

voir des fichiers similaires: http://130.149.60.45/~farbmtrik/SF25/SF25L0N1.TXT /PS; sortie de production
 informations techniques: http://www.ps.bam.de ou http://130.149.60.45/~farbmtrik

5 steps of grey series black – white (N _d – W _d)	Colour space, colour space coordinates and PostScript operator calculations according to ISO/IEC 15775:1999-12			
Linear mixture between black and white in CIELAB colour space	relative CIELAB			
	lab* w _d 000n _d 000a _d 000b _d setgray	lab* cmy0 _d 000a _d 000b _d setcmycolor	lab* cmy0 _d 000a _d 000b _d setcmycolor	lab* rgb _d 000a _d 000b _d setrgbcolor
1.00N _d +0.00W _d (Black N _d)	0,00	0,00	0,00	1,00
0.75N _d +0.25W _d	0,25	0,00	0,00	0,75
0.50N _d +0.50W _d	0,50	0,00	0,00	0,50
0.25N _d +0.75W _d	0,75	0,00	0,00	0,25
0.00N _d +1.00W _d (white W _d)	1,00	0,00	0,00	0,00

SF250-1

5 steps of grey series black – white (N _d – W _d)	Colour space, colour space coordinates and PostScript operator calculations according to ISO/IEC 15775:1999-12			
Linear mixture between black and white in CIELAB colour space	Standard CIELAB	adapted CIELAB	relative CIELAB	relative CIELAB
	LAB*LAB* _d = LAB* _d LAB* _d setcolor	LAB*LAB* _{a,d} = LAB* _{a,d} LAB* _{a,d} setcolor	lab*ncu* _d = ncu* _d lab* _d setcolor	lab*ncu* _d setcolor
1.00N _d +0.00W _d (Black N _d)	18,01	0,50	-0,40	1,00
0.75N _d +0.25W _d	37,35	0,10	0,80	0,75
0.50N _d +0.50W _d	56,70	-0,10	2,10	0,50
0.25N _d +0.75W _d	76,05	-0,50	-3,40	0,25
0.00N _d +1.00W _d (white W _d)	95,41	-0,98	4,76	0,00

SF250-3

5 steps of colour series cyan blue – white (C _d – W _d)	Colour space, colour space coordinates and PostScript operator calculations according to ISO/IEC 15775:1999-12			
Linear mixture between cyan blue and white in CIELAB colour space	Standard CIELAB	relative CIELAB	relative CIELAB	relative CIELAB
	LAB*LAB* _d = LAB* _d LAB* _d setcolor	lab*cmy0 _d = cmy0 _d lab* _d setcmycolor	lab*rgb _d = rgb _d lab* _d setrgbcolor	lab*rgb _d = rgb _d lab* _d setrgbcolor
1.00C _d +0.00W _d (cyan blue C _d)	58,62	-30,62	-42,74	1,00
0.75C _d +0.25W _d	67,82	-23,21	-30,86	0,75
0.50C _d +0.50W _d	77,02	-15,80	-18,98	0,50
0.25C _d +0.75W _d	86,21	-8,39	-7,11	0,25
0.00C _d +1.00W _d (white W _d)	95,41	-0,98	4,76	0,00

SF250-5

5 steps of colour series cyan blue – white (C _d – W _d)	Colour space, colour space coordinates and PostScript operator calculations according to ISO/IEC 15775:1999-12			
Linear mixture between cyan blue and white in CIELAB colour space	adapted CIELAB	relative CIELAB	relative CIELAB	relative CIELAB
	LAB*LAB* _{a,d} = LAB* _{a,d} LAB* _{a,d} setcolor	lab*tc* _d = tc* _d lab* _d setcolor	lab*ncu* _d = ncu* _d lab* _d setcolor	lab*ncu* _d setcolor
1.00C _d +0.00W _d (cyan blue C _d)	58,62	-30,34	-45,01	0,50
0.75C _d +0.25W _d	67,82	-22,75	-33,75	0,625
0.50C _d +0.50W _d	77,02	-15,17	-22,50	0,750
0.25C _d +0.75W _d	86,21	-7,58	-11,25	0,875
0.00C _d +1.00W _d (white W _d)	95,41	0,00	0,00	1,000

SF250-7

TUB-test graphique SF25; colour space and coordinates
 5 step colour scales and user friendly coordinates

Application of colour in daily life or in Colour Information Technology (IT)	
Design, architecture, art, industrial products Measured for CIE standard illuminant D65	Colour Information Technology Measured for CIE illuminants D65 and D50
colour order system; name and coordinates: RAL Design System (CIELAB) L* <i>C_ab</i> h _{ab} , lightness, chroma, hue angle Munsell Colour System VCH, lightness (Value), Chroma, Hue text Natural Colour System (NCS) ncu* _d : relative blackness, relative chroma relative elementary hue text	Device system name and coordinates: Printer system (illuminants D50 or D65): cmy _d , content of "cyan, magenta, yellow" Display system (standard illuminant D65): rgb _d /sRGB _d , content of "red, green, blue" <i>No user friendly colour coordinates</i> <i>Nearly no connection to colour orders</i>

Aim: define user friendly connection
 New: Interpretation of the *rgb* colour data in the range 0 to 1 as elementary colour data *rgb**_e
 Linear relations between relative and absolute coordinates *lab**_d – *LAB**_d and *lab**_d – *LAB**_e
*rgb**_d – (*L***a***b***C**_{ab}h_{ab})_d and *rgb**_e – (*L***a***b***C**_{ab}h_{ab})_e (CIELAB)
*rgb*_d – cmy_d, *rgb**_d – cmy*_d and *rgb*_e – cmy*_e, *rgb**_e – cmy*_e ("1-minus"-relation)
*rgb**_d – nce*_d, *rgb**_d – ncu*_d and *rgb*_e – nce*_e, *rgb**_e – ncu*_e
 relative coordinates *lab**_e: elementary redness *r**_e, greenness *g**_e, blueness *b**_e, blackness *n**_e
 chroma *c**_d, elementary hue *e**_d, elementary hue text *n**_e

SF25-3

User friendly colorimetric CIE colour notation *ncu**_d or *uic**_d or *nce**_d and linear relation to *rgb**_d data

White W
 $n^*_e = 0; i^*_e = 1$
 $c^*_e = 0$

Black N
 $n^*_e = 1; i^*_e = 0$
 $c^*_e = 0$

Chromatic X
 $n^*_e = 0; i^*_e = 1$
 $c^*_e = 1$

Point F
 $n^*_e = 0,25$
 $i^*_e = 0,75$
 $c^*_e = 0,50$

relative opponent (*r_e, *y**_e) chroma**
 $r^*_e = 1 - n^*_e$, relative brilliance
 $i^*_e = 1 - n^*_e$, relative chroma
 n^*_e elementary (unique) hue text
 e^*_e elementary hue number
 $n^*_e = 0; i^*_e = 1$
 $c^*_e = 0$
 $u^*_e = Y000$, y^*_e
 $e^*_e = 0,25$
 $u^*_e = G000$, r^*_e
 $e^*_e = 0,50$
 $u^*_e = B000$, b^*_e
 $e^*_e = 0,75$
 $u^*_e = R000$, r^*_e
 $e^*_e = 0,00$

relative CIELAB (*a_e, *b**_e) chroma**
 $g^*_e = 1 - n^*_e$, $r^*_e = 1 - n^*_e$
 $h_{ab,X} = 42$ degree
 $= (25 + 0,25 * 67)$ degree
 $g^*_e = 1 - n^*_e$, $r^*_e = 1 - n^*_e$
 $h_{ab,X} = 25$ degree
 $g^*_e = 1 - n^*_e$, $r^*_e = 1 - n^*_e$
 $h_{ab,X} = 100$ degree
 $g^*_e = 1 - n^*_e$, $r^*_e = 1 - n^*_e$
 $h_{ab,X} = 92$ degree
 $g^*_e = 1 - n^*_e$, $r^*_e = 1 - n^*_e$
 $h_{ab,X} = 162$ degree
 $g^*_e = 1 - n^*_e$, $r^*_e = 1 - n^*_e$
 $h_{ab,X} = 272$ degree

examples for user colour notation:
 $ncu^*_e = 0,25 \ 0,50 \ R25y_e$ or $uic^*_e = R25y_e \ 0,75 \ 0,50$
 or
 $nce^*_e = 0,25 \ 0,50 \ 0,0625 (=0,25/4)$
 $rgb^*_e = 0 \ 1 \ 0$; $h_{ab,G} = 162$ degree
 $rgb^*_e = 0 \ 1 \ 0$; $h_{ab,X} = 42$ degree
 $rgb^*_e = 0,75 \ 0,375 \ 0,25$
 $n^*_e = 1 - r^*_e = 0,25$ or
 $i^*_e = 1 - r^*_e = 0,75$
 $c^*_e = r^*_e - b^*_e = 0,50$

SF25-7

entrée: w/rgb/cmyk -> w/rgb/cmyk_d
 sortie: aucun changement

TUB enregistré: 20130201-SF25/SF25L0N1.TXT /PS
 application pour la mesure de sortie sur écran
 TUB matériel: code=thata