Product Data Sheet
Pad Printing Ink

Coates Screen Inks
Screen and Pad Printing Inks

TP 212

Solvent Based Pad Printing Ink Range, Oven Curing, 1-Component

APPLICATION
Oven curing pad printing inks for printing of duroplastics, coated surfaces, metals, polyester and glass.

PROPERTIES
- Ink range TP 212 is a solvent based 1-component pad printing ink series.
- In order to achieve mechanical and chemical resistances TP 212 has to be oven-cured.
- TP 212 inks result in a glossy finish.
- TP 212 prints show good mechanical abrasion resistance as well as a high chemical resistance.
- TP 212 ink range is suitable for outdoor applications.

COLOUR SHADES - OVERVIEW
- Opaque: Standard Colour shades with medium to good opacity.
- Special colour shades are available upon request.
- More information about available colour shades in the detailed tables in section Colour Shades.

CHOICE OF PIGMENTS AND LIGHT FASTNESS
Colour shades of TP 212 ink range contain pigments with a high light fastness. Light fastness and weather resistance will reduce if thinner layers are applied or if base colours are mixed with a high ratio of white or varnish.

Applied on suitable substrates pad printing inks TP 212 are suitable for outdoor applications.

ADJUSTMENT FOR PAD PRINTING
- Pad printing inks TP 212 are not supplied in a ready-to-print adjustment.
- The ink is adjusted for printing by addition of thinner or retarder (stir with mixer, agitator).
- Prior to printing, the inks should be stirred well to obtain a homogeneous dispersion of all ingredients.

THINNERS / RETARDERS
Depending on local conditions, the ink is adjusted for printing by addition of 15 to 30 % by weight thinner or retarder.
Generally, the thinner suitable for TP 212 is Additive A!
The additional products listed below should only be used if the required printing quality/ink transfer cannot be achieved using Additive A (e.g. drying too slow or too fast).

For adjustment of pad inks TP 212, the following products are available:

Thinner:	○	Additive C	Extremely quick thinner, good solving power
	■	**Additive A**	**Standard thinner**
	○	VD 60	Slow thinner
Retarder:	○	TPD	Very slow retarder

■= Preferred ○= If required

Depending on printing conditions, the products listed above can be mixed into the inks individually or as mixtures. Please note that depending on evaporation rate of the thinner/retarder used drying times may be longer.
Thinner/retarder should be mixed into the ink thoroughly using a mixer or agitator. In addition, inks should be stirred well prior to each processing to obtain a homogeneous dispersion of all ingredients.

ADDITIONAL AUXILIARY AGENTS

Application	Product	Addition in % by weight	Additional Information
Antistatic paste	LAB-N 111420	Max. 10%	Possibly slightly reduced gloss
Viscosity increase	Thickening powder	Max. 3%	Stir with mixer
Matting	Matting powder	Max. 5%	Stir with mixer
	Matt paste TP 212/MP	Max. 10%	Stir with mixer
Flow agent	VM 1	1 - 5%	Do not overdose!

OVERPRINTING

There is no need to overprint TP 212 inks with varnish.

BRONZE COLOURS, MIXING OF BRONZE INKS

Bronze colours are available upon request.
Printers should not mix TP 212 inks with “B” bronzes themselves.

DRYING / OVEN CURING

Initially TP 212 pad printing inks dry physically, i.e. by evaporation of solvents, however, there will be no adhesion to the substrate and no scratch resistance.
Therefore, depending on production conditions, oven curing either directly after printing or within 12 hours should be carried out. Temperatures and curing times are as follows:

120°C / 30 – 40 min. **140°C / 20 – 30 min.** **160°C / 15 - 20 min.** **180°C / 10 – 15 min.**

Resistance Tests

Resistances should not be checked before completion of oven curing. Allow a cooling time of at least 1 hour prior to checking resistances

CLICHÉ

All commercial types of clichés (polymer, thin and thick steel, ceramic) are suitable for processing TP 212 inks.
Note: Standard shades 17, 50 and 51 cannot be used for closed ink systems with a magnet holder as they contain pigments with iron oxide content.

CLEANING

Clichés, ink pots and tools can be cleaned with our universal cleaning agents URS, URS 3 or thinner VD 40.

PACK SIZE

Pad printing inks TP 212 are delivered in 1 litre containers. Other pack sizes are available upon request.

SHELF LIFE

In closed original containers, TP 212 inks generally have a shelf life of 1 year from date of production.
For exact date of expiry, please refer to the label.

SAFETY DATA SHEETS

Read safety data sheet prior to processing
Safety data sheets comply with Regulation (EC) No. 1907/2006 (REACH), Appendix II.

CLASSIFICATION AND LABELLING

Hazard classification and labelling comply with Regulation (EC) No. 1272/2008 (CLP/GHS).

CONFORMITY

Coates Screen Inks GmbH does not use any of the substances or mixtures for the production of printing inks, which are banned according to the EUPIA (European Association of the Printing Inks Industry) exclusion policy.
Further compliance confirmations are available upon request.

ADDITIONAL INFORMATION ABOUT OUR PRODUCTS

Product data sheets:	Auxiliary Agents for Pad Printing HM
Brochures:	Pad Printing Inks
Internet:	Various technical articles are available for download on www.coates.de, section “SN-Online”

FOR COLOUR RANGES, PLEASE REFER TO NEXT PAGE.

COLOUR SHADES

STANDARD Colour Range (medium opacity) According to colour card STANDARD A/O Availability of further standard shades upon request			
citric yellow	TP 212/10-NT-NEU	ultra marine	TP 212/32-NT-NEU
medium yellow	TP 212/11-NT-NEU	light green	TP 212/40-NT-NEU
dark yellow	TP 212/12-NT-NEU	light brown	TP 212/50-NT-NEU
orange	TP 212/15-NT-NEU	white	TP 212/60-NT-NEU
carmine red	TP 212/22-NT-NEU	black	TP 212/65-NT-NEU
medium blue	TP 212/31-NT-NEU		
STANDARD Colour Range HD (high opacity) According to colour card STANDARD HD for pad printing inks Availability of further standard HD shades upon request			
white, highly opaque	TP 212/60-HD-NT-NEU	black, highly opaque	TP 212/65-HD-MT-NT-NEU
SPECIAL PRODUCTS: Special Colour Shades, Varnishes, Pastes Information about availability upon request			
white, highly opaque, matt	TP 212/60-HD-MT-NT-NEU	black, highly opaque, matt	TP 212/65-HD-MT-NT-NEU
matt paste	TP 212/MP		
4 COLOUR PROCESS INKS (CMYK) According to colour card STANDARD A/O			
process yellow	TP 212/180-NT-NEU	process black	TP 212/65-NT-NEU
process red	TP 212/181-NT-NEU	transparent paste	TP 212/TP
process blue	TP 212/182-NT-NEU		
AB – BRONZE INKS and MG – METAL GLOSS INKS According to Bronze Colour Card			
AB Bronze Inks		**MG Metal Gloss Inks**	
Upon request		**Upon request**	

Matching of PMS, RAL, NCS colours and special shades upon request.

The statements in our product and safety data sheets are based on our present experiences, however they are no assurance of product properties and do not justify a contractual legal relationship. We provide these details to inform customers about our products and their possible applications. However, on account of various factors influencing processing of our products it is absolutely essential to carry out printing trials under local production conditions. Choice of individual ink types and their suitability for the intended application is the sole and entire responsibility of the user. We do not assume any liability for any problems of technical or process-related nature. Any liability shall be limited to the value of the goods delivered by us and processed by the user.
All former product data sheets are no longer valid.

May 2017 - Version B1

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