

Product Data Sheet

Screen Printing Ink

SunChemical[®]
Coates Screen Inks

LAB-N 331213

Solvent Based Screen Ink Range, Oven Curing, 1-Component

APPLICATION

Oven curing screen printing inks for printing of metals such as aluminium, brass and copper.

PROPERTIES

- Screen inks LAB-N 331213 are solvent based 1-component screen printing inks based on synthetic resins.
- In order to achieve mechanical and chemical resistances screen inks LAB-N 331213 have to be oven-cured.
- Screen inks LAB-N 331213 result in a glossy finish.
- Prints of LAB-N 331213 inks show good mechanical abrasion resistance as well as a high chemical resistance. The prints are elastic and therefore suitable for forming applications.
- Screen inks LAB-N 331213 are suitable for long-term outdoor applications.
- Silicone-free adjustment LAB-N 331213-SF is also available.
- Note: As industrial applications with LAB-N 331213 are quite complex, pre-tests are essential.

COLOUR SHADES - OVERVIEW

- Mixing System: C-MIX 2000 12 colour shades for mixing of RAL, PMS and HKS colours.
- 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 LAB-N 331213 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 screen printing inks LAB-N 331213 are suitable for outdoor applications.

ADJUSTMENT FOR SCREEN PRINTING

- Screen printing inks LAB-N 331213 are not supplied in a ready-to-print adjustment.
- Depending on local conditions the ink is adjusted for printing by addition 10 to 20 % by weight 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

For adjustment of screen inks LAB-N 331213, the following products are available:

| | | |
|------------------|---|----------------------|
| Thinner: | <input type="radio"/> VD 60 | Slow thinner |
| Retarder: | <input checked="" type="checkbox"/> VZ 30 | Slow retarder |
| | <input type="radio"/> VZ 40 | Very slow retarder |

■= Preferred ○= Suitable

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 |
|--------------------|-------------------|-------------------------|------------------------|
| Viscosity increase | Thickening powder | Max. 3% | Stir with mixer |
| Matting | Matting powder | Max. 5% | Stir with mixer |
| Flow agent | VM 1 | 1 - 5% | Do not overdose! |

OVERPRINTING

Generally, it is not necessary to overprint LAB-N 331213 inks with varnish. However, if required overprinting with LAB-N 331213/E50 is possible.

BRONZE COLOURS

Bronze colours are available upon request.

DRYING / OVEN-CURING

Initially screen printing inks LAB-N 331213 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:

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

SCREEN FABRIC / STENCILS

LAB-N 331213 inks have been formulated for printing with fabrics ranging from 77 to 120 threads/cm. Suitability for printing with coarser or finer fabrics should be determined by corresponding pre-trials.

All copy emulsions and capillary films suitable for solvent based screen inks can be used, such as our program of SunCoat or Murakami products.

CLEANING

Stencils and tools can be cleaned with our universal cleaning agents URS or URS 3.

PACK SIZE

Screen printing inks LAB-N 331213 are delivered in 1 litre containers. Other pack sizes are available upon request.

SHELF LIFE

In closed original containers, LAB-N 331213 inks generally have a shelf life of 2 years 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 Screen Printing HM

Brochures: Solvent Based Screen 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

| C-MIX 2000 BASE COLOUR SHADES | | | |
|---|-----------------------|-------------------|---------------------|
| Mixing system for matching of PMS, HKS, RAL colours (on white substrates) | | | |
| Start formulations available in data base „Formula Management C-MIX 2000“ | | | |
| According to colour card C-MIX 2000 | | | |
| primrose | LAB-N 331213/Y30 | violet | LAB-N 331213/V50 |
| golden yellow | LAB-N 331213/Y50 | blue | LAB-N 331213/B50 |
| orange | LAB-N 331213/O50 | green | LAB-N 331213/G50 |
| scarlet | LAB-N 331213/R20 | black | LAB-N 331213/N50 |
| red | LAB-N 331213/R50 | white | LAB-N 331213/W50 |
| magenta | LAB-N 331213/M50 | varnish | LAB-N 331213/E50 |
| C-MIX 2000 BASE COLOUR SHADES (SF), Silicone-Free | | | |
| primrose | LAB-N 331213/Y30-SF | violet | LAB-N 331213/V50-SF |
| golden yellow | LAB-N 331213/Y50-SF | blue | LAB-N 331213/B50-SF |
| orange | LAB-N 331213/O50-SF | green | LAB-N 331213/G50-SF |
| scarlet | LAB-N 331213/R20-SF | black | LAB-N 331213/N50-SF |
| red | LAB-N 331213/R50-SF | white | LAB-N 331213/W50-SF |
| magenta | LAB-N 331213/M50-SF | varnish | LAB-N 331213/E50-SF |
| 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 | LAB-N 331213 60/HD-NT | | |
| SPECIAL PRODUCTS: Special Colour Shades, Varnishes, Pastes | | | |
| Information about availability upon request | | | |
| Bronze binder | LAB-N 331213/B | transparent paste | LAB-N 331213/TP |

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

All above information refers to the colour shades listed in this product data sheet and other standard shades of this screen ink range. Information about availability of further standard shades upon request.

In some individual cases the product characteristics of special colour shades and modifications of this ink type manufactured upon customer request may differ from the above properties.

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.

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