Performance Inorganic Pigments
& Color Solutions

Zhonglong
Listen to your colors

CLAYDE

COMPLEX INORGANIC COLOR PIGMENTS

复 合 无 机 颜 料

For Plastics, Coatings, Inks & Constructions

www.zpigments.com

Innovative Colorful Palette Of Solutions Supplier - ZPIGMENTS 聆听你的色彩

ZHONGLONG MATERIALS offer a comprehensive palette of inorganic color solutions that gives you the intense colors you demand for your plastics , rubber , coatings , inks , constructions and ceramics ; our products provide you with reliable quality , consistent processing behavior , reduced scrap rates , and enhanced productivity , and they enable you to find the optimal combination of coloring value and processing efficiency.

中隆材料为您提供全面的无机色彩解决方案，服务于塑料、橡胶、涂料、油墨、建筑和陶瓷行业;我们的产品为您提供可靠的质量、稳定的加工性能、降低的不良品率和更高的生产效率，并使您能够找到着色价值和加工效率的最佳组合。

Explanation of Tests 测试说明

- **Color Shade**

Pigments shades are based on a full shade concentration of 2% pigments and a ratio of 1:3 for reductions.

- **颜色**

全色：2%颜料添加量；冲淡色：颜料与钛白粉比例为 1:3。

- **Mean Particle Size**

Tested by Malvern 3000, D50 value.

- **平均粒径**

马尔文 3000 粒径分布测试仪，D50 中值粒径。

- **Oil Absorption**

Determine oil absorption of a pigment. Based on regulation ASTM D-281-31.

- **吸油量**

按 ASTM D-281-31 方法测试颜料吸油量。

- **PH Value**

Weigh 10.00 gr of pigment, place in a beaker and add 100 ml warm distilled water. Stir with a glass rod and cool to 25 ºC. Then determine pH by using the appropriate electrodes.

- **PH 值**

将 10 克颜料置于 100 毫升热蒸馏水中，搅拌冷却至 25 摄氏度，用 PH 计测试。

- **Heat Resistance**

Resistance to heat was tested according to CF-33 at baking process. The values quoted are the temperatures in °C at which, after a dwell time of 60 mins, a color change equivalent to a ΔE*ab = 3 is obtained.

- **耐热性**

按 CF-33 测试方法测试颜料的耐温性能，停留时间 60 分钟，综合色差小于 3.0 时的耐受温度。

- **Acid Fastness**

Pigment in 10% hydrochloric acid; Assessments were against the 5-step gray scale, where 5 refers to very good acid fastness and 1 very poor acid fastness.

- **耐酸性**

颜料在 10%盐酸溶液中的颜色变化程度，用灰度尺标准评价，5 级为最好，1 级为最差。

- **Alkali Fastness**

Pigment in 10% sodium hydroxide; Assessments were against the 5-step gray scale, where 5 refers to very good alkali fastness and 1 very poor alkali fastness.

- **耐碱性**

颜料中 10%氢氧化钠溶液中的颜色变化程度，用灰度尺标准评价，5 级为最好，1 级为最差。

- **Light Fastness**

The light fastness was determined on PVDF coatings at full shade in an artificial light exposure according to CF-32. Assessments were against the 8-step blue wool scale, where 8 refers to very good light fastness and 1 very poor light fastness.

- **耐光性**

依据 CF-32 方法测试颜料在氟碳涂料中的耐人工加速氙灯老化性能，用蓝羊毛尺标准评价，8 级为最好，1 级为最差。

- **Weather Fastness**

The weather fastness was determined on PVDF coatings at full shade in an artificial weather exposure according to CF-32. Assessments were against the 5-step gray scale, where 5 refers to very good weather fastness and 1 very poor weather fastness.

- **耐候性**

依据 CF-32 方法测试颜料在氟碳涂料中的耐人工加速气候老化性能，用灰度尺标准评价，5 级为最好，1 级为最差。

Recommended Applications 推荐应用

Plastics, Coatings, Printing Inks, Constructions & Ceramics

> Plastics (PE, PP, PVC etc.) for masterbatch, building products, etc.

> Engineering plastics (ABS, PC etc.) for e.g. automotive applications.

> Fiber and thin film plastic applications.

> Coil coatings, powder coatings, industrial coatings, architectural coatings, fluorocarbon coatings, Silicon coatings, Heat resistant coatings, military camouflage coatings etc.

> Exterior building products, e.g. cement, mortar, concrete, roofing granules, colored sands etc.

> Glass printing inks applications.

> Ceramic applications.

塑料，涂料，油墨，建筑材料，陶瓷

> 塑料色母（PE, PP, PVC etc.），建筑材料等。

> 汽车工程塑料（ABS, PC etc.）。

> 纺纤和塑料薄膜。

> 卷钢涂料，粉末涂料，工业涂料，建筑涂料，氟碳涂料，有机硅涂料，耐高温涂料，军事伪装涂料等。

> 户外建筑材料，如水泥，砂浆，混凝土，屋顶，烧结彩砂等。

> 高温玻璃油墨。

> 陶瓷应用。

COMPLEX INORGANIC COLOR PIGMENTS 复合无机颜料

Full shade 全 色	Reduction 冲淡色	Product Name/Color Index 产品名称/颜色索引	Pigment Chemical 颜料成分	Specific Gravity 比重	Mean Particle Size 平均粒径 μm	Oil Absorption 吸油量(g/100g)	PH Value	Heat fastness 耐热性 ℃	Acid Fastness 耐酸性(1-5)	Alkali Fastness 耐碱性(1-5)	Light Fastness 耐光性(1-8)	Weather Fastness 耐候性(1-5)	RoHS
		Yellow 2111K 钛铬棕 Chrome Antimony Titanium Buff Pigment Brown 24	Ti-Sb-Cr	4.4	0.7	~28	6-9	>500	5	5	8	5	√
		Yellow 2201K 钛铬棕 Chrome Antimony Titanium Buff Pigment Brown 24	Ti-Sb-Cr	4.4	0.8	~28	6-9	>500	5	5	8	5	√
		Yellow 2203K 钛铬棕 Chrome Antimony Titanium Buff Pigment Brown 24	Ti-Sb-Cr	4.4	0.8	~28	6-9	>500	5	5	8	5	√
		Yellow 2230K 钛铬棕 Chrome Antimony Titanium Buff Pigment Brown 24	Ti-Sb-Cr	4.4	0.8	~28	6-9	>500	5	5	8	5	√
		Yellow 2111K 镍钛黄 Nickel Antimony Titanium Yellow Pigment Yellow 53	Ni-Sb-Ti	4.5	0.7	~18	6-9	>500	5	5	8	5	√
		Yellow 2102K 镍钛黄 Nickel Antimony Titanium Yellow Pigment Yellow 53	Ni-Sb-Ti	4.5	0.8	~16	6-9	>500	5	5	8	5	√
		Yellow 2112K 镍钛黄 Nickel Antimony Titanium Yellow Pigment Yellow 53	Ni-Sb-Ti	4.5	0.8	~16	6-9	>500	5	5	8	5	√
		Yellow 2730K 铁酸锌 Zinc Ferrites Yellow Pigment Yellow 119	Zn-Fe	5.0	1.2	~30	4-8	300	5	5	8	5	√

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		Yellow 2731K 铁酸锌 Zinc Ferrites Yellow Pigment Yellow 119	Zn-Fe	5.0	1.2	~30	4-8	300	5	5	8	5	√
		Yellow 2735K 铁酸锌 Zinc Ferrites Yellow Pigment Yellow 119	Zn-Fe	5.0	1.2	~30	4-8	300	5	5	8	5	√
		Blue 2501K 钴蓝 Cobalt Aluminate Blue Pigment Blue 28	Co-Al	4.2	1.1	~30	7-10	>500	5	5	8	5	√
		Blue 2502K 钴蓝 Cobalt Aluminate Blue Pigment Blue 28	Co-Al	4.2	1.1	~32	7-10	>500	5	5	8	5	√
		Blue 2503K 钴蓝 Cobalt Aluminate Blue Pigment Blue 28	Co-Al	4.2	1.1	~32	7-10	>500	5	5	8	5	√
		Blue 2511K 钴蓝 Cobalt Chromite Blue Pigment Blue 36	Co-Cr-Al	4.6	1.2	~28	6-9	>500	5	5	8	5	√
		Blue 2512K 钴蓝 Cobalt Chromite Blue Pigment Blue 36	Co-Cr-Al	4.7	1.1	~28	6-9	>500	5	5	8	5	√
		Blue 2542K 钴蓝 Cobalt Chromite Blue Pigment Blue 36	Co-Cr-Al	4.7	1.1	~28	6-9	>500	5	5	8	5	√

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		Green 2601K 钴绿 Cobalt Titanate Green Pigment Green 50	Co-Ti-Ni-Zn	5.0	1.0	~18	7-10	>500	5	5	8	5	√
		Green 2602K 钴绿 Cobalt Titanate Green Pigment Green 50	Co-Ti-Ni-Zn	5.0	0.9	~18	7-10	>500	5	5	8	5	√
		Green 2604K 钴绿 Cobalt Titanate Green Pigment Green 50	Co-Ti-Ni-Zn	5.0	0.9	~18	7-10	>500	5	5	8	5	√
		Green 2642K 钴绿 Cobalt Titanate Green Pigment Green 50	Co-Ti-Ni-Zn	5.1	0.9	~15	7-10	>500	5	5	8	5	√
		Green 2621K 钴绿 Cobalt Chromite Green Pigment Green 26	Co-Cr-Zn-Al	5.1	1.2	~15	5-9	>500	5	5	8	5	√
		Green GN 氧化铬绿 Chrome Oxide Green Pigment Green 17	Cr_2O_3	5.1	1.0	~20	4-8	>500	5	5	8	5	√
		Green DG 氧化铬绿 Chrome Oxide Green Pigment Green 17	Cr_2O_3	5.1	0.9	~21	4-8	>500	5	5	8	5	√
		Green 5713K 氧化铬绿 Chrome Oxide Green Pigment Green 17	Cr-Fe	5.1	0.6	~21	4-8	>500	5	5	8	5	√

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		Black 2720K 锰铁黑 Manganese Ferrites Black Pigment Black 26	Mn-Fe	5.0	0.9	~30	4-8	>500	5	5	8	5	√
		Black 2721K 锰铁黑 Manganese Ferrites Black Pigment Black 26	Mn-Fe	5.0	0.9	~30	4-8	>500	5	5	8	5	√
		Black 2301K 铜铬黑 Copper Chromite Black Pigment Black 28	Cu-Cr-Mn	5.4	0.5	~28	4-8	>500	5	5	8	5	√
		Black 2302K 铜铬黑 Copper Chromite Black Pigment Black 28	Cu-Cr-Mn	5.4	0.5	~28	4-8	>500	5	5	8	5	√
		Black 2304K 铜铬黑 Copper Chromite Black Pigment Black 28	Cu-Cr-Mn	5.4	0.6	~26	4-8	>500	5	5	8	5	√
		Black 2303K 铜铬黑 Copper Chromite Black Pigment Black 28	Cu-Cr	5.3	0.6	~27	4-8	>500	5	5	8	5	√
		Black 2313K 铜铬黑 Copper Chromite Black Pigment Black 28	Cu-Cr	5.3	0.5	~27	4-8	>500	5	5	8	5	√
		Black 2314K 铜铬黑 Copper Chromite Black Pigment Black 28	Cu-Cr	5.3	0.5	~27	4-8	>500	5	5	8	5	√

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		Black 1720K 锰铁黑 Manganese Ferrites Black Pigment Black 33	Mn-Fe	5.0	0.8	~30	4-8	>500	5	5	8	5	√
		Black 1724 锰铁黑 Manganese Ferrites Black Pigment Black 33	Mn-Fe	5.0	0.8	~30	4-8	>500	5	5	8	5	√
		Brown 1701K 铁铬棕 Iron Chrome Brown Pigment Brown 29	Fe-Cr	5.1	0.7	~26	5-8	>500	5	5	8	5	√
		Black 1712K 铁铬棕 Iron Chrome Brown Pigment Brown 29	Fe-Cr	5.2	0.6	~26	5-8	>500	5	5	8	5	√
		Black 1713K 铁铬棕 Iron Chrome Brown Pigment Brown 29	Fe-Cr	5.2	0.6	~26	5-8	>500	5	5	8	5	√
		Brown 2740K 锌铁铬棕 Zinc Iron Chrome Brown Pigment Brown 33	Zn-Fe-Cr	4.9	0.7	~20	5-8	>500	5	5	8	5	√
		Brown 2741K 锌铁铬棕 Zinc Iron Chrome Brown Pigment Brown 33	Zn-Fe-Cr	5.0	0.6	~22	5-8	>500	5	5	8	5	√
		Brown 2750K 锌铁铬棕 Zinc Iron Chrome Brown Pigment Brown 33	Zn-Fe-Cr	5.0	0.6	~22	5-8	>500	5	5	8	5	√

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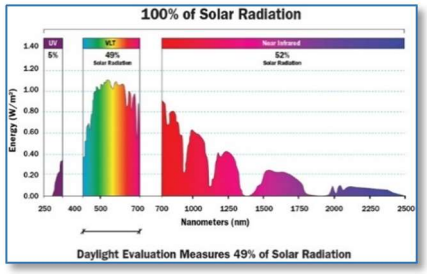
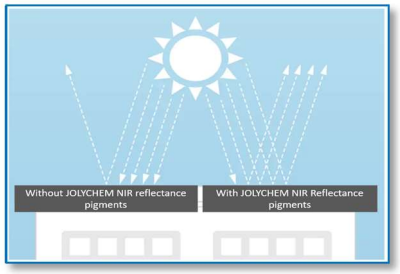
		Brown 2901K 钛锰棕 Manganese Antimony Titanium Pigment Yellow 164	Mn-Sb-Ti	4.8	0.9	~20	4-8	>500	5	5	8	5	√
		Brown 2902K 钛锰棕 Manganese Antimony Titanium Pigment Yellow 164	Mn-Sb-Ti	4.8	0.8	~21	4-8	>500	5	5	8	5	√
		Brown 2903K 钛锰棕 Manganese Antimony Titanium Pigment Yellow 164	Mn-Sb-Ti	4.8	0.8	~21	4-8	>500	5	5	8	5	√
		Red 2822P 硅铁红 Fe-Si Oxides Pigment Red 101	Fe-Si	4.8	0.6	~22	3-7	>500	5	5	8	5	√
		Red 2823P 硅铁红 Fe-Si Oxides Pigment Red 101	Fe-Al	4.8	0.6	~22	3-7	>500	5	5	8	5	√
		Violet 2591K 钴紫 Cobalt Violet Pigment blue 73	Co-Si	3.8	1.5	~20	7-10	>500	5	5	8	5	√
		Yellow 2161K 钒酸铋 Bismuth Vanadate Yellow Pigment yellow 184	BiVO4	5.7	0.5	~26	6-8	220	5	5	8	5	√
		Yellow 2162K 钒酸铋 Bismuth Vanadate Yellow Pigment yellow 184	BiVO4	5.6	0.5	~25	6-8	300	5	5	8	5	√

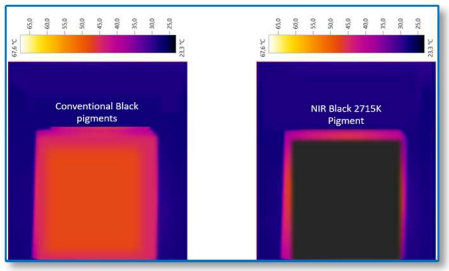
INFRARED REFLECTING PIGMENTS 红外反射颜料

Full shade 全 色	Reduction 冲淡色	Product Name/Color Index 产品名称/颜色索引	Pigment Chemical 颜料成分	L value*	NISR* （%） 近红外反射率	TSR* （%） 总太阳光反射率
		Brown 2701K 铁铬棕 Iron Chrome Brown Pigment Brown 29	Fe-Cr	30	58	28
		Black 2714K 铁铬棕 Iron Chrome Brown Pigment Brown 29	Fe-Cr	28.5	58.5	28
		Black 2715K 铁铬棕 Iron Chrome Brown Pigment Brown 29	Fe-Cr	28	58.5	28.5

* Full Shade 全色; Dry Film Thickness 膜厚: ~80µm; On White Substrate 基于白色底材







** The colors shown are printed versions of actual coatings pigmented with pigments. Though every attempt has been made for the colors to be exact matches, there may be slight variations. Therefore, always test our pigments prior to approval. 所示色卡为涂料制作色卡的印刷版本，与实际效果会略有差异，我们已尽可能使其接近实物，客户在使用前请先行测试确认！

** These items are provided as general information and for reference use only. They are approximate values and are not considered part of the product specification.
这些提供的项目为一般信息，并只作参考用途。它们为我们能提供的最接近值，但不能视为销售产品规格的一部分。

Quality & Sustainability

Zhonglong
Listen to your colors

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