

LRV Reference Guide

APCO Color Chart

Light Reflectancy Values

This information is provided for your use in determining the contrast between two colors that normally constitute the graphic image and the background of a sign. The light reflectancy values (LRV) shown here have been measured using Tristimulus Y value under D65 illuminant. Note there are different values for surface and sub-surface applied color.

To determine contrast, subtract the darker value from the brighter, divide by the brighter, and multiply by 100.
 Note: Brighter values have higher numbers.

The formula is $\{B1 - B2\} \div \{B1\} \times 100 = \text{Contrast}$.
 For Example, white letters on a black background (all first surface):
 $\{86.64 - 4.16\} \div 86.64 \times 100 = 95.20$

The ADA Accessibility Guidelines recommend at least 70 percent contrast between characters and their backgrounds.

APCO Color	LRV % 1st Surface	LRV % SubSurface	APCO Color	LRV % 1st Surface	LRV % SubSurface		
A01	White	86.64	56.32	A62	Silver Grey	32.65	25.79
A02	Black	4.16	3.85	A63	Wedgewood Blue	19.98	16.76
A03	Warm Grey	21.58	17.56	A64	Jade Blue	8.50	8.09
A06	Ginger	9.41	8.46	A65	Desert Rose	11.01	9.99
A08	Fire Red	14.83	12.40	A66	Sandy Pink	50.06	36.78
A11	Cobalt Blue	14.26	12.67	A67	Brick Red	8.73	8.03
A12	Peacock Blue	11.17	9.82	A68	Shadow Green	6.93	6.20
A13	Regal Blue	5.47	5.02	A69	American Red	11.75	10.10
A14	Medium Grey	9.36	8.35	A70	Lavender	36.33	28.98
A17	Earth Brown	6.63	6.13	A71	Harvard Green	28.02	22.94
A19	Terra Cotta	12.25	10.35	A72	Bone White	77.24	51.85
A20	Ultra Orange	19.79	15.72	A73	Empress Blue	25.51	20.83
A22	Chrome Yellow	42.96	31.65	A74	Indy Blue	8.29	7.17
A24	Wine	6.63	6.16	A75	Apricot	28.52	22.37
A27	Deep Green	8.58	7.87	A76	Biscuit	63.19	43.89
A28	Orbit Blue	8.83	8.02	A77	Aquamarine	21.83	17.89
A31	Grape	8.54	7.66	A78	Pearl Grey	49.09	36.12
A32	Champion Blue	5.74	5.61	A79	Chiffon	64.47	44.07
A43	Putty	61.47	43.77	A80	Tangerine	25.85	19.84
A44	Architectural Brown	10.13	9.07	A81	Cinnamon	16.30	13.92
A46	Off White	80.00	52.49	A82	Pale Yellow	72.80	39.60
A47	Light Grey	34.80	27.80	A83	Apple Green	46.70	29.90
A48	Chocolate	6.11	5.53	A84	Dusty Rose	46.30	30.20
A49	Mauve	12.90	11.30	A85	Deep Purple	7.00	6.30
A50	Windsor Blue	10.82	9.42	A86	Mint Green	75.80	41.50
A51	Deep Red	9.15	7.91	A87	Sky Blue	61.50	38.40
A52	Emerald Green	11.55	10.34	A88	Royal Blue	6.60	6.20
A53	Thistle Green	13.46	11.65	A90	Moth	51.80	32.80
A54	Graphite	12.23	10.74	A95	Eggplant	7.40	6.70
A55	Medium Yellow	53.23	36.95	A96	Olive Green	15.60	13.00
A60	Buff	53.40	36.00				
A61	Raisin	7.27	6.67				