

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
three subtractive basic colors:					
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
three subtractive mixed colors:					
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

ME450-3, 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
three subtractive basic colors:					
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
three subtractive mixed colors:					
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

ME450-7, BT9_08

color valence metrics terms (color values: linear coordinates)

color valence metric terms	name and relationship with standard chromaticity values	notes:
luminous value	$Y = y (X + Y + Z)$	definition in: CIEXYZ 1931
chromatic value	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	$C = [A^2 + B^2]^{1/2}$	
saturation value	= 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	$S_c = C / Y$ $= [(a - a_n)^2 + (b - b_n)^2]^{1/2}$	
chromaticity value	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	$c = [(a - a_n)^2 + (b - b_n)^2]^{1/2}$	

ME451-7, BT9_09