

Munsell and Lab Readings for Williamsburg Handmade Oil Colors

6 mil (~ thickness of 2 sheets of paper)

Munsell Ordering	Munsell			CIE LAB		
Name	Hue	Value	Chroma	L*	a*	b*
Persian Rose	3.94R	5.01	14.74	50.65	59.45	24.81
Quinacridone Magenta	6.33R	1.97	7.67	19.37	31.88	9.36
Quinacridone Violet	7.16R	1.54	8.14	15.17	34.72	8.96
Cadmium Red Deep	7.17R	3.08	12.92	30.41	52.61	32.71
Quinacridone Red	7.44R	3.20	12.75	31.61	53.23	32.93
Cadmium Red Purple	7.6R	2.65	11.35	25.94	46.20	26.51
Cadmium Red Medium	8R	3.92	16.05	39.08	60.78	48.20
Cadmium Purple	8.22R	2.12	9.20	20.87	36.48	19.14
Spanish Earth	8.45R	2.29	2.86	23.27	13.21	6.79
Fanchon Red	8.64R	4.01	17.22	39.76	62.80	59.63
Canton Rose	8.75R	6.45	6.07	65.42	23.24	18.34
Cadmium Red Vermilion	9.02R	4.88	17.67	48.69	63.87	65.68
Mars Violet	9.07R	2.26	6.06	22.67	25.78	15.20
Cadmium Red Light	9.29R	5.13	17.97	51.19	64.23	70.20
Carl's Crimson	9.33R	2.03	9.80	19.69	39.23	22.88
Perylene Crimson	9.38R	1.48	5.36	14.96	22.86	11.00
Permanent Red-Orange	9.54R	4.46	16.11	44.23	57.91	63.31
Italian Rosso Veneto	9.6R	3.72	6.32	37.55	26.53	20.46
Montserrat Orange	9.85R	6.70	9.83	67.45	36.29	34.36
Mars Red	10R	2.70	7.60	26.64	31.86	23.90
Italian Pompeii Red	0.34YR	3.88	7.28	39.08	29.40	25.69
Alizarin Orange	0.44YR	4.46	15.03	44.36	51.27	64.84
Permanent Crimson	0.48YR	1.64	11.14	15.78	44.79	23.48
Permanent Orange	0.5YR	5.18	15.80	51.85	52.23	68.43
Red Ochre	0.79YR	3.27	5.64	32.64	23.68	19.89
French Rouge Indien	0.95YR	3.38	5.98	33.92	24.77	21.51
Italian Pozzuoli Earth	1.12YR	3.60	6.72	36.09	26.89	25.07
Mars Red Light	1.26YR	3.06	8.18	30.31	32.28	31.26
Alizarin Crimson	1.42YR	1.12	6.15	11.18	26.23	13.24
Naples Reddish	1.5YR	6.20	9.00	62.25	33.71	34.28
Italian Burnt Sienna	1.61YR	2.84	4.26	28.47	17.77	15.46
Italian Terra Rosa	1.75YR	3.17	4.15	31.98	17.40	15.75
Quinacridone Gold Brown	1.88YR	1.03	2.13	10.65	10.74	5.97

Cadmium Orange	1.89YR	6.17	17.97	61.20	55.60	86.32
Burnt Sienna	2.23YR	2.61	6.10	25.87	23.89	23.20
Brown Pink	2.23YR	2.08	2.59	21.10	11.34	8.98
Mars Orange Deep	2.26YR	3.04	7.16	30.22	27.44	29.27
Mars Orange	2.62YR	4.17	7.30	41.87	26.74	31.11
Italian Pink	2.74YR	2.49	1.95	25.09	8.49	7.22
Payne's Grey (Violet)	3.26YR	1.31	0.33	13.80	1.43	1.28
Cadmium Yellow Extra Deep	4.12YR	6.88	18.56	67.92	49.15	98.67
French Burnt Ochre	4.3YR	2.57	1.43	25.95	5.94	6.01
French Ochre Havanna	4.66YR	4.06	7.40	40.65	24.29	35.45
Italian Orange Ochre	4.74YR	3.91	5.48	39.32	18.88	26.10
Permanent Yellow Deep	5.11YR	7.19	19.13	70.50	46.69	105.95
Indian Yellow	5.37YR	6.48	17.44	64.01	42.46	97.90
Van Dyke Brown	5.37YR	1.27	0.10	13.24	0.35	0.36
Dutch Brown (Transparent)	5.45YR	2.34	0.69	23.85	2.79	2.96
Red Umber	5.56YR	1.73	2.78	17.33	10.49	12.37
French Brown Ochre	6.24YR	2.78	2.68	27.96	9.41	12.91
Naples Yellow Reddish	6.39YR	7.35	7.83	73.58	22.17	40.71
Cyprus Orange	6.48YR	4.86	7.08	48.78	21.54	37.50
German Earth	6.84YR	1.98	0.04	20.37	0.16	0.24
French Cassell Earth	7.2YR	1.00	0.10	10.13	0.33	0.35
Alizarin Yellow	7.35YR	5.82	14.68	57.45	32.42	86.68
Graphite Grey	7.6YR	3.30	0.15	33.90	0.50	0.82
French Noir Indien	7.68YR	2.10	0.13	21.67	0.45	0.62
Mars Yellow Deep	7.74YR	4.70	7.80	47.17	20.44	43.69
Yellow Ochre Burnt	7.92YR	4.14	3.96	41.66	11.67	22.01
Zinc Buff	7.96YR	9.20	1.65	92.68	3.47	10.40
Stil De Grain	8.04YR	2.99	2.31	30.21	7.58	12.19
French Raw Sienna	8.18YR	4.03	4.10	40.64	12.21	23.21
Slate Black	8.3YR	1.80	0.07	18.51	0.19	0.33
French Yellow Ochre Deep	8.3YR	4.97	7.80	49.73	19.91	44.95
Raw Sienna	8.31YR	4.42	6.95	44.39	17.98	39.66
Mars Black	8.34YR	0.82	0.19	8.73	0.77	0.94
Italian Raw Sienna	8.34YR	4.16	5.10	41.76	13.92	29.14
Cadmium Yellow Deep	8.98YR	7.78	17.19	76.43	30.57	106.34
French Burnt Umber	9.06YR	1.76	0.84	17.89	2.55	4.29
Jaune Brilliant	9.06YR	7.97	6.67	79.68	14.52	39.01
Burnt Umber	9.07YR	1.84	1.18	18.68	3.50	6.17
Brown Umber	9.19YR	1.94	1.43	19.75	4.07	7.39
Italian Green Ochre	9.4YR	3.71	3.45	37.35	8.90	20.32
Yellow Ochre	9.62YR	5.55	8.69	55.50	18.84	52.68
Brown Ochre	9.7YR	3.82	3.89	38.43	9.86	23.34
Italian Lemon Ochre	9.72YR	6.01	8.41	60.14	18.13	50.84
Italian Yellow Ochre	9.73YR	5.45	6.74	54.62	15.28	40.83
Mars Yellow Light	0.43Y	5.54	8.72	55.25	17.38	54.18
Naples Yellow	0.62Y	7.34	6.91	73.38	13.03	42.45
French Raw Umber	0.98Y	2.95	1.91	29.64	4.18	11.03

Naples Yellow Italian	0.99Y	8.07	8.23	80.41	12.81	52.07
Unbleached Titanium Pale	1.87Y	7.92	1.84	80.10	1.45	13.32
Unbleached Titanium	2.18Y	7.45	2.82	75.34	2.46	19.65
French Light Sienna	2.54Y	3.21	3.36	32.34	5.33	20.84
Permanent Yellow Medium	2.56Y	8.38	16.95	82.39	17.65	112.46
Cadmium Yellow Medium	2.73Y	8.45	16.78	83.08	16.80	111.85
SF Flake White	2.81Y	9.61	0.28	97.00	-0.04	2.26
Cobalt Yellow	2.84Y	6.92	13.14	68.86	13.44	88.55
Italian Black Roman Earth	2.92Y	1.84	0.14	18.99	0.23	0.90
Davy's Grey Deep	3.76Y	2.38	0.23	24.46	0.19	1.43
Italian Raw Umber	3.96Y	2.24	0.73	22.73	0.80	4.25
Flake White	4.9Y	9.58	0.31	96.73	-0.22	2.68
SF Silver White	5.5Y	9.65	0.25	97.37	-0.28	2.26
Cadmium Yellow Light	6.07Y	8.89	15.10	87.77	1.66	108.96
Raw Umber	6.41Y	1.83	1.18	18.68	0.42	7.03
Bohemian Green Earth	6.48Y	2.95	2.62	29.78	0.92	16.29
Permanent Yellow Light	6.51Y	8.85	14.46	87.66	-0.47	105.55
Brilliant Yellow Pale	6.69Y	9.50	4.38	94.92	-1.33	33.41
Brilliant Yellow Extra Pale	7.73Y	9.57	1.30	96.32	-1.25	11.25
SF French Ardoise Grey	8.05Y	4.63	1.08	47.53	-0.89	7.87
Permanent Lemon	8.18Y	8.74	13.18	86.66	-4.96	97.05
Silver White	8.19Y	9.63	0.27	97.14	-0.53	2.45
French Ardoise Grey	8.37Y	4.64	0.99	47.63	-0.87	7.15
Zinc Buff Yellow	8.54Y	8.74	3.85	87.90	-4.09	30.12
Cadmium Lemon	9.06Y	9.05	12.69	89.99	-8.36	94.94
Nickel Yellow	9.23Y	8.61	8.21	85.89	-6.46	61.11
Courbet Green	1.54GY	1.29	2.12	13.12	-1.97	10.83
Earth Green	1.6GY	3.19	2.50	32.14	-1.89	15.43
Green Gold	1.95GY	2.87	5.84	28.67	-7.28	38.39
Titanium - Zinc White	2.01GY	9.74	0.26	98.37	-0.98	2.76
Titanium White	2.7GY	9.73	0.24	98.24	-0.99	2.58
Zinc White	2.95GY	9.60	0.22	96.90	-0.88	2.24
Cinnabar Green Light	3.62GY	6.91	10.35	62.97	-20.15	60.11
SF Titanium - Zinc White	4.52GY	9.80	0.20	99.07	-1.02	2.14
Turkey Umber	4.91GY	1.64	1.53	16.82	-3.06	6.07
Olive Green	5.37GY	2.67	6.03	26.50	-14.12	32.92
SF Titanium White	5.41GY	9.79	0.16	98.97	-0.97	1.80
Cadmium Green Light	7.44GY	5.86	10.98	59.55	-36.42	60.52
Cadmium Green	8.74GY	4.33	9.41	44.28	-35.29	44.03
SF Porcelain White	9GY	9.63	0.20	97.46	-1.06	1.33
Chromium Oxide Green	9.77GY	3.83	5.20	38.97	-19.81	18.86
SF Italian Terra Verte	0.35G	3.15	3.15	32.13	-11.69	10.11
Italian Terra Verte	0.37G	3.13	2.80	31.85	-10.28	8.76
Permanent Green Light	0.37G	5.76	14.88	58.94	-61.58	60.70
Permanent Green	0.64G	3.61	11.21	36.82	-46.17	38.38
Sap Green	1.13G	1.70	3.53	17.57	-13.25	8.38
French Terre Verte	5.67G	3.37	3.12	34.48	-14.93	5.32

Veronese Green	7.46G	4.79	11.18	50.51	-59.34	14.09
Cobalt Green	8.92G	2.48	5.72	25.98	-27.10	4.47
Viridian	1.51BG	2.01	6.32	21.45	-30.20	1.05
Phthalo Green-Yellowish	2.43BG	0.93	4.26	10.70	-22.08	0.02
Turquoise	4.08BG	4.46	9.57	47.59	-51.77	-2.33
Cobalt Teal Greenish	8.23BG	4.95	9.98	53.05	-48.91	-13.02
Cobalt Turquoise Greenish	8.44BG	3.32	7.60	35.69	-36.34	-12.05
Cobalt Teal Bluish	0.83B	5.07	10.26	54.35	-46.55	-20.02
Phthalo Green	1.42B	0.67	3.54	8.31	-13.77	-6.37
Indigo	7.09B	0.75	0.95	8.04	-2.23	-3.09
Cobalt Turquoise Bluish	9.43B	2.58	8.05	28.99	-20.43	-28.74
Sevres Blue	1.16PB	5.05	11.92	55.06	-21.60	-41.64
King's Blue	1.44PB	6.63	9.51	70.02	-16.69	-33.46
Cerulean Blue French	1.61PB	2.61	8.65	29.58	-15.71	-32.11
SF Cerulean Blue French	1.8PB	2.60	8.75	29.53	-15.20	-32.68
Cerulean Blue	2.42PB	3.37	9.65	37.28	-13.00	-36.12
Phthalo Turquoise	2.54PB	0.62	2.76	7.62	-5.13	-8.89
Lamp Black	4.52PB	1.39	0.11	14.54	-0.03	-0.45
Ivory Black	5.16PB	1.03	0.08	10.83	-0.03	-0.34
Cobalt Blue	6.42PB	2.25	13.27	26.58	8.91	-49.14
Cold Black	6.49PB	0.50	0.68	5.20	-0.06	-1.91
Cobalt Blue Deep	6.82PB	2.20	15.36	26.17	17.72	-55.12
Payne's Grey	8.12PB	0.39	1.49	4.22	0.34	-3.62
SF Ultramarine Blue	8.8PB	0.33	20.78	5.41	29.80	-43.17
Ultramarine Blue French	8.94PB	0.66	11.57	8.14	20.48	-33.63
Ultramarine Blue	9.01PB	0.32	18.16	4.78	24.88	-37.90
Phthalo Blue	9.61PB	0.60	12.00	7.75	22.12	-33.56
Provence Violet Bluish	9.82PB	2.74	12.98	29.87	26.42	-45.99
SF Ultramarine Violet	0.33P	0.75	9.05	8.74	19.78	-28.70
Ultramarine Violet	0.71P	0.66	8.26	7.68	17.32	-25.45
Cobalt Violet Deep	5.37P	1.42	14.18	15.58	46.22	-40.96
SF Cobalt Violet Light	6.65P	3.25	20.30	34.46	65.94	-53.36
Cobalt Violet Light	6.96P	3.43	19.23	36.07	62.78	-50.30
Indanthrone Blue	7.78P	0.46	3.70	4.74	8.70	-8.90
Egyptian Violet	8.23P	0.57	0.65	6.27	1.50	-1.84
Manganese Violet	8.53P	1.14	9.16	12.40	31.87	-25.04
Prussian Blue	1.55RP	0.10	1.99	1.22	1.58	-1.32
Dianthus Pink	3.01RP	7.70	8.07	78.38	28.91	-7.38
Provence Violet Reddish	3.51RP	3.22	10.57	33.19	39.76	-14.69
Ultramarine Pink	6RP	1.76	6.90	17.95	28.42	-9.06
SF Ultramarine Pink	6.88RP	1.88	7.40	18.84	31.04	-7.67