



Coates Screen

# Product Data Sheet



**GREC**  
GRAFIČNO EKOLOŠKI CENTER

## SCREEN PRINTING INKS YN

### APPLICATION

The screen printing ink YN is an ink type which is mainly intended for printing on packing materials, i.e. screen printing on bottles and containers of various shapes made of polyolefines (polyethylene and polypropylene require pre-treatment!), rigid PVC, polystyrene etc. However, other plastics and materials, such as acrylic glass, polyamide, duroplastics, varnished and unvarnished metals, coated papers (Chromolux) and cardboard can also be successfully printed with this screen printing ink.

Therefore the use of the ink type YN is not limited to printing on packing materials, but due to its universal usability it offers many possibilities in the technical, toy and souvenir article industry.

### CHARACTERISTICS

YN can be processed as 1- or as a 2-component ink. It can be processed well on various printing materials resulting in a glossy screen printing ink film with high opacity and good light fastness.

If especially high demands regarding resistance against different materials, e.g. various chemicals, cosmetic products etc. have to be met, the ink type YN has to be mixed with hardener ZH, ratio 10:1 (parts by weight) prior to processing.

The addition of hardener ZH causes a cross-linkage which improves the resistance of the printing ink film. Generally this also means an increase of adhesion on the various printing materials. When checking the resistance against different materials or the resistance against the various chemicals one has to pay attention not to carry out this test too soon after printing, as complete chemical curing does not take place until 3-4 days after printing.

The pot life, (i.e. the period of time during which the mixture base ink + hardener has to be processed) is approx. 10 hours at room temperature.

### CHOICE OF PIGMENTS AND LIGHT FASTNESS

Printing inks by Coates Screen Inks GmbH correspond to the requirements of the respective current version of the EUPIA exclusion list. Pigments and other compounds based on antimony\*, arsenic, cadmium, chromium(VI), lead, mercury and selenium are not used.

\*see footnote in EUPIA list

### ADJUSTMENT FOR SCREEN PRINTING

The screen printing ink YN is delivered with a normal screen printing ink consistency and has to be adjusted to the right printing consistency by addition of thinners or retarders. The following solvent mixtures are available for this purpose:

<b>Thinner VD 30</b>	as „quick thinner“ for machine printing
<b>Retarder VZ 25</b>	for printing of fine details with
<b>and Retarder VZ 40</b>	slow evaporation rate

Additional auxiliaries of the ink type YN available are:

<b>Transparent paste YN/TP</b>	for brightening of ink shades, especially for halftone printing
<b>Bronze binder YN/B</b>	for mixing bronze inks or as an addition to the ink shades to increase gloss
<b>Overprint varnish YN/E50</b>	protective varnish for special requirements

## **DRYING**

Without addition of the hardener the ink type YN only dries by evaporation of solvents (physical drying). If the YN is processed as a 2-component ink, chemical cross-linkage of the printing ink film takes place immediately after the physical drying.

When developing the screen printing ink YN, special attention was paid to fast drying time. This is especially important for printing on packaging materials in quick cycles.

Drying time can be reduced by heat application. However, in order to determine drying conditions tests under the local conditions are necessary: The following are only approximate values:

<b>hand dry</b>	at room temperature after approx. 10 minutes
<b>completely dry</b>	at room temperature after approx. 30-60 minutes
<b>dry surface</b>	at 60-80°C approx. 1-2 minutes (heat drying)

## **BRONZE INKS**

If bronze inks are needed the corresponding bronze paste has to be added to the binder YN/B, mixing ratios are as follows:

Gold bronze paste B 75-B 78 :YN/B	= 1 : 3-4
Silver bronze paste B 79 :YN/B	= 1 : 4-5

## **CLEANING OF STENCILS AND TOOLS**

The universal cleaning agents URS or URS 3 are used for cleaning the screen printing stencils as well as tools. If the ink type YN is processed as a 2-component ink we recommend use of thinner VD 40.

## **PACKING**

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

## **SHELF LIFE**

For information regarding shelf life please see tin label.

## **CLASSIFICATION**

Read material safety data sheet prior to processing.

The material safety data sheet according to Regulation (EC) No. 1907/2006 (REACH) contains classification according to Regulation (EC) No. 1272/2008 (CLP/GHS) as well as instructions for precautions when processing, handling and storing as well as first aid.

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## STANDARD SHADES

citric yellow	YN 10/NT	dark blue	YN 33/NT
medium yellow	YN 11/NT	turquoise	YN 34/NT
dark yellow	YN 12/NT	violet	YN 37/NT
orange	YN 15/NT	light green	YN 40/NT
ochre yellow	YN 17/NT	fir green	YN 41/NT
light red	YN 20/NT	brilliant green	YN 42/NT
red bright	YN 21/NT	light brown	YN 50/NT
carmine red	YN 22/NT	dark brown	YN 51/NT
pink	YN 25/NT	white	YN 60/NT
light blue	YN 30/NT	white, highly opaque	YN 60/HD-NT
medium blue	YN 31/NT	black	YN 65/NT
ultra marine	YN 32/NT		

Other shades can be manufactured subject to our special shade regulation.

## PROCESS COLOURS ACCORDING TO EUROPE SCALE

yellow	YN 180/NT
magenta	YN 181/NT
cyan	YN 182/NT

## C-MIX 2000 BASE COLOURS

primrose	YN/Y30	violet	YN/V50
golden yellow	YN/Y50	blue	YN/B50
orange	YN/O50	green	YN/G50
scarlet	YN/R20	black	YN/N50
red	YN/R50	white	YN/W50
magenta	YN/M50	varnish	YN/E50

## SPECIAL INKS

bronze binder	YN/B
transparent paste	YN/TP



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*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. JUNE 2015 – VERSION No. 7*

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