

TECHNICAL DATA SHEET

CL ZRP 21 Lite Modified Zinc-Rich Epoxy Primer

Two-component economical modified epoxy anti-corrosion primer

Document no.	CL-TDS-ZRP-21-LITE (ENG)
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Chemistry / role	Epoxy · Primer
System	Two component

SECTION 1 PRODUCT DESCRIPTION

Two-component, economical modified epoxy anti-corrosion primer made with modified epoxy resin, composite anti-rust pigments, shielding fillers and functional additives.

High anti-corrosion performance, high cost-effectiveness and strong versatility. The dense, closed film resists permeation by atmosphere, water vapour, salt spray and industrial corrosive media, making it a first choice for low-cost priming of large steel-structure projects.

SECTION 2 KEY FEATURES

- Excellent anti-corrosion: strong physical barrier protection against salt water, damp heat and industrial atmospheres.
- High cost-effectiveness: economical consumption, strong hiding power and high solids reduce total coating cost on large projects.
- Dense, hard film: impact, wear and pressure resistant; resists chalking, cracking and rust-back.
- High application tolerance: good levelling, sag resistance, filling and sanding; suited to large areas and fast on-site work.
- Wide compatibility with epoxy intermediate, polyurethane and acrylic topcoats, with good inter-coat sealing.

SECTION 3 SCOPE OF APPLICATION

Priming and protection of conventional-grade steel structures: factory steelwork, equipment racks, guardrail brackets, storage equipment, general outdoor steel frames, hardware and construction-machinery interiors. General economical anti-corrosion primer for civil and industrial use.

SECTION 4 COLOURS

Iron Red · Medium Gray · Light Gray · Custom colours on request

SECTION 5 TECHNICAL DATA

Typical values from factory production batches; may vary slightly with colour. Valid for the mixed coating only.

No.	Property	Specification	Test method
1	Appearance	Smooth, fine film; matte	TBC
2	Solid content	≥ 60 %	TBC
3	Surface-dry time	≤ 30 min	TBC
4	Hard-dry time	≤ 8 h	TBC
5	Adhesion (cross-cut)	Grade 0–1	TBC
6	Pencil hardness	≥ H	TBC
7	Salt-water resistance	120 h, no blistering, peeling or corrosion	TBC

SECTION 6 FILM THICKNESS AND COVERAGE

Dry film thickness (DFT) per coat	35–45 μm
Wet film thickness (WFT) per coat	TBC
Theoretical coverage	3–10 m ² /kg

SECTION 7 SURFACE PREPARATION

1. Remove oil, dust, rust, scale and loose material; the substrate must be dry and free of moisture and acid/alkali residue.
2. Cleaning grade: TBC (source sheet gives no grade).

SECTION 8 MIXING AND APPLICATION

Mixing ratio	Base : curing agent = 10 : 1 (by weight)
Thinner addition	15–35 % (adjust to temperature and spray viscosity)

Pot life	2–4 hours at 25 °C (shorter at higher temperature)
Induction	Stir base until uniform, add curing agent, stir thoroughly and stand 5–10 min to de-aerate before use.

Application methods: Spraying (air or airless); Brushing; Rolling. Ensure the specified dry film thickness is achieved.

Dilution ratio (by weight)	Paint : special acrylic thinner = 100 : 20–35
Standard spray viscosity	16–18 s at 25 °C (Ford cup No. 4)
Thinner	Safe environmental thinner or safety-type thinner
Gun nozzle diameter	1.3–1.5 mm
Spray air pressure	0.35–0.45 MPa
Spray distance	15–20 cm
Number of coats	2 thin coats, wet-on-wet
Flash-off / interval time	5–8 minutes
Recoat interval	Minimum 4 h at room temperature; maximum interval unlimited (firm inter-coat adhesion).

SECTION 9 COMPATIBILITY

Primer	CL ZRP 21 Lite (self)
Topcoat	Epoxy topcoat; Acrylic polyurethane topcoat; Fluorocarbon topcoat; Industrial acrylic topcoat

SECTION 10 PACKAGING

Pack size	Component A (base)	Component B (hardener)	Notes
TBC	TBC	TBC	Typical factory pack sizes; may vary by region

Typical factory reference packaging; pack sizes and volumes may vary by region due to local regulations.

SECTION 11 STORAGE AND SHELF LIFE

Storage environment	Cool, dry, well-ventilated warehouse; away from fire and heat sources
Precautions	Protect from sunlight, rain and freezing
Shelf life	12 months in original unopened container
After mixing	Use within the pot life; overnight use is prohibited

SECTION 12 SAFETY PRECAUTIONS

- Two-component reactive coating: mix strictly at the stated ratio. Incorrect mixing leads to non-drying, brittleness and peeling.
- Maintain good ventilation, prohibit open flames and take fire/explosion-prevention measures.
- Do not apply outdoors in high humidity, condensation, rain or snow; film whitening, blistering and loss of adhesion may result.
- Clean tools promptly with the recommended thinner to prevent curing.
- Wear a protective mask and gloves to avoid skin and respiratory contact.
- Dispose of waste paint and solvents in accordance with industrial hazardous waste regulations.

Refer to the Safety Data Sheet (SDS) for full hazard, first-aid and disposal information.

SECTION 13 DISCLAIMER

The information in this data sheet is based on our laboratory knowledge and practical experience. The product is considered a semi-finished product and its use is generally beyond our control; we therefore guarantee only the quality of the product itself.

To comply with local regulations the product may be adjusted, and we reserve the right to modify this data sheet without further notice. Users should seek specific guidance on product suitability for their own needs and applications.