

# Series 311

## Solvent based Screen Printing Ink for Plastics, free of PAH and Halogens

Glossy and high pigmented screen printing ink, Series 311, based on raw materials free of PAH and halogens, for printing on various plastics.

Series 311 is typically used for printing on toys, stickers and components in the 3C field.

### Application

- › Toys
- › Stickers
- › 3C (Computer, Communication & Consumer Electronic)

### Substrates

Substrate	Rating	Hints
PET-A	★★★★★	
ABS, SAN, copolymers	★★★★	
Acrylic glass (casted PMMA)	★★★★	
Primered / coated foils	★★★★	
Polycarbonate (PC)	★★★★	
Plasticized PVC self-adhesive foils	★★★★	
Rigid PVC	★★★	
Paper, cardboard	★★★	
Polystyrene (PS), glossy	★★★	
Polystyrene (PS), mat	★★★	
Composite materials	★★★	

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

## Properties / Characteristics

Feature	Rating	Hints
Alcohol- and gasoline resistance	★★★★	Use of Series 600-HDA (5–10 %) will improve resistance.
Resistance to adhesives	n/a	
Block resistance	★★★	
Flexibility	★★★★	
Gloss	★★★★	Glossy
Resistance to hand sweat	★★★★	
Light fastness	★★★	See technical information: light fastness
Abrasion resistance	★★★★	
Pigmentation	★★★★★	
Screen openness	★★★	
Temperature resistance	n/a	
Drying	★★★★	
Moldability	n/a	
Weather resistance	★★★	

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

## Product Range

### MS Basic Colors

Article	Color	HF				Article	Color	HF			
311-1100	MS light yellow	•				311-5000	MS blue	•			
311-3000	MS red	•				311-8000	MS black	•			
311-3100	MS magenta red	•				311-9000	MS white	•			
311-3300	MS magenta	•									

**HF** Free of Halogens

Note I: The MS basic inks must be processed in combination with the corresponding binder Series 311-07 (min. 20 % by weight).

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

### Other Colors

<b>ST Process Inks (ISO)</b>	According to ISO 12647 Part II	
<b>Special Colors</b>	Pantone®, HKS, RAL and after customers sample	
<b>Others</b>	Series 311-00	ST white
	Series 311-04/ISO	Transparent paste
	Series 311-05	ST varnish
	Series 311-07	Binder for metallics
	Series 311-33	ST black

## Auxiliaries

<b>Thinner</b>	Series 10-02459	<b>Addition ratio</b>	10–20 % by weight
<b>Retarder</b>	Series 10-03432	<b>Addition ratio</b>	10–20 % by weight

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

## Processing

### Mesh

All commercially available polyester can be used.

### Stencils

All commercially available and solvent resistant stencils can be used.

### Drying

Drying of Series 311 depends on the layer thickness as well as on the substrate and the auxiliaries used.

Usual parameters (without addition of retarder):

<b>Air</b>	Physically slow drying.
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### Further Processing

- › Punching
- › Cutting
- › Laminating
- › Grooving

### Cleaning

The stencils and squeegees should be cleaned with Series 300-URS or Series 300-BRS in a timely manner.

## Special Features & Tips

<b>Mixing system (MS)</b>	MS ink Series 311 (80 % by weight) + Binder Series 311-07 (minimum 20 % by weight)
<b>Color spectrum</b>	Limited spectrum due to pigmentation being free of halogens.
<b>Cleaning while printing</b>	Use of cleaners (Series 300-BRS) being free of PAH and halogens.

## Productivity

Depending on the color shade, a productivity of 50–70 m<sup>2</sup>/kg is to be expected with press-ready ink (20 % thinner) and use of a mesh 120.34.

## Others

<b>Delivery</b>	1 kg / 5 kg / 25 kg
<b>Certificates / standards</b>	<a href="http://www.printcolor.ch/certificates">www.printcolor.ch/certificates</a>
<b>Other</b>	Stir well before use.
	Information on shelf life can be found on the cover label.

### 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 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.