



Coates Screen

Product Data Sheet

SCREEN PRINTING INKS NC

APPLICATION

Screen printing inks NC are special printing inks for the production of dry transfers mainly used for window shop advertising. They are also used for marking and decorating wood, glass, ceramics, plastics etc.

The application of dry transfers is based on a transfer technique where a side- inverted graphic printed onto a carrier paper is transferred onto the item to be decorated. In order to achieve sufficient adhesion of the dry transfer to the substrate there is a permanent adhesive on the transfer image. Of course graphics transferred in this method do not have the same mechanical resistance than direct prints as the adhesive does not cure completely. This results in a relatively soft layer remaining between substrate and printing ink film.

CHOICE OF PIGMENTS AND LIGHT FASTNESS

Depending on the ink shade only pigments with good to excellent light fastness (5-8 according to wool scale, DIN 16 525) are used for the production of screen printing inks NC.

The colour shades of the NC range show heavy metal free pigmentation and correspond to EN 71, part 3, safety of toys, migration of certain elements.

ADJUSTMENT FOR SCREEN PRINTING

Prior to printing NC inks including pre-print varnish NC 70 are adjusted to printing consistency using

Thinner VD 10	machine printing
Thinner XVH	manual printing
Retarder XD	fine details

For adhesive HE 4 also required for the production of dry transfer pictures use thinner AV.

PROCESSING

The dry transfer pictures are printed onto a suitable carrier paper (generally a silicone paper) according to the following printing sequence:

1. Pre-print varnish NC 70
(77 thread/cm fabric (approx. 195 mesh) or more coarse fabric)
2. Graphic using NC colour shades, side-inverted (120 thread/cm fabric possible (approx. 305 mesh), however in order to achieve highest possible layer thickness a 77 thread/cm fabric (approx. 195 mesh) is more suitable)
3. Ground print white NC 60, or depending on the design NC 70 clear (77 thread/fabric (195 mesh)
4. Adhesive HE 4 [77 thread/fabric (195 mesh)]

LAB-N 211173/70-03 is a special pre-print varnish with good stability. Using this varnish difficult carrier papers can be printed free of pinholes. It cannot be mixed with pre-print varnish NC 70 or with the other NC inks.

The adhesive can be printed with the same fabric than the pre-print varnish. However the contours of the pre-print varnish should slightly reach beyond the contours of the picture. On the other hand the adhesive should not overlap the contours of the pre-print varnish (transfer problems).

After printing the adhesive the dry transfer picture must be covered with a suitable masking paper (siliconized pre-mask paper).

The products mentioned in this product data sheet are compatible. If other inks are combined in the printing sequence or if another adhesive is used the transfer pictures produced may show deficiencies, such as tearing after transfer.

DRYING

NC inks are a combination of air and oxidation drying inks. At room temperature (20-25°C, 68-77°F) drying time is approx. 10-15 minutes, approx. 2-3 minutes in a belt dryer at 40-50°C, 104-122°F. As various ink layers are printed delayed drying is possible (pre-test prior to stacking!).

BRONZE INKS

For printing bronze inks binder NC/B is mixed with bronze paste.

Mixing ratios (parts by weight) should be:

Gold bronze paste: NC/B = 1 : 4-5

Silver bronze paste: NC/B = 1 : 5-6

Please consider that bronzes mixed with binder NC/B only have a limited shelf life. Storage stability can be increased by using binder PF/B-03-NT instead of NC/B.

CLEANING OF STENCILS AND TOOLS

Screen printing inks NC can be removed from stencils and tools using universal cleaning agent URS.

PACKING

Screen printing inks NC are available in 1 and 5 liter containers.

SHELF LIFE

For information regarding shelf life please see tin label.

CLASSIFICATION

Read material safety data sheets prior to processing.

The material safety data sheets according to Regulation (EC) No. 1907/2006 contain classification according to preparations directive (1999/45/EC) as well as instructions for precautions when processing, handling and storing as well as first aid.

The information given in the material safety data sheet refers to processing as described in this product data sheet.

STANDARD SHADES			
medium yellow	NC 11/NT	light green	NC 40/NT
red bright	NC 21/NT	fir green	NC 41/NT
carmine red	NC 22/NT	white	NC 60/NT
ultra marine	NC 32/NT	black	NC 65/NT
blue violet	NC 36/NT		
PROCESS COLOURS ACCORDING TO EUROPE SCALE			
C-MIX 2000 BASE COLOURS			
primrose	NC/Y30	violet	NC/V50
golden yellow	NC/Y50	blue	NC/B50
orange	NC/O50	green	NC/G50
scarlet	NC/R20	black	NC/N50
red	NC/R50	white	NC/W50
magenta	NC/M50	varnish	NC/E50
yellow	NC 180/NT		
magenta	NC 181/NT		
cyan	NC 182/NT		
SPECIAL SHADES			
transparent paste	NC/TP		
bronze binder	NC/B		
top coating	NC 70		

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. They serve to advise our business associates, but it is absolutely necessary to make your own printing tests under local conditions, with regard to the intended purpose prior to starting the job. - All former product data sheets are no longer valid. APRIL 2008 – VERSION No. 4

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