



Colour diversity and reliability

The right number for true colour



The system

The HKS® system, an international colour system owned by the HKS® Warenzeichenverbandes e.V. has been conceived by Hostmann-Steinberg GmbH (**hubergroup**), K + E Druckfarben and Schmincke & Co. specifically for corporate design purposes.

The HKS® system provides those involved in the printing process - the graphic designer, prepress provider, printer and customer - with an instrument that, from the drawing board through to the final product, enables them to obtain perfect colour fidelity.

- 3,520 artists colours for limitless freedom of design.
- The ideal colour system for consistent corporate designs, not restricted simply to standard printing of papers and boards, but extending to the printing of textiles, colouring of plastics, plastic films, varnishes, and paints for buildings and cars.
- Once an HKS® colour has been defined, the colour shade and purity of this colour match up on all printing substrates used, thanks to the perfectly adapted mixing formulae. The mixed colours on coated paper (German: **Kunstdruckpapier**), uncoated paper (German: **Naturpapier**), continuous paper (German: **Endlospapier**) and newsprint paper (German: **Zeitungsdruckpapier**) offer the best accuracy of hue match possible. This is one massive advantage of the HKS® system compared with all other colour mixing systems on the market.

The colour guides

HKS® K 3000 plus for coated paper (**Kunstdruckpapier**)

HKS® N 3000 plus for uncoated paper (**Naturpapier**)

HKS® Z for newsprint (**Zeitungsdruckpapier**)

HKS® En for continuous paper on uncoated paper r

HKS® Ek for continuous paper shows the colours of the standard En colour guide but on mattcoated paper

HKS® colour charts for 4-colour separations (K, N, E, Z)

The elementary and basic colours are proofprinted in the HKS® colours guides (fans) with the following film thicknesses commonly in use in the field:

HKS® K 3000 plus = 1.5 g/m²

HKS® N 3000 plus = 2.0 g/m²

HKS® E = 1.2 – 1.4 g/m²

HKS® Z = 1.3 – 1.4 g/m²

Optimum reproducibility on the press is therefore guaranteed.

- Based on 9 elementary colours plus black and transparent white, each of the various colour guides contains 88 shades (nuances); the only exception to this is the HKS® Z guide that has 50 shades.

The HKS® K 3000 plus and HKS® N 3000 plus guides each contain a matching range of 3,520 colour shades that offer the graphic designer a massive variety of colours from which to choose. The basis is formed by the 88 basic HKS® colours in full tone, which are lightened in 10 steps and also overprint with 3 different steps of black to produce halftones. All shades shown for halftone are also available as full-tone colours.

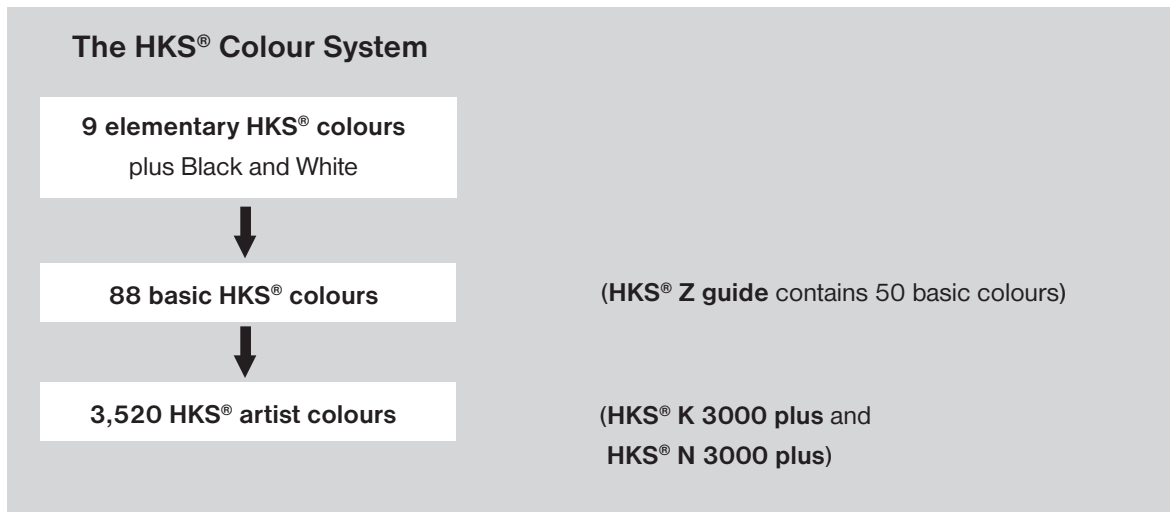
- When reprints of the colour guides are made, the coloristics are always based on the HKS® K guide. The mixed colours for the guides printed on uncoated paper, continuous paper and newsprint are matched to the HKS® K guide.

Following production, the elementary and basic HKS® colours are colour-matched with the latest colour guide during the delivery inspection with the aid of a weighed proof and compared with the wet sample of the latest guide. In this way, we achieve the best possible colour fidelity, i.e. consistency of hue, when using similar substrates in the field.

Source – see www.hks-colour.com
www.hks-colourgeneration.com

The elementary and basic HKS® colours

The various colour guides are each based on 9 elementary colours plus black and transparent white.



The elementary colours for HKS® K and N have the following properties:

(Fastness properties per DIN 16 524/25)							
	HKS K	HKS N	Light (BWS)	Trans- parency	Alcohol	Solvent mixture	Alkali
Yellow	3 K	3 N	5	L	+	+	+
Orange	7 K	7 N*	5	L	+	+	+
Orange		207 N*	5	L	+	+	+
Red	13 K	13 N	5	LD	+	-	+
Red	25 K	25 N	5	L	+	+	-
Red	27 K	27 N	4	L	-	-	-
Violet	33 K	33 N	4	L	-	-	-
Blue	43 K	43 N*	4	L	-	-	-
Blue		243 N*	4	L	-	-	-
Blue	47 K	47 N	8	L	+	+	+
Green	53 K	53 N	8	L	+	+	+
White	47 P 0000	47 P 0000		L			
Black	88 K	88 N	8		+	+	+

***The HKS® K colour guide is always binding for the coloristics of the HKS® system!**

In the past in order to obtain a coloristic correspondence between the colours of the HKS® K and HKS® N colour guides, the colours Orange HKS® 7 N and Blue HKS® 43 N were formulated as mixtures. In the course of the ongoing development of the HKS® system, the formulation of HKS® N inks was made more intensive as of 2002. To continue to be able to guarantee the reliability of the HKS® system with regard to colour fidelity, it was necessary to separate both orange and blue into two colours each.

- Orange HKS® 7 N = correspondence to Orange HKS® 7 K
- Orange HKS® 207 N = basic and mixed colour in the HKS® N guide
- Blue HKS® 43 N = correspondence to Blue HKS® 43 K
- Blau HKS® 243 N = basic and mixed colour in the HKS® N guide

1. Fastness properties

To enable subsequent finishing with UV varnish or film laminating (celloglazing), the inks must be solvent- and/or alkali-resistant, but this can only be achieved by using special basic colour inks with better fastness properties. If necessary, a custom made ink can be produced in line with a defined requirement profile. The use of fast pigments can lead to colour deviations in the mixed HKS® shades because compared with the standard pigment, pigments with higher fastness values often differ in practice with respect to their colorimetrics.

2. Finishing

The HKS® colour guides present the colours without surface finishing. Postprint finishing (varnishing or lamination) usually leads to a change in the colour shade. This is technically unavoidable and can not be counteracted by modifying the formula either.

3. Suitability for bar code

See TI 19.1.05 E „HKS® printing inks for bar codes“.

The software

HKS® DTP software package „Creative Box 3000+“ is available for Macintosh and the various Windows versions for use by graphic designers. The data of this DTP package can be integrated into programs such as QuarkXPress, FreeHand, Indesign, Illustrator, CorelDRAW, PowerPublisher and other applications.

Among other things, the CD-ROM contains the CMYK and L*a*b*-50/2°- and 65/2°-values [CIELAB conditions DIN, Pol, Abs] for the HKS® K 3000 plus, N 3000 plus, E and Z fan.

The DTP package rounded off by a comparison of the HKS® system with the RAL system.

Source - see www.hks-colour.com

www.hks-colourgeneration.com

Corporate Design

The HKS® colour system offers the greatest possible choice and colour fidelity when developing and maintaining corporate designs. HKS® colours can be perfectly reproduced on almost any material. You can always be sure of colour fidelity with colours defined in the HKS® system - and not only in prints.

The HKS® Warenzeichenverband e.V. has concluded appropriate agreements with a number of licencees from the screen printing, car paints, building paints and varnishes, plastic films, plastic colouring and textiles segments.

For further details and a list of HKS® partners, see www.hks-colour.com

The Internet

Please look on the internet for information on where to order the HKS® colours guides, on the partners of HKS® and on how to purchase the DTP package: www.hks-colour.com.

Contact addresses for advice and further information can be found under www.hubergroup.de

This Technical information sheet reflects the current state of our knowledge. It is designed to inform and advise. We assume no liability for correctness. Modifications may be made in the interest of technical improvement.