with compatible epoxy, polyurethane, acrylic or high-heat systems after appropriate curing.

TYPICAL USES

Structural steel and pipe supports • Industrial plants • Marine and coastal structures • Steel under approved fireproofing systems • Bridges and exposed fabricated steelwork • Tank and equipment exteriors.

PRODUCT INFORMATION

PARAMETER	SPECIFICATION
Generic type	Solvent-based inorganic zinc-rich steel primer
Appearance / colour	Flat finish; green or grey
Recommended dry film thickness	51–76 microns (2–3 mils) per coat
Maximum recommended DFT	Avoid thickness above 150 microns (6 mils)
Volume solids | ASTM D2697	Approximately 62.3% ± 2%
Zinc dust in dry film	Approximately 85% by weight
Theoretical coverage	Approximately 8.2 m^2/L at 75 microns DFT
Packaging / mix components	1 US gal: 0.75 gal base + 6.6 kg zinc; 5 US gal: 3.75 gal base + 33 kg zinc

TECHNICAL & PERFORMANCE CHARACTERISTICS

PARAMETER / TEST	TYPICAL VALUE / BENCHMARK
Salt spray resistance | ASTM B117	43,000 hours without rust, blisters, cracking or delamination in stated test
Slip coefficient | ASTM A325	0.68; Class B test benchmark for suitable faying surfaces
Immersion test | AASHTO M300	650 hours in 5% sodium chloride in stated test
Pencil hardness | ASTM D3363	2H
VOC as supplied | EPA Method 24	Approximately 479 g/L
Maximum untopcoated service	400 °C continuous / 427 °C intermittent
With qualified high-heat topcoat	540 °C continuous / 650 °C intermittent
Corrosion resistance mechanism	Zinc-rich galvanic protection of prepared steel

Application & System Data

KREVO Shield Zinc Primer | Surface preparation, mixing, spray application and curing

CURING SCHEDULE | TEMPERATURE DEPENDENCE

STEEL TEMPERATURE	DRY TO HANDLE	DRY TO TOPCOAT	IMMERSION CURE
−18 °C	4 h	7 days	Not recommended
+4 °C	1 h	2 days	4 days
+16 °C	45 min	24 h	3 days
+27 °C	45 min	18 h	2 days
+38 °C	15 min	16 h	36 h

Cure times are indicative for the specified film build and adequate ventilation. Low humidity, cold weather or high DFT may extend curing. Verify coating hardness and surface cleanliness before topcoating or immersion.

TYPICAL COATING APPLICATION SEQUENCE

STAGE	MATERIAL / METHOD
1 | Surface inspection	Confirm sound dry steel; remove oil, grease, dust and contaminants.
2 | Abrasive blasting	SSPC-SP 6 for atmospheric use; obtain 25–75 micron angular profile.
3 | Mixing	Agitate base; slowly incorporate zinc powder; mix completely.
4 | Spray application	Use suitable conventional/airless spray; maintain agitation; monitor DFT.
5 | Cure & inspection	Check coating integrity and cure before service or topcoating.

STEEL SURFACE PREPARATION

Steel must be sound, clean and dry. Remove dirt, dust, oil and grease. For non-immersion exposure, abrasive blast to SSPC-SP 6 / commercial blast standard and achieve an angular anchor profile of approximately 25–75 microns. Where the coating is placed below fireproofing, follow the fireproofing manufacturer's surface-preparation requirements.

MIXING & SPRAY CONTROL

Power mix the liquid base first. With continuous agitation add zinc powder gradually and mix until lump-free. Strain through approximately 30-mesh screen where appropriate. Do not mix partial kits. Maintain mild agitation during spraying to prevent zinc settlement. The actual thinning requirement depends on ambient conditions and approved thinner compatibility.

INSTALLATION CONTROL	SPECIFIED REQUIREMENT
Typical dry film thickness	51–76 µm, with excess thickness above 150 µm not recommended.
Theoretical coverage	Approximately 8.2 m^2/L at 75 µm DFT, before losses.
Pot life / storage	About 8 hours at 24 °C; original unopened Part A 12 months, zinc powder 24 months.
Application temperature	Material/ambient typically −18 to +54 °C; surface up to +93 °C.
Curing & topcoat	Verify actual humidity, temperature, DFT and coating hardness.

For airless spraying, typical equipment guidance is a pump ratio of at least 30:1, 0.019–0.023 inch tip and spray pressure of approximately 1,500–2,000 psi. Roller application is not recommended; brushing is reserved for localized touch-up.

APPLICATION CONDITIONS & QUALITY CONTROL

Steel temperature must remain above the dew point with no condensation. Surface preparation, profile, cleanliness, dry film thickness and curing must be inspected before service or application of a topcoat. Typical film thickness is 51–76 microns; excessive thickness above 150 microns is not recommended.

Installation & Product Support

KREVO Shield Zinc Primer | Coating preparation, application controls, curing and safety

MIXING PROCEDURE

- Verify material identity, storage condition and full kit proportions before opening.
- Power mix the liquid base, then slowly add zinc filler while maintaining continuous agitation.
- Mix to a uniform, lump-free consistency and strain using a 30-mesh screen where required.
- Do not split kits. Keep mixed material agitated and use within the stated pot life (approximately 8 hours at 24 °C).

APPLICATION & INSPECTION

- Blast-clean, inspect surface profile, and immediately remove abrasive dust or residual contamination.
- Apply with suitable conventional or airless spray equipment, maintaining uniform zinc dispersion and film build.
- Check DFT, edges, welds, bolt areas, overspray and coating continuity; avoid excessive dry-film thickness.
- Before topcoating, remove zinc salts or loose spray deposits and confirm the coating is sufficiently cured.

LIMITATIONS & SERVICE NOTES

- Prevent condensation, rain contamination and insufficient cure; low humidity may substantially slow curing.
- Use only compatible, approved thinners; thinning may affect VOC, pot life, spray behaviour and final film build.
- At ambient temperatures below 4 °C or above 29 °C, adjust application practices to the qualified procedure.
- Do not apply a topcoat until specified cure criteria are met; use a mist coat where required to control bubbling.
- For immersion, high-temperature or fireproofing systems, qualify the full system before use.

HEALTH, SAFETY & ENVIRONMENT

Solvent-based zinc primers are intended for trained professional applicators. Consult the current Safety Data Sheet before work. Provide effective ventilation, eliminate ignition sources, use suitable respiratory and skin protection, and prevent uncontrolled releases of solvent, zinc dust and coating waste. Enclosed-space application requires an approved confined-space and atmospheric-control plan.

QUALITY & PRODUCT INFORMATION

Mechanical, corrosion and high-temperature performance depends on substrate preparation, film thickness, humidity, cure and coating-system selection. Published numerical values are technical specification criteria and should be checked against KREVO production and test records before being used as certified performance or third-party compliance claims.

KREVO | GLOBAL CONTACTS

ENGLAND	UNITED STATES	CHINA
10 Shipley Avenue, Fenham Newcastle upon Tyne England NE4 9RA +44 7436 650806 info@krevo.uk krevo.uk	9209 S. Aeva Avenue Evergreen Park, IL 60805 +1 (773) 996-0846 info@krevo.us krevo.us	Office 235, 4th Floor No. 5 Inner China +86 139 5536 3625 krevo.cn