



Coates Screen

Product Data Sheet

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, f.e. 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

The colour shades of YN-NT inks show heavy-metal free pigmentation and correspond to the requirements of EN 71, part 3, safety of toys, migration of certain elements.

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:

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

Additional auxiliaries of the ink type YN available are:

Transparent paste YN/TP	for brightening of ink shades, especially for halftone printing
Bronze binder YN/B	for mixing bronze inks or as an addition to the ink shades to increase gloss
Overprint varnish YN 70	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:

hand dry	at room temperature after approx. 10 minutes
completely dry	at room temperature after approx. 30-60 minutes
dry surface	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 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			
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		

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

Coates Screen Inks GmbH
Wiederholdplatz 1 90451 Nürnberg
Phone: 0911 6422 0 Fax: 0911 6422 200
<http://www.coates.de>