

Number	Name	colour	Opacity	Lightfastness	Pigments	R	G	B	L	a	b	H	V	C
116	Titanium white		O	***	PW6 - PW4	243	243	238	95.6	-0.5	2	7.6Y	9.5	0.3
123	Zinc titanium white		O	***	PW6 - PW4	237	237	231	93.4	-0.5	2.4	6.7Y	9.3	0.4
136	Titanium buff		O	***	PW6 - PBr24 - PY154	235	219	190	88.4	1.8	16.5	0.1Y	8.7	2.3
205	Raw umber		O/T	***	PBk11	49	40	32	17.1	2.6	7.3	0.4Y	1.7	1.3
208	Raw sienna		O/T	***	PBk11 - PY83	119	73	28	36.9	16	35.5	7.2YR	3.6	6.3
211	Burnt sienna		O/T	***	PBk11 - PR101	91	38	19	23.7	25.3	25.7	3.0YR	2.3	6.5
213	Green earth		O/T	***	PG23	41	57	35	21.9	-13.9	11.4	8.8GY	2.1	3.6
250	Modigliani ochre		O	***	PR102 - PY43 - PW4	189	131	108	61.2	21.5	23.1	1.1YR	6	6.1
252	Yellow ochre		O/T	***	PR101 - PY42 - PBk11	167	104	36	51.6	19.3	48.8	7.5YR	5	8.4
259	Red ochre		O	***	PR101 - PR102	126	43	9	31.6	37	40.5	2.3YR	3.1	9.9
308	Indigo hue		O/T	***	PBk8/9 - PB15:3	16	10	19	3.3	3.6	-3.3	5.0P	0.3	0.8
312	Ultramarine light		T	***	PB29	0	19	111	8.5	39.2	-59.5	6.3PB	1	13.7
315	Ultramarine deep		T	***	PB29 - PV23	9	8	44	2.9	9	-22	5.7PB	0.3	3.8
323	Cerulean blue		O	***	PB35	0	84	134	27.7	-9.2	-45	2.9PB	2.9	9.7
326	Phthalo blue		T	***	PB15:1	16	16	51	5.3	12.8	-24.2	7.2PB	0.5	4.7
438	Sepia		O/T	***	PBk9 - PY83 - PR101	33	34	30	12.9	-1.6	2.6	2.6GY	1.3	0.5
517	Indian yellow hue		O/T	***	PY13 - PG17	167	111	0	53.4	13.3	65.4	0.5Y	5.2	10.2
531	Cadmium yellow medium		O	***	PY35	255	180	0	83.4	19.8	103.5	9.7YR	8.2	14.6
539	Cadmium yellow light hue		O	***	PY3 - PY154	255	196	0	84.7	5.2	97.8	3.2Y	8.3	13.9
543	Cadmium yellow deep hue		O	***	PY154 - PY83	251	135	0	71.1	35.2	106.3	5.3YR	7	14.9
545	Cadmium yellow lemon hue		O	***	PY3	246	216	0	88.4	-7.7	96.3	5.8Y	8.7	13.4
563	Naples yellow warm		O	***	PW6 - PW4 - PY83 - PO73	255	198	158	87.1	19	33.3	4.0YR	8.6	6.2
567	Naples yellow		O	***	PW6 - PW4 - PY3 - PY74	255	216	112	90.5	1.7	58.5	2.9Y	8.9	8.3
605	Cadmium red light		O	***	PR108	200	24	0	45.8	70.6	62.7	8.1R	4.5	18.2
618	Cadmium deep red hue		O	***	PR170 - PV16	149	0	1	32.9	60.5	48.4	9.5R	3.3	12.8
619	Permanent intense red		T	***	nr	188	12	0	42.6	68.7	64.3	8.2R	4.2	17.6
635	Carmine red		T	***	PR202 - PR101 - PY42 - PBk11	71	7	18	13.9	33.9	14.2	0.5YR	1.3	7.1
645	Chinese orange		T	***	PY13 - PY83	133	53	0	34.8	35.1	47.5	2.1YR	3.4	9.6
650	Blush tint		O	***	PW6 - PY42 - PR208 - PR101	208	134	116	64.5	27.9	24.5	9.5R	6.3	7.6
675	French vermilion		O	***	PR255 - PY170	210	42	2	49.4	68.4	64.1	8.6R	4.8	18.3
703	Payne's grey		O	***	PB60 - PBk7 - PV19	20	22	28	6.9	0.8	-4.7	5.3PB	0.6	0.9
755	Ivory black		O	***	PBk9	12	10	9	2.8	0.4	0.6	8.3YR	0.3	0.1
757	Peach black		O	***	PBk7 - PB60	27	26	26	9.1	0.8	0.3	0.3YR	0.9	0.1

Number	Name	colour	Opacity	Lightfastness	Pigments	R	G	B	L	a	b	H	V	C
136	Titanium buff		O	***	PW6 - PBr24 - PY154	235	219	190	88.4	1.8	16.5	0.1Y	8.7	2.3
563	Naples yellow warm		O	***	PW6 - PW4 - PY83 - PO73	255	198	158	87.1	19	33.3	4.0YR	8.6	6.2
567	Naples yellow		O	***	PW6 - PW4 - PY3 - PY74	255	216	112	90.5	1.7	58.5	2.9Y	8.9	8.3
545	Cadmium yellow lemon hue		O	***	PY3	246	216	0	88.4	-7.7	96.3	5.8Y	8.7	13.4
539	Cadmium yellow light hue		O	***	PY3 - PY154	255	196	0	84.7	5.2	97.8	3.2Y	8.3	13.9
531	Cadmium yellow medium		O	***	PY35	255	180	0	83.4	19.8	103.5	9.7YR	8.2	14.6
543	Cadmium yellow deep hue		O	***	PY154 - PY83	251	135	0	71.1	35.2	106.3	5.3YR	7	14.9
675	French vermilion		O	***	PR255 - PY170	210	42	2	49.4	68.4	64.1	8.6R	4.8	18.3
605	Cadmium red light		O	***	PR108	200	24	0	45.8	70.6	62.7	8.1R	4.5	18.2
618	Cadmium deep red hue		O	***	PR170 - PV16	149	0	1	32.9	60.5	48.4	9.5R	3.3	12.8
323	Cerulean blue		O	***	PB35	0	84	134	27.7	-9.2	-45	2.9PB	2.9	9.7
833	Cobalt green light		O	***	PG10	0	111	96	39.1	-37.4	-5.2	4.1BG	3.8	7.3
805	Chromium green light		O	***	PR107 - PW6 - PG36 - PO43	90	88	18	37.6	-14.6	39	2.8GY	3.6	5.8
650	Blush tint		O	***	PW6 - PY42 - PR208 - PR101	208	134	116	64.5	27.9	24.5	9.5R	6.3	7.6
250	Modigliani ochre		O	***	PR102 - PY43 - PW4	189	131	108	61.2	21.5	23.1	1.1YR	6	6.1
259	Red ochre		O	***	PR101 - PR102	126	43	9	31.6	37	40.5	2.3YR	3.1	9.9
703	Payne's grey		O	***	PB60 - PBk7 - PV19	20	22	28	6.9	0.8	-4.7	5.3PB	0.6	0.9
757	Peach black		O	***	PBk7 - PB60	27	26	26	9.1	0.8	0.3	0.3YR	0.9	0.1
755	Ivory black		O	***	PBk9	12	10	9	2.8	0.4	0.6	8.3YR	0.3	0.1
116	Titanium white		O	***	PW6 - PW4	243	243	238	95.6	-0.5	2	7.6Y	9.5	0.3
123	Zinc titanium white		O	***	PW6 - PW4	237	237	231	93.4	-0.5	2.4	6.7Y	9.3	0.4
911	Cobalt violet hue		O/T	***	PW6 - PR209 - PV16	117	43	106	31.1	46.1	-18.1	2.1RP	3.1	10.1
308	Indigo hue		O/T	***	PBk8/9 - PB15:3	16	10	19	3.3	3.6	-3.3	5.0P	0.3	0.8
847	Emerald green		O/T	***	PW6 - PG7 - PY154	0	141	86	49	-61.8	13.1	6.3G	4.7	11.2
831	Yellow cinnabar green		O/T	***	PY154 - PG36	74	145	0	54.3	-53.6	59.6	8.5GY	5.2	12.4
829	Cinnabar green deep		O/T	***	PG36 - PY83 - PW6	49	79	35	30.6	-25.6	22.2	9.1GY	3	5.7
827	Cinnabar green light		O/T	***	PR101 - PG36 - PY83 - PY154	56	43	16	19.1	0	20.2	4.8Y	1.9	3
517	Indian yellow hue		O/T	***	PY13 - PG17	167	111	0	53.4	13.3	65.4	0.5Y	5.2	10.2
252	Yellow ochre		O/T	***	PR101 - PY42 - PBk11	167	104	36	51.6	19.3	48.8	7.5YR	5	8.4
208	Raw sienna		O/T	***	PBk11 - PY83	119	73	28	36.9	16	35.5	7.2YR	3.6	6.3
211	Burnt sienna		O/T	***	PBk11 - PR101	91	38	19	23.7	25.3	25.7	3.0YR	2.3	6.5
919	Caput mortuum		O/T	***	PR101 - PB29 - PV23	78	30	27	19.4	25.2	15.3	9.8R	1.9	5.7
931	Neutral tint		O/T	***	PBk9 - PR209 - PB60	31	30	31	11	1.1	-0.6	2.0RP	1	0.2
205	Raw umber		O/T	***	PBk11	49	40	32	17.1	2.6	7.3	0.4Y	1.7	1.3
438	Sepia		O/T	***	PBk9 - PY83 - PR101	33	34	30	12.9	-1.6	2.6	2.6GY	1.3	0.5
213	Green earth		O/T	***	PG23	41	57	35	21.9	-13.9	11.4	8.8GY	2.1	3.6
645	Chinese orange		T	***	PY13 - PY83	133	53	0	34.8	35.1	47.5	2.1YR	3.4	9.6
619	Permanent intense red		T	***	nr	188	12	0	42.6	68.7	64.3	8.2R	4.2	17.6
635	Carmine red		T	***	PR202 - PR101 - PY42 - PBk11	71	7	18	13.9	33.9	14.2	0.5YR	1.3	7.1
941	Magenta		T	***	PV19	98	29	51	23.9	39.7	6.5	3.9R	2.3	8.2
312	Ultramarine light		T	***	PB29	0	19	111	8.5	39.2	-59.5	6.3PB	1	13.7
315	Ultramarine deep		T	***	PB29 - PV23	9	8	44	2.9	9	-22	5.7PB	0.3	3.8
326	Phthalo blue		T	***	PB15:1	16	16	51	5.3	12.8	-24.2	7.2PB	0.5	4.7
807	Chromium green deep		T	***	PB27 - PY154 - PG7	0	35	30	9.9	-13.3	-3.2	4.6BG	0.9	2.8
837	Viridian		T	***	PG18	0	63	46	20	-34	-0.8	1.0BG	2	7
819	Sap green		T	***	PG36	48	65	32	25.4	-17.9	17.4	8.1GY	2.5	4.2
	Winsor & Newton AOC													
330	Iridescent white		O/T	A	Titanium oxide coated mica	226	220	210	88.1	0.6	5.9	0.2Y	8.7	0.9
576	Rose doré		T	A	NR9	180	0	6	40.4	68.3	55.5	8.4R	4	17.1
294	Green gold		T	A		85	80	13	34.2	-8.5	36.9	1.2GY	3.3	5.5
676	Vandyke brown		T	A	NBr8 - PBr7	39	27	21	11.2	4.9	7.3	8.1YR	1.1	1.3
646	Transparent gold ochre		T/2	AA	PY42 - PY43 - PBr7	128	77	30	39.4	17.1	37.9	7.2YR	3.8	6.7
217	Davy's grey		T/2	AA	PBk19 - PY42 - PBk7	54	54	48	22.2	-1	3.4	9.6Y	2.2	0.6
505	Perylene black		T/2	A		31	20	18	7.5	8.3	3.2	0.2YR	0.7	1.3
655	Transparent white		T/2	AA		238	237	226	93.6	-1.1	5.3	9.5Y	9.3	0.6
	Colours scanned and pasted in from patch samples. Colour values measured using ColorMunki® and converted to Munsell using BabelColor CT&A.													
	Note that all colour values are approximate, and conversions are even more approximate, particularly to the Munsell System.													
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Number	Name	colour	Opacity	Lightfastness	Pigments	R	G	B	L	a	b	H	V	C
650	Blush tint		O	***	PW6 - PY42 - PR208 - PR101	208	134	116	64.5	27.9	24.5	9.5R	6.3	7.6
211	Burnt sienna		O/T	***	PBk11 - PR101	91	38	19	23.7	25.3	25.7	3.0YR	2.3	6.5
618	Cadmium deep red hue		O	***	PR170 - PV16	149	0	1	32.9	60.5	48.4	9.5R	3.3	12.8
605	Cadmium red light		O	***	PR108	200	24	0	45.8	70.6	62.7	8.1R	4.5	18.2
543	Cadmium yellow deep hue		O	***	PY154 - PY83	251	135	0	71.1	35.2	106.3	5.3YR	7	14.9
545	Cadmium yellow lemon hue		O	***	PY3	246	216	0	88.4	-7.7	96.3	5.8Y	8.7	13.4
539	Cadmium yellow light hue		O	***	PY3 - PY154	255	196	0	84.7	5.2	97.8	3.2Y	8.3	13.9
531	Cadmium yellow medium		O	***	PY35	255	180	0	83.4	19.8	103.5	9.7YR	8.2	14.6
919	Caput mortuum		O/T	***	PR101 - PB29 - PV23	78	30	27	19.4	25.2	15.3	9.8R	1.9	5.7
635	Carmine red		T	***	PR202 - PR101 - PY42 - PBk11	71	7	18	13.9	33.9	14.2	0.5YR	1.3	7.1
323	Cerulean blue		O	***	PB35	0	84	134	27.7	-9.2	-45	2.9PB	2.9	9.7
645	Chinese orange		T	***	PY13 - PY83	133	53	0	34.8	35.1	47.5	2.1YR	3.4	9.6
807	Chromium green deep		T	***	PB27 - PY154 - PG7	0	35	30	9.9	-13.3	-3.2	4.6BG	0.9	2.8
805	Chromium green light		O	***	PR107 - PW6 - PG36 - PO43	90	88	18	37.6	-14.6	39	2.8GY	3.6	5.8
829	Cinnabar green deep		O/T	***	PG36 - PY83 - PW6	49	79	35	30.6	-25.6	22.2	9.1GY	3	5.7
827	Cinnabar green light		O/T	***	PR101 - PG36 - PY83 - PY154	56	43	16	19.1	0	20.2	4.8Y	1.9	3
833	Cobalt green light		O	***	PG10	0	111	96	39.1	-37.4	-5.2	4.1BG	3.8	7.3
911	Cobalt violet hue		O/T	***	PW6 - PR209 - PV16	117	43	106	31.1	46.1	-18.1	2.1RP	3.1	10.1
847	Emerald green		O/T	***	PW6 - PG7 - PY154	0	141	86	49	-61.8	13.1	6.3G	4.7	11.2
675	French vermilion		O	***	PR255 - PY170	210	42	2	49.4	68.4	64.1	8.6R	4.8	18.3
213	Green earth		O/T	***	PG23	41	57	35	21.9	-13.9	11.4	8.8GY	2.1	3.6
517	Indian yellow hue		O/T	***	PY13 - PG17	167	111	0	53.4	13.3	65.4	0.5Y	5.2	10.2
308	Indigo hue		O/T	***	PBk8/9 - PB15:3	16	10	19	3.3	3.6	-3.3	5.0P	0.3	0.8
755	Ivory black		O	***	PBk9	12	10	9	2.8	0.4	0.6	8.3YR	0.3	0.1
941	Magenta		T	***	PV19	98	29	51	23.9	39.7	6.5	3.9R	2.3	8.2
250	Modigliani ochre		O	***	PR102 - PY43 - PW4	189	131	108	61.2	21.5	23.1	1.1YR	6	6.1
567	Naples yellow		O	***	PW6 - PW4 - PY3 - PY74	255	216	112	90.5	1.7	58.5	2.9Y	8.9	8.3
563	Naples yellow warm		O	***	PW6 - PW4 - PY83 - PO73	255	198	158	87.1	19	33.3	4.0YR	8.6	6.2
931	Neutral tint		O/T	***	PBk9 - PR209 - PB60	31	30	31	11	1.1	-0.6	2.0RP	1	0.2
703	Payne's grey		O	***	PB60 - PBk7 - PV19	20	22	28	6.9	0.8	-4.7	5.3PB	0.6	0.9
757	Peach black		O	***	PBk7 - PB60	27	26	26	9.1	0.8	0.3	0.3YR	0.9	0.1
619	Permanent intense red		T	***	nr	188	12	0	42.6	68.7	64.3	8.2R	4.2	17.6
326	Phthalo blue		T	***	PB15:1	16	16	51	5.3	12.8	-24.2	7.2PB	0.5	4.7
208	Raw sienna		O/T	***	PBk11 - PY83	119	73	28	36.9	16	35.5	7.2YR	3.6	6.3
205	Raw umber		O/T	***	PBk11	49	40	32	17.1	2.6	7.3	0.4Y	1.7	1.3
259	Red ochre		O	***	PR101 - PR102	126	43	9	31.6	37	40.5	2.3YR	3.1	9.9
819	Sap green		T	***	PG36	48	65	32	25.4	-17.9	17.4	8.1GY	2.5	4.2
438	Sepia		O/T	***	PBk9 - PY83 - PR101	33	34	30	12.9	-1.6	2.6	2.6GY	1.3	0.5
136	Titanium buff		O	***	PW6 - PBr24 - PY154	235	219	190	88.4	1.8	16.5	0.1Y	8.7	2.3
116	Titanium white		O	***	PW6 - PW4	243	243	238	95.6	-0.5	2	7.6Y	9.5	0.3
315	Ultramarine deep		T	***	PB29 - PV23	9	8	44	2.9	9	-22	5.7PB	0.3	3.8
312	Ultramarine light		T	***	PB29	0	19	111	8.5	39.2	-59.5	6.3PB	1	13.7
837	Viridian		T	***	PG18	0	63	46	20	-34	-0.8	1.0BG	2	7
831	Yellow cinnabar green		O/T	***	PY154 - PG36	74	145	0	54.3	-53.6	59.6	8.5GY	5.2	12.4
252	Yellow ochre		O/T	***	PR101 - PY42 - PBk11	167	104	36	51.6	19.3	48.8	7.5YR	5	8.4
123	Zinc titanium white		O	***	PW6 - PW4	237	237	231	93.4	-0.5	2.4	6.7Y	9.3	0.4
	Winsor & Newton AOC													
217	Davy's grey		T/2	AA	PBk19 - PY42 - PBk7	54	54	48	22.2	-1	3.4	9.6Y	2.2	0.6
294	Green gold		T	A		85	80	13	34.2	-8.5	36.9	1.2GY	3.3	5.5
330	Iridescent white		O/T	A	Titanium oxide coated mica	226	220	210	88.1	0.6	5.9	0.2Y	8.7	0.9
505	Perylene black		T/2	A		31	20	18	7.5	8.3	3.2	0.2YR	0.7	1.3
576	Rose doré		T	A	NR9	180	0	6	40.4	68.3	55.5	8.4R	4	17.1
646	Transparent gold ochre		T/2	AA	PY42 - PY43 - PBr7	128	77	30	39.4	17.1	37.9	7.2YR	3.8	6.7
655	Transparent white		T/2	AA		238	237	226	93.6	-1.1	5.3	9.5Y	9.3	0.6
676	Vandyke brown		T	A	NBr8 - PBr7	39	27	21	11.2	4.9	7.3	8.1YR	1.1	1.3
														
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