

## TS-688

### Defining Colors using Hex Values

#### With the Gray-Scale and RGB Color Naming Schemes

##### Introduction

In Version 6, SAS/Graph includes predefined names for 290 different colors. Additional predefined color names became available for over 100 colors for SAS/Graph output in Version 9. These are the HTML color names listed in the SAS Registry. Together the list of predefined colors give you over 400 colors to choose from. See the ["Predefined Colomames"](#) section of this document for the names of the available pre-defined colors.

In any of these releases of the SAS system, you can also define your own colors in SAS/Graph using one of the color-naming schemes. The color-naming schemes are documented in the "SAS/Graph Software Reference" section of the OnlineDoc, under "SAS/Graph Colors". This document focuses on two of those schemes, gray-scale and RGB.

Using the gray-scale color-naming system, it is possible to define 256 different shades of gray ranging from pure black to pure white. With the RGB color-naming system, it is possible to define over 16 million colors. Both color-naming schemes in SAS use hexadecimal notation to define the colors.

##### Understanding Hex Values

In everyday life we typically use numbers from the base 10 system, where values range from 0 to 9 before an additional digit is needed. In a hexadecimal numbering system, each digit can represent 16 values, typically represented as 0 through 9 and then A through F, as shown in the following table.

Base 10	Base 16 (Hexadecimal)
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F

In the base 10 system, a two-digit number can represent 100 values ranging from 0 through 99. In the base 16 system, a two digit number can represent 256 values, ranging from 00 through FF. A six-digit number in the base 10 system represents  $10^6$  ( $10 \times 10 \times 10 \times 10 \times 10 \times 10$ ) values, or 1,000,000 numbers. A six-digit number in the hexadecimal system represents  $16^6$  ( $16 \times 16 \times 16 \times 16 \times 16 \times 16$ ) values, or 16,777,215 numbers.

Methods for manipulating numbers, such as addition, subtraction, and multiplication, work the same in both systems; it is the representation of the value that is different. For example, each of these equations represents the same values:

Base 10	Base 16
$9 + 1 = 10$	$9 + 1 = A$
$8 + 8 = 16$	$8 + 8 = 10$
$3 \times 85 = 255$	$3 \times 55 = FF$

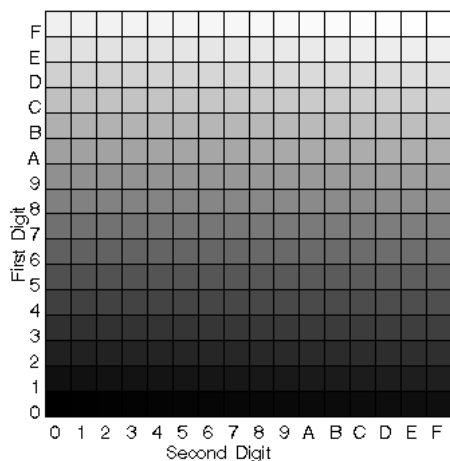
When using the hexadecimal system to define you own colors, the exact value for the color is not as significant as the relationship of the digits in the value to each other, and the relationship of the value of this color to other colors.

### The Gray-Scale Color-Naming Scheme

The gray-scale color naming scheme uses a two digit hex value to define up to 256 shades of gray. In SAS, the root word GRAY is used to distinguish this naming system from the other color-naming systems. For example, GRAY00 is black, GRAYFF is white, and GRAY88 is a medium gray.

The following chart displays all 256 Gray-scale colors.

#### Gray-Scale Colors



To define the Gray-scale colors using this chart, build the names as follows:

"GRAY" || FIRST DIGIT || SECOND DIGIT

For example, the last square on the bottom right represents the value GRAY0F, a very dark gray. The square on the top of the left vertical axis represents the value GRAYF0, a very light gray.

### The RGB Color-Naming System

The RGB color system is commonly used in both web graphics and web documents. This system is was designed to define colors as the human eye perceives them, as light. The three foundation or primary colors of this system are red, green, and blue.

The color system is additive: varying values for red, green, and blue can be combined to form the other colors. Because the system is based upon the properties of light, an absence of all color is black and full saturation in all colors is white. Each secondary color is the sum of two primary colors:

- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan

The SAS RGB color-naming scheme is similar to the standard HTML color-naming scheme. Both use a six-digit hexadecimal value to represent the amount of red, green, and blue that define the color. The first pair of digits represents the amount of red in the color; the second pair of digits is for blue, and the third is for green. In SAS, the color names must also be preceded by the letters "CX" to distinguish this color-naming system from other SAS color-naming systems. The general form of the names in SAS is as follows:

"CX" || RED RED || GREEN GREEN || BLUE BLUE

This system allows for the creation of over 16 million different colors. All 256 grayscale colors are included in this color system.

### Listing the RGB Colors

Because the RGB system defines over 16 million colors, it would take many pages to display them all. It is also difficult to distinguish colors that have very similar values.

A good reference for a broad range of colors are the 216 colors commonly used on the web. These 216 colors form what is known as the "web-safe" or "non-dithering" color palette. They were traditionally used to prevent color-mapping or dithering of images when the majority of computer displays only supported 256 colors. Although most displays today are capable of representing millions of colors, this palette still remains popular.

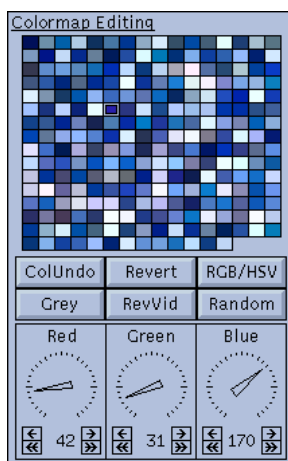
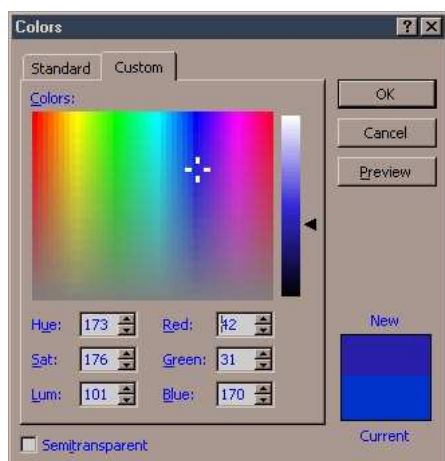
The only digits used in web-safe colors are 0, 3, 6, 9, C, and F. As you can see in the chart, the convention is for the values of red, green, and blue to use the same value for both digits.

### The 216-Websafe Colors

By varying the amounts of red, green, and blue in a given value, you can begin to define your own colors. Remember that the names must be preceded by the letters "CX" in order to identify the value as an RGB color in SAS.

### Converting Color Values from Other Software Programs

Many software programs that allow you to edit their own colors can display the RGB values for that color. In these programs the RGB colors are usually represented as three base-10 values ranging from 0 to 255. For example, the following screen-shots show the RGB values for a particular shade of blue as displayed by two different software programs:



To match RGB colors in your SAS output to RGB colors from another software program, you can translate the decimal values to hexadecimal representation using a SAS program. For example, the following program converts the color blue above from the base 10 representation to hexadecimal values that can be used to represent the RGB color in SAS.

```
data _null_;
  /* Input values */
```

```
red=42;

green=31;

blue=170;

/* Convert to hex */

hexred=put(red,hex2.);

hexgreen=put(green,hex2.);

hexblue=put(blue,hex2.);

/* Create as a SAS RGB color */

sasrgb="CX"||hexred||hexgreen||hexblue;

/* Write the new value to the Log */

put sasrgb;

run;
```

For this shade of blue, the SAS RGB color is CX2A1FAA.

Predefined Colornames



In SAS 6, 290 different colors were available by their predefined names, such as RED, ORANGE, and VIGB ("vivid greenish blue"). In SAS 8.2, 140 predefined colors were added that could be used with non-graphical output. In Version 9.0, you can specify these HTML colors for SAS/Graph output. These colors, such as BlanchedAlmond and SeaShell, are listed in the SAS Registry under the key "COLORNAMES\HTML". The RGB values for the colors are displayed next to each name.

The following table shows the SAS/Graph color names and the HTML color names. The presence of a Description indicates the color is one of the SAS/Graph colors. RGB and HLS colors are shown for both types of colors. The color should be referenced by its name, RGB, or HLS value. Names do not contain spaces, so they do not need to be specified in quotes. Colors listed by both schemes, such as BLACK and YELLOW, are represented only once in the table.

Name	RGB Value	HLS Value	Sample	Description
BLACK	CX000000	H0000000		Black
Navy	CX000080	H00040FF		
DarkBlue	CX00008B	H00046FF		
MediumBlue	CX0000CD	H00067FF		
BLUE	CX0000FF	H00080FF		Blue
DarkGreen	CX006400	H0EF32FF		
Green	CX008000	H0EF40FF		
Teal	CX008080	H12C40FF		
DarkCyan	CX008B8B	H12C46FF		
DeepSkyBlue	CX00BFFF	H13980FF		
DarkTurquoise	CX00CED1	H12C69FF		
MediumSpringGreen	CX00FA9A	H1157DFF		
GREEN	CX00FF00	H0F080FF		Green
SpringGreen	CX00FF7F	H10D80FF		
CYAN	CX00FFFF	H12C80FF		Cyan
BRBL	CX010101	H0980101		Brownish black
VIB	CX090766	H00136DF		Vivid blue
VDEYG	CX0A260E	H0F81894		Very deep yellowish green
DEB	CX100F26	H0011B6D		Deep blue
VIG	CX118044	H10C48C3		Vivid green
VDAGB	CX121519	H14E162D		Very dark greenish blue
VDAG	CX121915	H10C162D		Very dark green
VDABG	CX121919	H12A162D		Very dark bluish green
VIGB	CX13478C	H14E4FC3		Vivid greenish blue
VIBG	CX138C89	H12A4FC3		Vivid bluish green
DEGB	CX142233	H14E246D		Deep greenish blue
DEG	CX143322	H10C246D		Deep green
DEBG	CX143332	H12A246D		Deep bluish green
DAPB	CX151219	H017162D		Dark purplish blue
DEOLG	CX15260D	H0DD1980		Deep olive green
DAV	CX161219	H022162D		Dark violet
DAOL	CX161911	H0CB1533		Dark olive
VIYG	CX16A629	H0F85EC3		Vivid yellowish green
VDEP	CX170819	H034117F		Very deep purple
BLB	CX171719	H001180D		Blackish blue
BLG	CX171918	H10C180D		Blackish green
VDAYG	CX172118	H0F81C2D		Very dark yellowish green
DEPB	CX180F26	H0171B6D		Deep purplish blue
VDAP	CX181219	H034162D		Very dark purple
DEYG	CX185920	H0F83994		Deep yellowish green
VERP	CX190817	H046117F		Very deep reddish purple
VDER	CX190A0D	H06D126D		Very deep red
VDEPR	CX190A12	H058126D		Very deep purplish red

Name	RGB Value	HLS Value	Sample	Description
VDAR	CX191213	H06D162D		Very dark red
VDAPR	CX191216	H058162D		Very dark purplish red
VDARP	CX191218	H046162D		Very dark reddish purple
DARBR	CX191614	H08C171C		Dark reddish brown
DABR	CX191714	H098171C		Dark brown
BLR	CX191717	H06D180D		Blackish red

BLP	CX191719	H034180D		<i>Blackish purple</i>
RBK	CX191919	H06D1904		<i>Reddish black</i>
MidnightBlue	CX191970	H00045A2		
DEV	CX1B0D26	H0221980		<i>Deep violet</i>
DAB	CX1B1B26	H001212D		<i>Dark blue</i>
DodgerBlue	CX1E90FF	H1498FFF		
DAOLG	CX1F261C	H0DD2127		<i>Dark olive green</i>
STB	CX201F73	H0014994		<i>Strong blue</i>
LightSeaGreen	CX20B2AA	H12969B2		
ForestGreen	CX228B22	H0EF579B		
DERBR	CX26150D	H08C1980		<i>Deep reddish brown</i>
DEBR	CX261C0F	H0981B6D		<i>Deep brown</i>
DAYBR	CX26251F	H0AA221C		<i>Dark yellowish brown</i>
DAOLBR	CX26261C	H0B52127		<i>Dark olive brown</i>
STOLG	CX264C14	H0DD3094		<i>Strong olive green</i>
DAGB	CX2A3440	H14E3533		<i>Dark greenish blue</i>
VIPB	CX2B0766	H01736DF		<i>Vivid purplish blue</i>
DABG	CX2D403F	H12A362D		<i>Dark bluish green</i>
DAGROLG	CX2E332C	H0DD3012		<i>Dark grayish olive green</i>
STGB	CX2E4C73	H14E506D		<i>Strong greenish blue</i>
STG	CX2E734E	H10C506D		<i>Strong green</i>
STBG	CX2E7371	H12A506D		<i>Strong bluish green</i>
SeaGreen	CX2E8B57	H10A5D81		
DarkSlateGray	CX2F4F4F	H12C3F41		
DAGROL	CX30332C	H0CB3012		<i>Dark grayish olive</i>
BIB	CX3230B2	H0017194		<i>Brilliant blue</i>
LimeGreen	CX32CD32	H0EF809B		
VIR	CX33070F	H06D1DC3		<i>Vivid red</i>
DEYBR	CX332E14	H0AA246D		<i>Deep yellowish brown</i>
DAGRRBR	CX332E2C	H08C3012		<i>Dark grayish reddish brown</i>
DAGRBR	CX33322E	H0A5300D		<i>Dark grayish brown</i>
DAG	CX364C40	H10C412D		<i>Dark green</i>
DAGRB	CX373740	H0013B12		<i>Dark grayish blue</i>
STYG	CX388C43	H0F8626D	STYG	<i>Strong yellowish green</i>
DAYG	CX3B593F	H0F84A33		<i>Dark yellowish green</i>
STV	CX3C1859	H0223994		<i>Strong violet</i>
DELG	CX3C6629	H0DD476D		<i>Deep yellow green</i>
MediumSeaGreen	CX3CB371	H10A787F		
DEP	CX3E1745	H0342E80		<i>Deep purple</i>
MOB	CX3E3D73	H001584E		<i>Moderate blue</i>
STPB	CX3F1F73	H0174994		<i>Strong purplish blue</i>

Name	RGB Value	HLS Value	Sample	Description
MOPB	CX3F3059	H017444E		Moderate purplish blue
DAR	CX40262B	H06D3340		Dark red
DAGRYBR	CX403E37	H0AA3B12		Dark grayish yellowish brown
Turquoise	CX40E0D0	H12690B8		
RoyalBlue	CX4169E1	H15A91BA		
DAP	CX423045	H0343B2D		Dark purple
DAGRP	CX443C45	H0344012		Dark grayish purple
VILG	CX44A616	H0DD5EC3		Vivid yellow green
DEPR	CX45122E	H0582C94		Deep purplish red
DERP	CX45173E	H0462E80		Deep reddish purple
DAPR	CX452938	H0583740		Dark purplish red
DARP	CX453042	H0463B2D		Dark reddish purple
DAGRR	CX453C3D	H06D4012		Dark grayish red
DAGRG	CX454C48	H10C490D		Dark grayish green
MOOLG	CX45593B	H0DD4A33		Moderate olive green
SteelBlue	CX4682B4	H1467D71		
MOV	CX473059	H022444E		Moderate violet
MOOL	CX47592A	H0CB415D		Moderate olive
DarkSlateBlue	CX483D8B	H0076464		
MediumTurquoise	CX48D1CC	H12A8D99		
GRPB	CX4A4159	H0174D27		Grayish purplish blue
Indigo	CX4B0082	H02341FF		
VIPR	CX4C052C	H05829DF		Vivid purplish red
DER	CX4C1923	H06D3380		Deep red
STRBR	CX4C2714	H08C3094		Strong reddish brown
MOGB	CX4C5D73	H14E6033		Moderate greenish blue
MOG	CX4C735E	H10C6033		Moderate green
MOBG	CX4C7372	H12A6033		Moderate bluish green
BIGB	CX4D7EBF	H14E8679		Brilliant greenish blue
BIG	CX4DBF81	H10C8679		Brilliant green
BIBG	CX4DBFBC	H12A8679		Brilliant bluish green
GRV	CX4F4159	H0224D27		Grayish violet
BIYG	CX52CC62	H0F88F8B		Brilliant yellowish green
VIV	CX53098C	H0224BDF		Vivid violet
DABGR	CX535359	H0015609		Dark bluish gray
GROL	CX54594A	H0CB5217		Grayish olive
DarkOliveGreen	CX556B2F	H0C94D64		
OLGR	CX575953	H0CB5609		Olive gray
DAPGR	CX585359	H0345609		Dark purplish gray
VIRP	CX59064C	H04630DF		Vivid reddish purple
STBR	CX593B18	H0983994		Strong brown
MORBR	CX59453B	H08C4A33		Moderate reddish brown
MOBR	CX594E41	H0984D27		Moderate brown
GRRBR	CX594F4A	H08C5217		Grayish reddish brown
DARGR	CX595354	H06D5609		Dark reddish gray
GRBR	CX59564D	H0A55312		Grayish brown
BRGR	CX595753	H0985609		Brownish gray

Name	RGB Value	HLS Value	Sample	Description
MOOLBR	CX595936	H0B54740		Moderate olive brown
DAGGR	CX595959	H0F85900		Dark greenish gray
LIB	CX5A58A6	H0017F4E		Light blue
STLG	CX5B993D	H0DD6B6D		Strong yellow green
GRB	CX5C5C73	H001671C		Grayish blue
MOYG	CX5D8C64	H0F87533		Moderate yellowish green
CadetBlue	CX5F9EA0	H12D8041		
BIPB	CX6130B2	H0177194		Brilliant purplish blue
LIOL	CX628033	H0CB596D		Light olive
GRG	CX63736A	H10C6B12		Grayish green
CornFlowerBlue	CX6495ED	H153A9CA		
DERO	CX662F14	H08C3DAA		Deep reddish orange
DARO	CX663D29	H08C476D		Dark reddish orange
MediumAquaMarine	CX66CDAA	H1189A82		
STP	CX671F73	H0344994		Strong purple
DimGray	CX696969	H0006900		
SlateBlue	CX6A5ACD	H0079489		
MOP	CX6B3D73	H034584E		Moderate purple
OliveDrab	CX6B8E23	H0C6599B		
LIPB	CX6D5299	H017754E		Light purplish blue
LIGB	CX6E86A6	H14E8A3C		Light greenish blue
LIG	CX6EA688	H10C8A3C		Light green
LIBG	CX6EA6A4	H12A8A3C		Light bluish green
VIP	CX6F0980	H03444DF		Vivid purple
MAROON	CX700000	H07838FF		Maroon
PURPLE	CX703070	H03C5066		Purple
GRP	CX705C73	H034671C		Grayish purple
SlateGray	CX708090	H14A8021		
STR	CX731727	H06D45AA		Strong red
STPR	CX731749	H05845AA		Strong purplish red
STRP	CX731F65	H0464994		Strong reddish purple
MOR	CX732E3A	H06D506D		Moderate red
MOPR	CX732E53	H058506D		Moderate purplish red
MORP	CX733D6A	H046584E		Moderate reddish purple
GRPR	CX734C61	H0586033		Grayish purplish red
GRR	CX73545A	H06D6327		Grayish red
GRRP	CX73546E	H0466327		Grayish reddish purple
MOYBR	CX736E58	H0AA6522		Moderate yellowish brown
GRYBR	CX737060	H0AA6917		Grayish yellowish brown
DEGY	CX749938	H0CB6976		Deep greenish yellow
VLIB	CX7674D9	H001A691		Very light blue
MOLG	CX769966	H0DD7F33		Moderate yellow green
LightSlateGray	CX778899	H14A8825		
BIV	CX7930B2	H0227194		Brilliant violet
LIV	CX7A5299	H022754E		Light violet
MediumSlateBlue	CX7B68EE	H007ABCC		
LawnGreen	CX7CFC00	H0D27EFF		

Name	RGB Value	HLS Value	Sample	Description
DAGY	CX7E9952	H0CB754E		Dark greenish yellow
Aquamarine	CX7FFDD4	H119BEF8		
Chartreuse	CX7FFF00	H0D280FF		
Maroon	CX800000	H07840FF		
Purple	CX800080	H03B40FF		
VIRO	CX803009	H08C44DF		Vivid reddish orange
DEO	CX80511A	H0984DAA		Deep orange
BRO	CX80603C	H0985E5D		Brownish orange
STYBR	CX806A2B	H0A5557F		Strong yellowish brown
Olive	CX808000	H0B440FF		
GRAY	CX808080	H0008000		Gray
VIGY	CX80BF1A	H0CB6CC3		Vivid greenish yellow
LIYG	CX80BF88	H0F89F55		Light yellowish green
BGR	CX83838C	H001880A		Bluish gray
LIGROL	CX838C75	H0CB8118		Light grayish olive
DEY	CX839938	H0C26976		Deep yellow
PAB	CX8585A6	H0019528		Pale blue
PAV	CX877099	H022852A		Pale violet
LIOLGR	CX878C7E	H0CB850F		Light olive gray
SkyBlue	CX87CEEB	H13CB9B7		
LightSkyBlue	CX87CEFA	H142C1EB		
BILG	CX88E55C	H0DDA1BA		Brilliant yellow green
DAY	CX899952	H0C2754E		Dark yellow
BlueViolet	CX8A2BE2	H01F87C2		
PAPB	CX8A7AA6	H0179033		Pale purplish blue
DarkRed	CX8B0000	H07846FF		
DarkMagenta	CX8B008B	H03B46FF		
SaddleBrown	CX8B4513	H0904FC2		
PGR	CX8B838C	H034880A		Purplish gray
LIOLBR	CX8B8C4B	H0B56C4E		Light olive brown
GRLG	CX8B9985	H0DD8F17		Grayish yellow green
STRO	CX8C411C	H08C54AA		Strong reddish orange
MORO	CX8C5438	H08C626D		Moderate reddish orange
GRRO	CX8C6754	H08C7040		Grayish reddish orange
LIRBR	CX8C7367	H08C7A27		Light reddish brown
LIBR	CX8C7962	H098772D		Light brown
LIGRRBR	CX8C7D75	H08C8118		Light grayish reddish brown
RGR	CX8C8385	H06D880A		Reddish gray
LIGRBR	CX8C887A	H0A58313		Light grayish brown
LIBRGR	CX8C8883	H098880A		Light brownish gray
GGR	CX8C8C8C	H0F88C01		Greenish gray
STGY	CX8DBA44	H0CB7F76		Strong greenish yellow
DAGRY	CX8E996B	H0C2822F		Dark grayish yellow
DarkSeaGreen	CX8FBC8F	H0EFA641		
PAG	CX90A69A	H10C9B1C		Pale green
VLIBG	CX90B0D9	H14EB57C		Very light greenish blue
VLIBG	CX90D9D7	H12AB57C		Very light bluish green

Name	RGB Value	HLS Value	Sample	Description
LightGreen	CX90EE90	H0EFBFBBC		
MediumPurple	CX9370DB	H012A699		
DarkViolet	CX9400D3	H02B6AFF		
PaleGreen	CX98FB98	H0EFCaec		
DEPPK	CX991F85	H0465CAA		Deep purplish pink
DEPK	CX99293D	H06D6194		Deep pink
DarkOrchid	CX9932CC	H0297F9B		
DEYPK	CX993329	H07D6194		Deep yellowish pink
DAPPK	CX995278	H058754E		Dark purplish pink
LIRP	CX99528E	H046754E		Light reddish purple
DAPK	CX995C67	H06D7A40		Dark pink
DAYPK	CX99615C	H07D7A40		Dark yellowish pink
LIGRR	CX997078	H06D852A		Light grayish red
LIGRPR	CX997086	H058852A		Light purplish red
PARP	CX997092	H046852A		Pale reddish purple
DEOY	CX997A1F	H0A55CAA		Deep orange yellow
DAOY	CX998547	H0A5705D		Dark orange yellow
VIY	CX99BF1A	H0C26CC3		Vivid yellow
VLIG	CX99E5BC	H10CBF99		Very light green
YellowGreen	CX9ACD32	H0C6809B		
LIP	CX9B58A6	H0347F4E		Light purple
MOGY	CX9DBF66	H0CB9369		Moderate greenish yellow
VLIYG	CX9EEDA8	H0F8C6B0		Very light yellowish green
BIP	CXA030B2	H0347194		Brilliant purple
BROWN	CXA05000	H09650FF		Brown
Sienna	CXA0522D	H08A6790		
PAP	CXA185A6	H0349528		Pale purple
VLIPB	CXA37AE5	H017B0AD		Very light purplish blue
STY	CXA3BF46	H0C2837C		Strong yellow
Brown	CXA52A2A	H0786898		
STO	CXA66921	H09863AA		Strong orange
MOO	CXA67D4D	H0987A5D		Moderate orange
LIYBR	CXA69F7A	H0AA9033		Light yellowish brown
LIGRYBR	CXA6A18A	H0AA9822		Light grayish yellowish brown
DarkGray	CXA9A9A9	H000A900		
GRGY	CXA9BF86	H0CBA34F		Grayish greenish yellow
MOY	CXABBF66	H0C29369		Moderate yellow
VLIV	CXAC74D9	H022A691		Very light violet
LightBlue	CXADD8E6	H139CA88		
GreenYellow	CXADFF2F	H0CB97FF		
VPAB	CXAEADD9	H001C35C		Very pale blue
BIGY	CXAE554	H0CB9DBD		Brilliant greenish yellow
PaleTurquoise	CXAFEEEE	H12CCFA6		
VIOLET	CXB090D0	H01EB067		Violet
LightSteelBlue	CXB0C4DE	H14EC769		
PowerBlue	CXB0E0E6	H131CB85		
LILG	CXB1E599	H0DDBF99		Light yellow green



Name	RGB Value	HLS Value	Sample	Description
FireBrick	CXB22222	H0786AAE		
STPPK	CXB2309E	H0467194		Strong purplish pink
MOPPK	CXB25FA5	H046895A		Moderate purplish pink
VIO	CXB26306	H0985CEF		Vivid orange
GRPPK	CXB28FA2	H058A130		Grayish purplish pink
LIBGR	CXB3B2BF	H001B917		Light bluish gray
GRY	CXB5BF93	H0C2A942		Grayish yellow
DarkGoldenrod	CXB8860B	H0A362E3		
MediumOrchid	CXBA55D3	H0319497		
MOPK	CXBA7C87	H06D9B4F		Moderate pink
GRPK	CXBA9BA1	H06DAB2F		Grayish pink
MOOY	CXBA157	H0A5896B		Moderate orange yellow
YGR	CXBBBFAC	H0C2B621		Yellowish gray
RosyBrown	CXBC8F8F	H078A641		
VPAG	CXBCD9C5	H103CA46		Very pale green
LIPGR	CXBD82BF	H034B917		Light purplish gray
DarkKhaki	CXBD876B	H0B09462		
LIGY	CXBDE57A	H0CBB0AD		Light greenish yellow
MOYPK	CXBF8580	H07D9F55		Moderate yellowish pink
VIOY	CXBF9106	H0A563EF		Vivid orange yellow
STOY	CXBF9926	H0A573AA		Strong orange yellow
GRYPK	CXBFA5A2	H07DB130		Grayish yellowish pink
PKGR	CXBFB2B5	H06DB917		Pinkish gray
BRPK	CXBFB9A6	H0A5B22A		Brownish pink
LIGGR	CXBFBFBF	H0F8BF01		Light greenish gray
VPAPB	CXC0A8E5	H017C78B		Very pale purplish blue
Silver	CXC0C0C0	H000C000		
LIME	CXC0FF81	H0D2C0FF		Lime
BIY	CXC6E55C	H0C2A1BA		Brilliant yellow
MediumVioletRed	CXC71585	H0516ECF		
VLIP	CXCB74D9	H034A691		Very light purple
VPBV	CXCB8E5	H022C78B		Very pale violet
PAGY	CXCBE5A1	H0CBC392		Pale greenish yellow
VIPK	CXCC1B3B	H06D74C3		Vivid pink
VIYPK	CXCC2B1B	H07D74C3		Vivid yellowish pink
STYPK	CXCC5D52	H07D8F8B		Strong yellowish pink
IndianRed	CXCD5C5C	H0789588		
Peru	CXCD853F	H0958696		
LIY	CXCDE57A	H0C2B0AD		Light yellow
PALG	CXD1E5C7	H0DDD660		Pale yellow green
Chocolate	CXD2691E	H09078C0		
Tan	CXD2B48C	H09AAF70		
VPAP	CXD3ADD9	H034C35C		Very pale purple
LightGrey	CXD3D3D3	H000D300		
Thistle	CXD8BFD8	H03BCC3E		
BJPPK	CXD93ABF	H04689AC		Brilliant purplish pink
STPK	CXD9576E	H06D98A1		Strong pink

Name	RGB Value	HLS Value	Sample	Description
LIPPK	CXD974C9	H046A691		<i>Light purplish pink</i>
BIO	CXD9892B	H09882B1		<i>Brilliant orange</i>
LIO	CXD9A465	H0989F99		<i>Light orange</i>
PAY	CXD9E5B0	H0C2CB83		<i>Pale yellow</i>
Orchid	CXDA70D6	H03DA597		
Goldenrod	CXDAA520	H0A37DBE		
PaleVioletRed	CXDB7093	H065A699		
Crimson	CXDC143C	H06D78D5		
Gainsboro	CXDCDCDC	H000DC00		
Plum	CXDDA0DD	H03BBF79		
Burlywood	CXDEB887	H09AB391		
BWH	CXDEDDDED	H001E54E		<i>Bluish white</i>
LILAC	CXE06090	H062A0AC		<i>Lilac</i>
TAN	CXE0A860	H09AA0AC		<i>Tan</i>
LightCyan	CXE0FFFF	H12CF0FF		
LIPK	CXE599A7	H06DBF99		<i>Light pink</i>
LIYPK	CXE5A099	H07DBF99		<i>Light yellowish pink</i>
BIOY	CXE5B82E	H0A58AC8		<i>Brilliant orange yellow</i>
PAPPK	CXE5B8D0	H058CF79		<i>Pale purplish pink</i>
PAPK	CXE5BFC6	H06DD26D		<i>Pale pink</i>
PAYPK	CXE5C5C2	H07DD468		<i>Pale yellowish pink</i>
LIOY	CXE5C76B	H0A5A8B4		<i>Light orange yellow</i>
PAOY	CXE5D4A1	H0A5C392		<i>Pale orange yellow</i>
Lavender	CXE6E6FA	H000F0AA		
CREAM	CXE8D898	H0A8C0A2		<i>Cream</i>
YWH	CXE8EDD5	H0C2E166		<i>Yellowish white</i>
Dark Salmon	CXE9967A	H086B2B7		
PWH	CXEBDDDED	H034E54E		<i>Purplish white</i>
GWH	CXECEDEC	H0F8ED06		<i>Greenish white</i>
PKWH	CXEDDDE0	H06DE54E		<i>Pinkish white</i>
Violet	CXEE82EE	H03BB8C2		
PaleGoldenrod	CXEEE8AA	H0AFCCAA		
LightCoral	CXF08080	H078B8CA		
Khaki	CXF0E68C	H0AEBEC5		
AliceBlue	CXF0F8FF	H147F8FF		
Honeydew	CXF0FFF0	H0EFF8FF		
Azure	CXF0FFFF	H12CF8FF		
SandyBrown	CXF4A460	H093AADE		
Wheat	CXF5DEB3	H09FD4C4		
Beige	CXF5F5DC	H0B4E98E		
WhiteSmoke	CXF5F5F5	H000F500		
MintCream	CXF5FFFA	H10EFAFF		
GhostWhite	CXF8F8FF	H000FCFF		
Salmon	CXFA8072	H07DB6EE		
AntiqueWhite	CXFAEBD7	H09AE9C7		
Linen	CXFAF0E6	H096F0AA		
LightGoldenrodYellow	CXFAFAD2	H0B4E6CC		

Name	RGB Value	HLS Value	Sample	Description
Oldlace	CXFDF5E6	H09FF2DA		
RED	CXFF0000	H07880FF		<i>Red</i>
SALMON	CXFF0055	H06480FF		<i>Salmon</i>
PINK	CXFF0080	H05980FF		<i>Pink</i>
MAGENTA	CXFF00FF	H03C80FF		<i>Magenta</i>
DeepPink	CXFF1493	H0578AFF		
OrangeRed	CXFF4500	H08780FF		
ROSE	CXFF6060	H078B0FF		<i>Rose</i>
Tomato	CXFF6347	H080A3FF		
HotPink	CXFF69B4	H059B4FF		
Coral	CXFF7F50	H087A8FF		
ORANGE	CXFF8000	H09680FF		<i>Orange</i>
DarkOrange	CXFF8C00	H09980FF		
LightSalmon	CXFFA07A	H088B0FF		
Orange	CXFFA500	H09F80FF		
GOLD	CXFFAA00	H0A080FF		<i>Gold</i>
LightPink	CXFFB6C1	H06FDBFF		
Pink	CXFFC0CB	H06EE0FF		
Gold	CXFFD700	H0AB80FF		
Peachpuff	CXFFDAB9	H094DCFF		
NavajoWhite	CXFFDEAD	H09CD6FF		
Moccasin	CXFFE4B5	H09EDAFF		
Bisque	CXFFE4C4	H098E2FF		
MistyRose	CXFFE4E1	H07DF0FF		
BlanchedAlmond	CXFFEBCD	H09CE6FF		
PapayaWhip	CXFFEFD5	H09DEAFF		
LavenderBlush	CXFFF0F5	H064F8FF		
Seashell	CXFFF5EE	H090F7FF		
Cornsilk	CXFFF8DC	H0A9EEFF		
LemonChiffon	CXFFFACD	H0AEE6FF		
FloralWhite	CXFFFAF0	H0A0F8FF		
Snow	CXFFFafa	H078FDFF		
YELLOW	CXFFFF00	H0B480FF		<i>Yellow</i>
LightYellow	CXFFFFE0	H0B4F0FF		
Ivory	CXFFFFF0	H0B4F8FF		
WHITE	CXFFFFFF	H000FF00		<i>White</i>