

Low-Temperature Waterslide Decal Inks

TECHNICAL DATA SHEET | Solvent-Based & UV LED Systems

01 Applications

For decorating glass, ceramics, plastics and metals. Particularly suitable for glass decoration on consumer products such as spirits bottles and perfume bottles, as well as insulated tumblers. Available in solvent-based and UV LED systems to suit the substrate and process requirements.

02 Product Range

Solvent-Based Waterslide Decal Inks	UV LED Waterslide Decal Inks
Solvent-Based Clear Varnish	UV LED Clear Varnish
Solvent-Based Red Ink	UV LED Red Ink
Solvent-Based Black Ink	UV LED Black Ink
Solvent-Based White Ink	UV LED White Ink
	UV LED Relief Varnish (thick-film, raised effect)
	UV LED Hot-Stamping Base (100-120°C)

03 Mixing & Curing Conditions

Solvent-based clear varnish: Add 3% hardener by varnish weight. **Solvent-based colour inks:** No hardener.

UV LED: Hardener is supplied separately and added before use.

Ink System	Drying / Curing After Printing	Full Cure After Transfer
Solvent-Based	After printing on waterslide decal paper, allow to air-dry for approximately 2-4 hours .	After transfer to the substrate, bake at 160°C for 30 minutes to achieve full cure.
UV LED	After printing on waterslide decal paper, expose to a 395 nm LED light source . A typical curing dose of approximately 1,000 mJ/cm² provides rapid curing.	After transfer to the substrate, bake at 160°C for 30 minutes to achieve full cure.

04 Packaging

Unit Size	Units per Carton	Net Weight per Carton
5 kg / pail	4 pails	20 kg
1 kg / can	10 cans	10 kg

05 Performance Properties

Application substrate: **clear, uncoated glass**. After transfer, bake at **160°C for 30 minutes** to achieve full cure.

Solvent-Based Clear Varnish	Performance
Appearance	Clear, glossy, with a rich, wet-look finish.
Alcohol Resistance	At least 3 hours of immersion in 52% ABV spirits .
Water Resistance	At least 4 hours of immersion in room-temperature tap water.
Bake Yellowing Resistance	Usually no noticeable yellowing when baked at 160°C. Suitable as a protective varnish over white designs.
BPA Test	SGS-tested varnish sample: BPA not detected (ND); detection limit 0.1 mg/kg, based on total dried sample weight. Result applies only to the tested sample.

UV LED Clear Varnish	Performance
Appearance	Clear, glossy, with a rich, wet-look finish.
Alcohol Resistance	At least 1 hour of immersion in 52% ABV spirits .
Water Resistance	At least 2 hours of immersion in room-temperature tap water.
Intercoat Compatibility	Does not attack the underlying ink layers.

UV LED Relief Varnish	Performance
Print Effect	For thick-film printing with a pronounced, raised 3D effect and tactile texture.
Alcohol Resistance	At least 3 hours of immersion in 52% ABV spirits .
Water Resistance	At least 1 hour of immersion in room-temperature tap water.
Yellowing Resistance	Better than standard UV LED clear varnish; suitable for thick-film designs.

UV LED Hot-Stamping Base	Performance
Decorative Effect	Used with hot-stamping foil to create a metallic finish.
Hot-Stamping Temperature	100-120°C
Adhesion	Consistent adhesion to glass substrates.