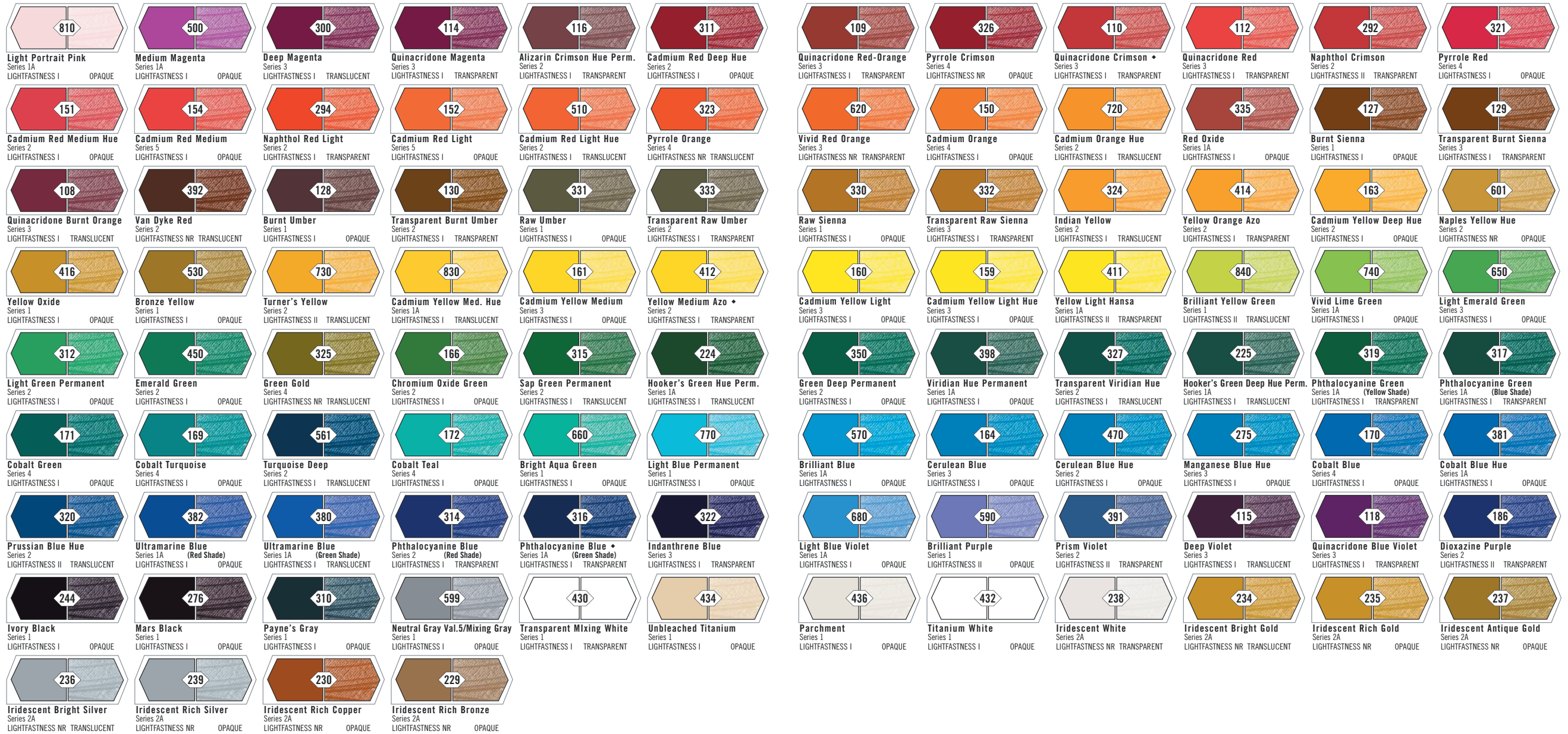


Color chart accuracy is dependent on monitor & printer performance. Actual colors may vary. Use for reference only.



* = PRIMARY COLORS LIGHTFASTNESS: I-EXCELLENT; II-VERY GOOD;
NR - Colors not rated for ASTM lightfastness. Internal testing indicates this pigment to be equivalent to ASTM I and II.
THIS COLOR CHART IS PRODUCED WITHIN THE LIMITATIONS OF LITHOGRAPHIC PRINTING AND IS INTENDED AS A GUIDE ONLY.
SOME COMPOSITION AND PIGMENT INFORMATION MAY CHANGE, BASED UPON AVAILABILITY OR IMPROVEMENTS TO THE RANGE.

100 COLOR SPECTRUM



HB HEAVY BODY

COLOR CHART PROFESSIONAL COLOR RANGES

COMPOSITION AND PERMANENCE CHART

#	Color Name	Series #	Hue	Value	Chroma	Lightfastness "T"	Opacity	Pigment ¹	Pigment name	"S"-Single Pigment M-Mixed Pigment	#	Color Name	Series #	Hue	Value	Chroma	Lightfastness "T"	Opacity	Pigment ¹	Pigment name	"S"-Single Pigment M-Mixed Pigment	#	Color Name	Series #	Hue	Value	Chroma	Lightfastness "T"	Opacity	Pigment ¹	Pigment name	"S"-Single Pigment M-Mixed Pigment						
116	Alizarin Crimson Hue Permanent	2	3.30R	2.86	3.94	I	TP	M	Quinacridone (PR 204), Quinacridone (PR 202)		171	Cobalt Green	4	4.93BG	3.72	4.56	I	O	S	Light Green Oxide (PG 50)		312	Light Green Permanent	2	1.42G	5.09	10.24	I	O	M	Chlorinated Copper Phthalocyanine (PG 7), Arylide Yellow FGL (PY 97), Titanium Dioxide (PW 6)		109	Quinacridone Red-Orange	Series 3	Lightfastness I	TRANSPARENT	
660	Bright Aqua Green	1	4.88BG	6.03	9.04	I	O	M	Chlorinated Copper Phthalocyanine (PG 7), Copper Phthalocyanine (PB 15), Titanium Dioxide (PW 6)		172	Cobalt Teal	4	8.31BG	5.89	9.16	I	O	S	Light Green Oxide (PG 50)		326	Pyrrrole Crimson	Series 4	Lightfastness NR	OPAQUE												
570	Brilliant Blue	1A	7.91B	5.08	9.61	I	O	M	Copper Phthalocyanine (PB 15.3), Chlorinated Copper Phthalocyanine (PG 7), Titanium Dioxide (PW 6)		169	Cobalt Turquoise	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		110	Quinacridone Crimson •	Series 3	Lightfastness I	TRANSPARENT											
590	Brilliant Purple	1	1.73P	5.01	11.15	II	O	M	Carbazole Dioxazine (PV 23 RS), Titanium Dioxide (PW 6)		170	Cobalt Blue	Series 4	Lightfastness I	OPAQUE		325	Emerald Green	Series 1A	Lightfastness I	OPAQUE		112	Quinacridone Red	Series 3	Lightfastness I	TRANSPARENT											
840	Brilliant Yellow Green	1	6.22GY	8.07	10.07	II	TL	M	Phthalocyanine Green (PG 7), Titanium Dioxide (PW 6), Arylide Yellow 10G (PY 3), Arylide Yellow FGL (PY 97)		171	Cobalt Green	Series 4	Lightfastness I	OPAQUE		325	Emerald Green	Series 1A	Lightfastness I	OPAQUE		292	Naphthol Crimson	Series 2	Lightfastness II	TRANSPARENT											
530	Bronze Yellow	1	1.77 Y	5.26	4.9	I	O	M	Synthetic Iron Oxide Yellow (PY 42), Synthetic Iron Oxide Red (PR 101), Synthetic Iron Oxide Black (PBk 11)		168	Cobalt Turquoise	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		321	Pyrrrole Red	Series 4	Lightfastness I	OPAQUE											
127	Burnt Sienna	1	0.21R	3.43	4.16	I	O	S	Calcined Natural Iron Oxide (PB 7)		172	Cobalt Teal	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		151	Cadmium Red Medium Hue	Series 2	Lightfastness I	OPAQUE											
128	Burnt Umber	1	4.22YR	2.63	0.92	I	O	S	Calcined Natural Iron Oxide Containing Manganese (PB 7)		171	Cobalt Green	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		154	Cadmium Red Medium	Series 5	Lightfastness I	OPAQUE											
150	Cadmium Orange	4	3.06YR	6.86	14.99	I	O	S	Cadmium Orange (PO 20)		169	Cobalt Turquoise	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		294	Naphthol Red Light	Series 2	Lightfastness I	TRANSPARENT											
720	Cadmium Orange Hue	2	3.98YR	6.98	13.01	I	TL	M	Pernissine Orange (PO 43 DU), Titanium White (PW 6), Diarylide Yellow HR70 (PY 83)		170	Cobalt Blue	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		108	Quinacridone Burnt Orange	Series 3	Lightfastness I	TRANSPARENT											
311	Cadmium Red Deep Hue	2	5.00R	3.29	8.25	I	O	M	Naphthol Carbazole (PR 170 F300), Quinacridone Violet B (PV 19)		168	Cobalt Turquoise	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		500	Medium Magenta	Series 1A	Lightfastness I	OPAQUE											
152	Cadmium Red Light	5	7.67R	4.96	14.11	I	O	S	Cadmium Red (PR 108)		171	Cobalt Green	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		300	Deep Magenta	Series 3	Lightfastness I	TRANSPARENT											
510	Cadmium Red Light Hue	2	7.50R	5.01	13.4	I	TL	M	Naphthol AS-OL (PR 9), Arylide Yellow 5GX (PY 74 LF), Titanium Dioxide (PW 6)		172	Cobalt Teal	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		114	Quinacridone Magenta	Series 3	Lightfastness I	TRANSPARENT											
154	Cadmium Red Medium	5	6.28R	4.48	13.82	I	O	S	Cadmium Red (PR 108)		171	Cobalt Green	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		116	Alizarin Crimson Hue Perm.	Series 2	Lightfastness I	TRANSPARENT											
151	Cadmium Red Medium Hue	2	6.25R	4.3	13.59	I	O	M	Naphthol Crimson (PR 170 F300), Arylide Yellow FGL (PY 97)		170	Cobalt Blue	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		311	Cadmium Red Deep Hue	Series 3	Lightfastness I	OPAQUE											
163	Cadmium Yellow Deep Hue	2	8.99Y	7.43	12.46	I	O	M	Diarylide Yellow (PY 83 HR 70), Arylide Yellow 5GX (PY 74 LF), Titanium Dioxide (PW 6)		168	Cobalt Turquoise	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		620	Vivid Red Orange	Series 3	Lightfastness NR	TRANSPARENT											
140	Cadmium Yellow Light	3	7.63Y	8.81	12.94	I	O	S	Cadmium Yellow (PY 35)		169	Cobalt Turquoise	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		150	Cadmium Orange	Series 4	Lightfastness I	OPAQUE											
159	Cadmium Yellow Light Hue	3	6.85Y	8.73	11.9	I	O	S	Bismuth Vanadate (PY 184)		170	Cobalt Blue	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		720	Cadmium Orange Hue	Series 2	Lightfastness I	TRANSPARENT											
161	Cadmium Yellow Medium	3	2.39Y	8.27	14.21	I	O	S	Cadmium Yellow (PY 35)		171	Cobalt Green	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		335	Red Oxide	Series 1A	Lightfastness I	OPAQUE											
830	Cadmium Yellow Medium Hue	1A	2.11Y	8.01	12.78	I	TL	M	Arylide Yellow FGL (PY 97), Diarylide Yellow (PY 83 HR 70), Titanium Dioxide (PW 6)		172	Cobalt Teal	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		127	Burnt Sienna	Series 1	Lightfastness I	OPAQUE											
164	Carulean Blue	3	3.29PB	3.96	9.25	I	O	S	Cobalt Chromite (PB 36)		171	Cobalt Green	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		129	Transparent Burnt Sienna	Series 3	Lightfastness I	TRANSPARENT											
470	Carulean Blue Hue	2	3.01PB	4.05	9.52	I	O	M	Complex Silicate of Sodium and Aluminum with Sulfur (PB 29), Chlorinated Copper Phthalocyanine (PG 7), Titanium Dioxide (PW 6), Copper Phthalocyanine (PB 15.3)		169	Cobalt Turquoise	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		601	Transparent Burnt Sienna	Series 3	Lightfastness I	TRANSPARENT											
166	Chromium Oxide Green	2	9.49G	4.19	4.25	I	O	S	Anhydrous Chromium Sesquioxide (PG 17)		170	Cobalt Blue	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		416	Yellow Oxide	Series 3	Lightfastness I	TRANSPARENT											
170	Cobalt Blue	4	6.94PB	3.33	11.43	I	O	S	Oxides of Cobalt and Aluminum (PB 28)		171	Cobalt Green	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		530	Bronze Yellow	Series 2	Lightfastness I	OPAQUE											
381	Cobalt Blue Hue	1A	7.48PB	3.09	12.9	I	O	M	Complex Silicate of Sodium and Aluminum with Sulfur (PB 29), Titanium Dioxide (PW 6)		172	Cobalt Teal	Series 4	Lightfastness I	OPAQUE		312	Light Green Permanent	Series 2	Lightfastness I	OPAQUE		730	Turner's Yellow	Series 2	Lightfastness II	TRANSPARENT											