

Series 552

UV Screen Printing Ink for Plastics



The Series 552 is a high-gloss, UV curing screen printing ink for functional and decorative printing on plastics, coatings and papers. The resulting color films are flexible, offer good chemical and block resistance and are suitable for medium-term outdoor use. Typical applications include labels, signs and cosmetics. During development of the

Series 552 the guidelines of REACH (especially SVHC) and the European Printing Ink Association (EuPIA) were met. The ink series therefore does not contain N-Vinyl Caprolactam (NVC / VCL) nor Bisphenol A (BPA).

Applications

- › Signs
- › Panels
- › Displays
- › Promotional items
- › Labels
- › Hollow containers
- › Tubes

Substrates

Substrate	Suitability	Hints
Paper & cardboard, concentrated / rolled	★★★★★	
Polycarbonate (PC)	★★★★★	
PET-G / PET-GAG	★★★★★	
Polyester, primered	★★★★★	
Tritan™ (copolyester)	★★★★★	
Hard-PVC	★★★★	
Paper & cardboard, uncoated	★★★★	Reached with 25 % of Series 500-MP, 3 % of Series 500-037 double printed with 90.48 mesh.
PMMA / Acrylic glass injection-molded	★★★★	Adhesion reached after 24 hours.
Polyolefin foils, pigmented	★★★★	
Polystyrol (PS), mat	★★★★	
Polystyrol (PS), glossy	★★★★	
Composite materials	★★★★	
Soft PVC self-adhesive foils	★★★★	
Decorative glass	★★★	See «Additives» for further information
PET-A	★★★	
Paper / cardboard, offset printed	★★	
Polypropylene (PP), pre-treated	★	

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

Note: As material quality can vary, we can only offer our recommendations. These recommendations and evaluations should not exclude customer tests.

Properties / Characteristics

Feature	Rating	Hints
Alcohol and gasoline resistance	★★★★★	
Resistance to adhesives	n/a	Detailed pre-tests necessary
Block resistance	★★★★★	
Flexibility	★★★	
Gloss	★★★★	
Resistance to hand sweat	★★★★★	
Curing	★★★★★	
Light fastness	★★★★★	
Abrasion resistance	★★★★★	
Pigmentation	★★★★★	
Temperature resistance	★★★★	No influence on the property profile at 80 °C during 24 hours.
Over-printability	★★★★★	
Moldability	★	Not moldable
Water resistance	★★★★★	
Weather resistance	★★★★	

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

Product Range

MS Basic Colors

Article	Color	HP	LV	Article	Color	HP	LV
552-1005	MS light yellow	•	•	552-3305	MS magenta	•	•
552-1105	MS medium yellow	•	•	552-4005	MS violet	•	•
552-1205	MS dark yellow	•	•	552-5005	MS blue	•	•
552-2005	MS orange	•	•	552-6005	MS green	•	•
552-3005	MS red	•	•	552-8005	MS black	•	•
552-3105	MS magenta red	•	•	552-9005	MS white	•	•
552-3205	MS dark red	•	•				

HP High pigmented **LV** Low viscosity version available as 552-xxxx/LV. The low viscosity version is also high pigmented.

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

Other Colors

Process Colors	Series 552-0953/ISO	ST Process Color Cyan	
	Series 552-0963/ISO	ST Process Color Yellow	
	Series 552-0973/ISO	ST Process Color Magenta	
	Series 552-0983/ISO	ST Process Color Black	
	Series 552-04/ISO	Thixotropy paste	
Metallics	Standard version, normal viscosity		
	Series 552-100	Silver	
	Series 552-07	Bronze binder	
	Low viscosity version		
	Series 552-100/LV	Silver, low viscosity	
	Series 552-07/LV	Bronze binder, low viscosity	
	Gold concentrate (mixing ratio binder 70:30 concentrate)		
	Series 500-102/KONZ	Rich Gold	
	Series 500-103/KONZ	Rich Pale Gold	
	Series 500-104/KONZ	Pale Gold	
	Series 500-105/KONZ	Fine Gold, reddish	
	Special Colors	Pantone [®] , HKS, RAL and with customer sample	
	Others	Standard version, normal viscosity	
Series 552-00		ST opaque white	
Series 552-05		ST varnish	
Series 552-07		Binder, varnish, bronze binder	
Series 552-33		ST opaque black	
Low viscosity version			
Series 552-00/LV		ST opaque white, low viscosity	
Series 552-05/LV		Varnish, low viscosity	
Series 552-07/LV		Binder, varnish, bronze binder, low viscosity	
Series 552-33/LV		ST opaque black, low viscosity	

Additives

Description	Addition ratio	
Thinner	Series 500-017	Max. 5 % if necessary
UV curing additive	Series 500-036	Max. 10 % for high speed hollow parts & tubes printer
Glass hardener	Series 550-GL	Max. 5 % for the printing on pre-treated glass and untreated aluminum to increase resistance (i.e. washing machine).
Matt paste	Series 500-MP	Max. 25% for silk matt surfaces. Reached gloss of 40-55 with a 60° measurement. We recommend using a mesh of 150 lines per cm for this application.

Processing

Mesh

All commercially available polyester meshes from 180 to 120 lines per cm can be used. Usually, a mesh of 150 or 165 lines per cm is used.

Stencils

All commercially available stencils can be used.

Curing

The curing of the Series 552 depends on the layer thickness as well as on the substrate and the auxiliaries used.

Usual parameters are:

UV dryer	The energy requirements for use of a mesh 150.31 (depending on the color shade) are 250-350 mJ/cm ² (Technigraf Integrator) on a white substrate.
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Further processing

- › Punching
- › Cutting
- › Laminating

Cleaning

Intermediate cleaning of stencils and squeegees should promptly be done with Series 500-BRS. Final cleaning is best be done with Series 500-URS.

Special Features & Tips

Low viscosity version	All MS and ST color shades are also available in a low viscosity version (Series 552-xxxx/LV). The low viscosity version was developed for rotation screen printing and high speed cylinder printing.
User friendly formulation	The Series 552 does not contain N-Vinyl Caprolactam (NVC/VCL), ACOMO and Bisphenol A (BPA).

Productivity

With the MS inks and the ST opaque black with the layer thickness of 11 µm, productivity of 70-90 m²/kg can be expected. This layer thickness is typical, when using a 150.31 mesh. With the ST opaque white the calculated productivity lies at 65-70 m²/kg.

Others

Delivery	1 kg / 5 kg / 20 kg
Certificates / Standards	www.printcolor.swiss/certificates
Shelf life	Minimum one year in the original container, in a dark space and at room temperature. Further information on shelf life can be found on the cover label.
Other	Stir well before use.

Basic Color Systems

- HP** Basic Color Mixing System with high pigmented basic colors.
- LV** Low viscosity version available as (Series 552-xxxx/LV).

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.