

TECHNICAL DATA SHEET

CL ETC 11 Universal Primer

Single-component acrylic primer for smooth and difficult-to-adhere metal substrates

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Chemistry / role	Acrylic · Primer
System	Single component

SECTION 1 PRODUCT DESCRIPTION

Single-component, high-performance acrylic primer. It uses a special modified acrylic resin as the main film-forming substance, with long-acting anti-corrosion pigments and fillers, functional additives and high-quality solvents.

Optimised through a special alloy modification process, with a formula adapted to smooth, difficult-to-adhere metal substrates. The film is dense, flexible and highly sealed, with excellent adhesion. It addresses the common problems of paint stripping, poor adhesion and weak corrosion resistance on smooth surfaces of stainless steel, galvanized sheet and aluminium profiles, and is a professional high-efficiency anti-corrosion primer for light metal profiles and hardware components.

SECTION 2 KEY FEATURES

- Very strong adhesion on special substrates: excellent adhesion to smooth substrates such as stainless steel, galvanized sheet, aluminium profile and aluminium plate. No complex phosphating or grinding is required, and the film does not fall off or peel after spraying.
- Excellent dense sealing and anti-corrosion performance: the alloy film structure is dense and stable, effectively isolating water vapour, salt and industrial corrosive media. Rust prevention, salt-spray resistance and atmospheric corrosion resistance are far superior to ordinary primers.
- Good film flexibility and stability: high toughness, resistant to bending, impact and hot/cold temperature changes; not easy to crack or chalk in long-term use.
- Fast drying and high application tolerance: single-component self-drying system with no curing agent, simple ratio and convenient application; suitable for assembly lines and large-area outdoor work.
- Excellent inter-coat adhesion: recoating is not limited by time, and the primer is compatible with various conventional topcoats without inter-coat peeling or stripping.
- Excellent substrate wetting: avoids defects such as shrinkage holes, bottoming and poor wetting on smooth metal surfaces, giving a uniform, fine surface finish.

SECTION 3 SCOPE OF APPLICATION

Specialised substrates: stainless steel plates, hot and cold galvanized steel plates, aluminium profiles, aluminium alloy plates, curtain-wall aluminium and galvanized hardware components. General substrates: ordinary carbon steel, mechanical equipment and various hardware metal products, for priming and protection.

SECTION 4 COLOURS

Iron Red · Medium 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	State in container	Uniform, easy to stir	GB 3186-82
2	Viscosity	≥ 60	GB/T 1723-93
3	Fineness	≤ 35 μm	GB 6753.1-86
4	Non-volatile content	≥ 60 %	GB/T 6751
5	Workability	Normal	GB 1757-79 (89)
6	Surface-dry time	30 min	GB/T 1728 Method B
7	Hard-dry time	8 h	GB/T 1728 Method B
8	Baking time	60 min at 60 °C	GB 93-8827
9	Film colour and appearance	Consistent with standard sample; flat film, uniform colour	GB 9761-88
10	Cross-cut adhesion	Level 1 pass	GB/T 9286-1998
11	Pencil hardness	HB pass	GB/T 6739-1996

No.	Property	Specification	Test method
12	Water resistance	No obvious change after 240 h immersion	GB/T 1733-93 Method A
13	Oil resistance	No obvious change after 240 h immersion	GB 9274-88 Method A

SECTION 6 FILM THICKNESS AND COVERAGE

Dry film thickness (DFT) per coat	35–55 µm
Wet film thickness (WFT) per coat	55–80 µm
Theoretical coverage	3–8 m ² /L

SECTION 7 SURFACE PREPARATION

1. All surfaces must be clean, dry and free of contaminants to ensure lasting adhesion of the next coat.
2. Steel: abrasive blast to Sa 2½ or hand/power-tool clean to St 3; surface profile 40–70 µm; keep clean and dry.
3. Apply the primer within 4 hours of reaching the above standard; re-treat any surface not coated in time.
4. Before applying the next coat, confirm the surface is clean and dry. Substrate temperature 0–50 °C and at least 3 °C above dew point; relative humidity not above 85 %.

SECTION 8 MIXING AND APPLICATION

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

Dilution ratio (by weight)	Paint : dedicated acrylic thinner = 100 : 20–35
Standard spray viscosity	16–18 s at 25 °C (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	Not limited by time.

SECTION 9 COMPATIBILITY

Primer	—
Topcoat	Acrylic topcoat; Alkyd topcoat; Industrial general topcoat; High-chlorinated anti-corrosion topcoat

SECTION 10 PACKAGING

Pack size	Net weight	Notes
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; 5–30 °C; away from fire and heat sources
Precautions	Protect from sunlight, freezing and open-air stacking
Shelf life	12 months in original sealed container under normal storage
After opening	Use as soon as possible; prolonged exposure causes moisture absorption, evaporation and thickening

SECTION 12 SAFETY PRECAUTIONS

1. Maintain ventilation during application; wear a mask, gloves and protective clothing.
2. Avoid contact with eyes and skin; in case of contact, rinse immediately with clean water.
3. Keep out of reach of children.
4. 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.