GOLDEN Name	Pigment Classification	Color Index Name	Chemical Description	Opacity/ Transparenc y	Lightfastness Rating	Permanency
Pale Yellow	Synthetic Inorganic	PY53	Nickel Antimony Titanate	Semi-Opaque	ASTM 1: Excellent	Excellent
Cadmium Primrose	Synthetic Inorganic	PY35	Concentrated Cadmium Zinc Sulfide	Semi-Opaque	ASTM 1: Excellent	Not for exterior use
Bismuth Vanadate Yellow	Inorganic	PY184	Bismuth Vanadate	Semi-Opaque	ASTM 1: Excellent	Excellent
Permanent Yellow	Mixture	PY74 / PY53	Arylide Yellow 5GX / Nickel Antimony Titanate	Semi-Opaque	ASTM 1: Excellent	Excellent
Cadmium Yellow Medium	Synthetic Inorganic	PY35	Concentrated Cadmium Zinc Sulfide	Semi-Opaque	ASTM 1: Excellent	Not for exterior use
Permanent Yellow Deep	Synthetic Organic	PY83(HR70)	Diarylide Yellow HR70	Semi-Opaque	ASTM 1: Excellent	Excellent
Cadmium Orange	Synthetic Inorganic	PO20	Concentrated Cadmium Sulfoselenide	Opaque	ASTM 1: Excellent	Not for exterior use
Cadmium Red Light	Synthetic Inorganic	PR108	Concentrated Cadmium Sulfoselenide	Opaque	ASTM 1: Excellent	Not for exterior use
Naphthol Red Light	Synthetic Organic	PR112	Naphthol AS-D	Semi-Opaque	ASTM 2: Very Good	Very Good
Pyrrole Red	Synthetic Organic	' PR754	Diketopyrrole-pyrrole	Opaque	ASTM 1: Excellent	Excellent
Cadmium Red Dark	Synthetic Inorganic	PR108	Concentrated Cadmium Sulfoselenide	Opaque	ASTM 1: Excellent	Not for exterior use
Naphthol Pink	Mixture	PW6 / PR112	Titanium Dioxide Rutile / Naphthol AS-D	Opaque	ASTM 2: Very Good	Very Good

Red Violet	Mixture	PR122 / PB29 / PW6	Quinacridone / Polysulfide of Sodium-Alumino-Silicate / Titanium Dioxide Rutile	Semi-Opaque	ASTM 1: Excellent	Excellent
Dioxazine Violet Deep	Mixture	PV23 / PW6	Carbazole Dioxazine / Titanium Dioxide Rutile	Opaque	ASTM 2: Very Good	Very Good
Blue Violet	Synthetic Inorganic		Polysulfide of Sodium- Alumino-Silicate / Carbazole Dioxazine / Titanium Dioxide Rutile	Opaque	ASTM 2: Very Good	Very Good
Ultramarine Blue	Synthetic Inorganic	PB29 / PW6	Polysulfide of Sodium- Alumino-Silicate / Titanium Dioxide Rutile	Semi-Opaque	ASTM 1: Excellent	Not for exterior use
Phthalo Blue (Green Shade)	Organometal lic	PB15:3	Copper Phthalocyanine	Semi-Opaque	ASTM 1: Excellent	Excellent
Cerulean Blue Hue	Mixture	PB15:3 / PW6	Copper Phthalocyanine / Titanium Dioxide Rutile	Opaque	ASTM 1: Excellent	Excellent
Turquoise	Mixture	PB15:3 / PG7 / PW6	Copper Phthalocyanine / Chlorinated Copper Phthalocyanine / Titanium Dioxide Rutile	Opaque	ASTM 1: Excellent	Excellent

Cobalt Teal	Synthetic Inorganic	PG50	Oxides of Cobalt and Titanium	Opaque	ASTM 1: Excellent	Excellent
Phthalo Green (Blue Shade)	Mixture	PG7 / PW6	Chlorinated Copper Phthalocyanine / Titanium Dioxide Rutile	Semi-Opaque	ASTM 1: Excellent	Excellent
Permanent Green	Mixture	PY184 / PG7	Bismuth Vanadate / Chlorinated Copper Phthalocyanine	Opaque	ASTM 1: Excellent	Excellent
Dark Green	Mixture	PY43 / PG7	Natural Hydrated Iron Oxide / Chlorinated Copper Phthalocyanine	Opaque	ASTM 1: Excellent	Excellent
Yellow Green	n Mixture	PY184 / PG36	Bismuth Vanadate / Brominated and Chlorinated Copper Phthalocyanine	Semi-Opaque	ASTM 1: Excellent	Excellent
Naples Yellow Deep	Inorganic	PBr24	Chrome Antimony Titanate	Opaque	ASTM 1: Excellent	Excellent
Yellow Oxide	Synthetic Inorganic	PY42	Synthetic Hydrated Iron Oxide	Semi-Opaque	ASTM 1: Excellent	Excellent
Mars Yellow Deep	Synthetic Inorganic	PY42 / PR101	Synthetic Hydrated Iron Oxide / Synthetic Iron Oxide	Opaque	ASTM 1: Excellent	Excellent
Red Oxide	Synthetic Inorganic	PR101	Synthetic Iron Oxide	Opaque	ASTM 1: Excellent	Excellent
Burnt Sienna	Natural				ASTM 1:	

Burnt Umber	Natural Inorganic		Calcined Natural Iron Oxide containing Manganese	Opaque	ASTM 1: Excellent	Excellent
Raw Umber	Natural Inorganic	PBr7	Natural Iron Oxide containing Manganese	Opaque	ASTM 1: Excellent	Excellent
Black	Natural Inorganic	PBk7	Nearly Pure Amorphous Carbon	Opaque	ASTM 1: Excellent	Excellent
Payne's Gray	Mixture	PB29 / PBk7	Polysulfide of Sodium- Alumino-Silicate / Nearly Pure Amorphous Carbon	Opaque	ASTM 1: Excellent	Excellent
Titanium White	Synthetic Inorganic	PW6	Titanium Dioxide Rutile	Semi-Opaque	ASTM 1: Excellent	Excellent
Fluorescent Yellow	Synthetic Inorganic	N/A / PW6	Dyed Polymer Particles / Titanium Dioxide Rutile	Semi- Transparent	5: Very Poor	Very Poor
Fluorescent Orange	Synthetic Inorganic	N/A / PW6	Dyed Polymer Particles / Titanium Dioxide Rutile	Semi- Transparent	5: Very Poor	Very Poor
Fluorescent Red	Synthetic Inorganic	N/A / PW6	Dyed Polymer Particles / Titanium Dioxide Rutile	Semi- Transparent	5: Very Poor	Very Poor
Fluorescent Pink	Synthetic Inorganic	N/A / PW6	Dyed Polymer Particles / Titanium Dioxide Rutile	Semi- Transparent	5: Very Poor	Very Poor
Fluorescent Violet	Synthetic Inorganic	N/A / PW6	Dyed Polymer Particles / Titanium Dioxide Rutile	Semi- Transparent	5: Very Poor	Very Poor

Fluorescent Green	Synthetic Inorganic	N/A / PW6	Dyed Polymer Particles / Titanium Dioxide Rutile	Semi- Transparent	5: Very Poor	Very Poor
Light Orange	Mixture	PW6 / PY184 / PO73	Titanium Dioxide Rutile / Bismuth Vanadate / Diketopyrrole-pyrrole	Semi-Opaque	1 - Excellent	Excellent
Quinacridone Red	e Mixture	PV19 / PW6	Quinacridone / Titanium Dioxide Rutile	Semi- Transparent	ASTM 1: Excellent	Excellent
Light Magenta	Mixture	PW6 / PR112 / PG7	Titanium Dioxide Rutile / Naphthol AS-D / Chlorinated Copper Phthalocyanine	Semi-Opaque	ASTM 2: Very Good	Very Good
Quinacridone Magenta	<sup>e</sup> Mixture	PR122 / PW6	Quinacridone / Titanium Dioxide Rutile	Semi- Transparent	ASTM 1: Excellent	Excellent
Light Violet	Mixture	PW6 / PV23	Titanium Dioxide Rutile / Carbazole Dioxazine	Opaque	ASTM 2: Very Good	Very Good
Light Ultramarine Blue	Mixture	PW6 / PB29	Titanium Dioxide Rutile / Polysulfide of Sodium- Alumino-Silicate	Opaque	ASTM 1: Excellent	Excellent
Light Phthalo Blue	Mixture	PW6 / PB15:3	Titanium Dioxide Rutile / Copper Phthalocyanine	Semi-Opaque	ASTM 1: Excellent	Excellent

Light Phthalo Green	Mixture	PW6 / PG36	Titanium Dioxide Rutile / Brominated and Chlorinated Copper Phthalocyanine	Semi-Opaque	ASTM 1: Excellent	Excellent
Titan Green Pale	Mixture	PW6 / PY42 / PBr7 / PG7	Titanium Dioxide Rutile / Synthetic Hydrated Iron Oxide / Natural Iron Oxide containing Manganese / Chlorinated Copper Phthalocyanine	Opaque	ASTM 1: Excellent	Excellent
Titan Buff	Synthetic Inorganic (Mixture)	PW6:1 / PW6	Titanium Dioxide Rutile / Titanium Dioxide Rutile	Semi-Opaque	ASTM 1: Excellent	Excellent
Titan Mars Pale	Mixture	PW6 / PBr6	Titanium Dioxide Rutile / Mixture of Synthetic Iron Oxides	Semi-Opaque	ASTM 1: Excellent	Excellent
Titan Violet Pale	Mixture	PW6 / PR101	Titanium Dioxide Rutile / Synthetic Iron Oxide	Semi-Opaque	ASTM 1: Excellent	Excellent
Cobalt Blue	Synthetic Inorganic	PB28	Oxides of Cobalt and Aluminum	Semi- Transparent	ASTM 1: Excellent	Excellent

N5 Neutral Gray	Mixture	PW6 / PBk9 / PBr7	Titanium Dioxide Rutile / Amorphous Carbon produced by charring animal bones / Calcined Natural Iron Oxide	Opaque	ASTM 1: Excellent	Excellent
Medium Orange	Mixture	PW6 / PY184 / PO73	Titanium Dioxide Rutile / Bismuth Vanadate / Diketopyrrole-pyrrole	Semi-Opaque	ASTM 1: Excellent	Excellent
Crimson	Synthetic Organic (Mixture)	PR122 / PR264	Quinacridone / Diketopyrrole-pyrrole	Semi-Opaque	1 - Excellent	Excellent
Medium Phthalo Blue	Mixture	PW6 / PB15:3	Titanium Dioxide Rutile / Copper Phthalocyanine	Opaque	ASTM 1: Excellent	Excellent
Light Green Yellow	Mixture	PY184 / PW6 / PG7	Bismuth Vanadate / Titanium Dioxide Rutile / Chlorinated Copper Phthalocyanine	Semi-Opaque	ASTM 1: Excellent	Excellent
Olive	Mixture	PY150 / PY42 / PG7	Nickel Complex Azo / Synthetic Hydrated Iron Oxide / Chlorinated Copper Phthalocyanine	Semi-Opaque	ASTM 1: Excellent	Excellent

N8 Neutral Gray

PW6 / PBk9 / PBr7

Amorphous Carbon produced by charring animal bones / Calcined Natural Iron Oxide

ASTM 1: Excellent Excellent

Titanium Dioxide Rutile /