

See original or copy: <http://web.me.com/klaus.richter/NE45/NE45L0NA.TXT> /.PS  
 Technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20101101-NE45/NE45L0NA.TXT /.PS  
 application for measurement of printer or monitor systems

TUB material: code=rh4ta

basic and mixed colors of standard color printing by DIN 16 539					
basic color or mixed color and name	CIE standard chromaticity		CIE standard tristimulus value		
	x	y	X	Y	Z
<i>three subtractive basic colors:</i>					
C cyanblue	0,1553	0,1967	16,92	21,44	70,62
M magentared	0,4675	0,2314	33,88	16,77	21,82
Y yellow	0,4399	0,4925	68,13	76,28	10,48
<i>three subtractive mixed colors:</i>					
O orangered	0,6152	0,3226	30,51	16,00	3,08
L leafgreen	0,1958	0,5256	6,05	16,23	8,06
V violetblue	0,1807	0,1009	4,86	2,72	19,33
NLC (white)	0,3101	0,3162	98,07	100,00	118,22

NE450-3, BT9\_07

basic and mixed colors of a test offset color printing process					
basic color or mixed color and name	CIE standard chromaticity		CIE standard tristimulus value		
	x	y	X	Y	Z
<i>three subtractive basic colors:</i>					
C cyanblue	0,1776	0,2510	20,04	28,32	64,46
M magentared	0,4298	0,2320	29,94	16,17	23,56
Y yellow	0,4512	0,5000	62,08	68,74	6,75
<i>three subtractive mixed colors:</i>					
O orangered	0,6261	0,3368	21,57	11,60	1,28
L leafgreen	0,2416	0,5989	5,82	14,43	3,84
V violetblue	0,1890	0,1326	4,39	3,08	15,77
D65 (white paper, D65)	0,3173	0,3337	77,74	81,79	85,43
N (printing black)	0,3130	0,3258	4,12	4,29	4,75

NE450-7, BT9\_08

color valence metrics terms (color values: linear coordinates)		
color valence metric terms	name and relationship with standard chromaticity values	notes:
<b>luminous value</b>	$Y = y ( X + Y + Z )$	definition in: CIEXYZ 1931
<b>chromatic value</b>	for linear chromatic value diagram (AT, B)	
red-green	$A = [ X / Y - X_n / Y_n ] Y = [ a - a_n ] Y$ $= [ x / y - x_n / y_n ] Y$	definition opponent
yellow-blue	$B = -0,4 [ Z / Y - Z_n / Y_n ] Y = [ b - b_n ] Y$ $= -0,4 [ z / y - z_n / y_n ] Y$	color system n=D65 (surround)
radial	$C = [ A^2 + B^2 ]^{1/2}$	
<b>saturation value</b>	= chromatic value / luminous value definition	
red-green	$S_a = A / Y = X / Y - X_n / Y_n$ $= x / y - x_n / y_n = a - a_n$	opponent color system
yellow-blue	$S_b = B / Y = -0,4 [ Z / Y - Z_n / Y_n ]$ $= -0,4 [ z / y - z_n / y_n ] = b - b_n$	
radial	$S_c = C / Y$ $= [ ( a - a_n )^2 + ( b - b_n )^2 ]^{1/2}$	
<b>chromaticity value</b>	for linear chromaticity diagram (a, b) definition	
red-green	$a = X / Y = x / y$	opponent
yellow-blue	$b = -0,4 [ Z / Y ] = -0,4 [ z / y ]$	color system
radial	$c = [ ( a - a_n )^2 + ( b - b_n )^2 ]^{1/2}$	

NE451-7, BT9\_09