

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 $lab^*w_d^a \quad lab^*000n_d^a - 000n_d^a$ setgray 000n_d^a setcmycolor			
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

SS250-1

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 $LAB^*LAB^*_{a,d} = LAB^*_{a,d}$ $LAB^*_{a,d}$ setcolor	adapted CIELAB $LAB^*LAB^*_{a,d} = LAB^*_{a,d}$ $LAB^*_{a,d}$ setcolor	relative CIELAB $lab^*ncu^*_{a,d} = ncu^*_{a,d}$ $ncu^*_{a,d}$ setcolor	relative CIELAB $lab^*rgb^*_{a,d} = rgb^*_{a,d}$ $rgb^*_{a,d}$ setrgbcolor
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

SS250-3

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 $LAB^*LAB^*_{a,d} = LAB^*_{a,d}$ $LAB^*_{a,d}$ setcolor	relative CIELAB $lab^*cmy0^*_{a,d} = cmy0^*_{a,d}$ $cmy0^*_{a,d}$ setcmycolor	relative CIELAB $lab^*rgb^*_{a,d} = rgb^*_{a,d}$ $rgb^*_{a,d}$ setrgbcolor	relative CIELAB $lab^*ncu^*_{a,d} = ncu^*_{a,d}$ $ncu^*_{a,d}$ setcolor
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

SS250-5

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 $LAB^*LAB^*_{a,d} = LAB^*_{a,d}$ $LAB^*_{a,d}$ setcolor	relative CIELAB $lab^*tch^*_{a,d} = tch^*_{a,d}$ $tch^*_{a,d}$ setcolor	relative CIELAB $lab^*ncu^*_{a,d} = ncu^*_{a,d}$ $ncu^*_{a,d}$ setcolor	relative CIELAB $lab^*rgb^*_{a,d} = rgb^*_{a,d}$ $rgb^*_{a,d}$ setrgbcolor
1.00C _d +0.00W _d (cyan blue C _d)	58,62	-30,34	-45,01	0,500
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

SS250-7

gráfico TUB-SS25; 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) $L^*C^*_{ab}$ Lab, lightness, chroma, hue angle Munsell Colour System VCH, lightness (Value), Chroma, Hue text Natural Colour System (NCS) ncu^* : relative blackness, relative chroma relative elementary hue text	Device system name and coordinates: Printer system (illuminants D50 or D65): cmy_a , content of "cyan, magenta, yellow" Display system (standard illuminant D65): $rgb_a/sRGB_a$, content of "red, green, blue" <i>No user friendly colour coordinates</i> <i>Nearly no connection to colour order systems</i>

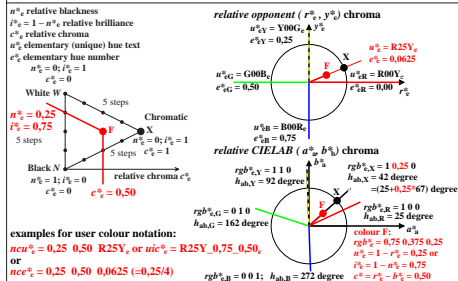
Aim: define user friendly connection

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 $lab^*_a - LAB^*_a$ and $lab^*_e - LAB^*_e$
 $rgb^*_a - (L^*a^*b^*C^*_{ab})_{ab,d}$ and $rgb^*_e - (L^*a^*b^*C^*_{ab})_{ab,e}$ (CIELAB)
 $rgb_a - cmy_a$, $rgb^*_a - cmy^*_a$ and $rgb_e - cmy_e$, $rgb^*_e - cmy^*_e$ ("1-minus"-relation)
 $rgb^*_a - ncu^*_a$, $rgb^*_e - ncu^*_e$ and $rgb^*_a - ncu^*_a$, $rgb^*_e - ncu^*_e$
relative coordinates lab^*_e : elementary redness r^*_e , greenness g^*_e , blueness b^*_e , blackness n^*_e
chroma c^*_a , elementary hue e^*_e , elementary hue text u^*_e

SS251-3

User friendly colorimetric CIE colour notation ncu^*_e or uic^*_e or ncc^*_e and linear relation to rgb^*_e data



SS251-7

entrada: w/rgb/cmyk → w/rgb/cmyk_d
salida: ningún cambio