

Series 631

2C-Screen Printing Ink for Flat Glass

Highly opaque 2-component screen printing ink Series 631 based on highly resistant raw materials for printing of flat glass for indoor use. Series 631 does neither contain PAH nor halogens. For system reasons some individual color shades have halogens containing pigments (see *Product Range*). Series

631 is completely free of cyclohexanone. Further advantages are the excellent processability, excellent adhesion as well as the high chemical resistance. Typical applications are printing of decorative glass, elevator panels, scales or speedometers.

Application

- › Decorative glass
- › Elevator panels
- › Scales
- › Furniture glass
- › Speedometers
- › Audio systems

Substrates

Substrate	Rating	Hints
Glass / ceramics	★★★★★	
Metal	★★★★★	
Polyethylene (PE), pre-treated	★★★★★	
Polypropylene (PP), pre-treated	★★★★★	
Duroplasts	★★★★	
Coated surfaces / powder coatings	★★★★	

Legend ★★★★★ Very well suited ★ Detailed pre-tests necessary

Properties / Characteristics

Feature	Rating	Hints
Acetone resistance	★★★	
Alcohol- and gasoline resistance	★★★★★	
Resistance to adhesives	★★★★★	
Block resistance	★★★★★	
Flexibility	★★★★	
Gloss	★★★★	glossy
Resistance to hand sweat	★★★★★	
Light fastness	★★★	
Abrasion resistance	★★★★	
Pigmentation	★★★★★	
Sieve openness	★★★★★	
Temperature resistance	★★★★★	
Drying	★★★★★	
Water resistance	★★★★★	
Weather resistance	n/a	

Legend ★★★★★ Very good product properties n/a No information available
 ★ Product properties not available

Product Range

MS Basic Colors

Article no.	Color	HP	HF	PF	Article no.	Color	HP	HF	PF
631-1000	MS light yellow	•		•	631-4000	MS violet	•		•
631-1100	MS medium yellow	•	•	•	631-5000	MS blue	•	•	•
631-1200	MS dark yellow	•		•	631-6000	MS green	•		•
631-2000	MS orange	•		•	631-6010	MS green	•	•	•
631-3000	MS red	•	•	•	631-8000	MS black	•	•	•
631-3100	MS magenta red	•	•	•	631-9000	MS white	•	•	•
631-3300	MS magenta	•	•	•					

HP High Pigmented **HF** Free of halogens **PF** Free of PAH

Note: all abbreviations used in this chart are explained in detail on the last page of this data sheet.

Other Colors

		HF	PF
ST Metallics	Series 631-100	ST silver	•
	Series 631-100/HG	ST high gloss silver	• •
	Series 631-102	ST rich gold	• •
	Series 631-103	ST rich pale gold	• •
	Series 631-103/HG	ST high gloss rich pale gold	•
	Series 631-200	ST mother of pearl	• •
	Series 631-02299	ST silver coarse	•

UV Luminescent Inks	Series 631-UL09/05	UV luminescent ink, yellow	•
	Series 631-UL16/05	UV luminescent ink, red	•
	Series 631-UL26/05	UV luminescent ink, blue	•
	Series 631-UL30/05	UV luminescent ink, green	•
ST Neon Colors	Color Chart / www.printcolor.ch/stcolorguide		
Special Colors	Pantone®, HKS, RAL and after customers sample		
Others	Series 631-00	ST white opaque, glossy	• •
	Series 631-00/MT	ST white opaque, mat	• •
	Series 631-04	ST transparent paste	• •
	Series 631-05	ST varnish	• •
	Series 631-05/MT	ST varnish, mat	• •
	Series 631-07	Binder	• •
	Series 631-33	ST black	• •

Auxiliaries

Thinner	Series 600-037	Addition ratio	5-15% by weight
Retarder	Series 600-038	Addition ratio	5-15% by weight
Hardener	Series 600-GLH	Addition ratio	5-10% by weight
	Series 600-GL		2-6% by weight

Note: a detailed overview of all available auxiliaries can be found in a separate data sheet.

Hardener

	Series 600-GL	Series 600-GLH	Series 600-HDI
Application	Glass / Ceramics / non-ferrous metals	Glass / Ceramics / Metals	Duroplasts / Aluminum / Sheet metal
Addition ratio	20:1	10:1	4:1
Reactivity	Medium reactivity from 20°C	Medium reactivity from 20°C	Higher reactivity from 15°C
Resistance to chemicals	Excellent	Very good	Very good
Outdoor resistance	Not recommended	Not recommended	Not recommended
Various	-	free of PAH & Halogen	free of PAH & Halogen

Note: a detailed overview of all available auxiliaries can be found in a separate data sheet.

Processing

Mesh

All commercially available polyester mesh can be used.

Stencils

All commercially available stencils can be used.

Drying

Drying of Series 631 depends on the layer thickness as well as on the substrate and the auxiliaries used.

Usual parameters (without addition of retarder):

Air	Physically fast drying
Oven (recommended)	80°C / 60 minutes up to 140°C / 20 minutes

Curing

Bonding of the ink system depends on temperature, used hardener and layer thickness. To reach maximum resistance, a minimum temperature (see point „hardener“) must be guaranteed over a duration of 5 to 10 days. By increasing the temperature the ink film cures faster and an earlier and even better chemical resistance can be achieved.

Curing times

Series 600-GL	5-7 days (at minimum temperature)
Series 600-GLH	5-7 days (at minimum temperature)
Series 600-HDA	7 days (at minimum temperature)
Forced drying	80°C / 60 minutes up to 140°C / 20 minutes

It is important to ensure, that temperatures do not fall below within the first 48 hours. An increased moisture supply during drying time can permanently damage the ink film.

Special Features & Tips

Extension of pot life	Series 600-GLH: 8 - 12 hours
Hardener, free of Halogen	Series 600-GLH

Productivity

Depending on the color shade, a productivity of 45-65 m²/kg is to be expected with press-ready ink and use of a mesh 120.34.

Others

Delivery	1 kg / 5 kg / 25 kg
Certificates / Standards	www.printcolor.ch/certificate
Others	Stir well before use. Information on shelf life can be found on the cover label.

Basic Color Systems

HP Basic Color Mixing System with high pigmented basic colors.

Safety Information

Actual Material Safety Data Sheets according to EC-Regulation 1907/2006 are available for all products, mentioned in this data sheet.

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Important Information

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor for their suitability for each application. You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for specific applications is exclusively your responsibility. Should, however, any liability claims arise, such claims shall be limited to the value of the goods delivered by us and utilized by you with respect to any and all damages not caused intentionally or by gross negligence.