



COMPLEXED INORGANIC COLORED PIGMENT

混相金属氧化物颜料



ISO 9001:2000 ISO 14001:2004



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INTRODUCTION

引言

With the continuous improvement on the quality and performance of industrial products, so do the requirement on their appearance and durability. Therefore, there is a steadily increasing requirement for the more durable pigments that are used in paints, plastics, building materials and ceramics. As a consequence, the complex inorganic color pigments are of increasing importance to formulators.

The complex inorganic color pigments absorb rutile lattice of nickel oxide, chromium (III) or manganese oxide as hair color component. The rutile pigment nickel, chromium, manganese, antimony and other elements fill the defect in the original crystal titanium dioxide to form a more complete crystal structure and improve the stability of the crystal lattice. These metallic elements lose their original chemical physical properties. So this kind of rutile pigment can not be considered to be nickel, chromium or antimony compound or a pure oxide. The complex inorganic color pigments have highly inert, its water exudation is under 2ppm, Human stomach acid can not dissolve. Therefore, even into the gastrointestinal, no harm to human. It is absolutely safe even if human touch it. So we do not include them in hazardous substances. By the indicating from manufacturer for compatibility, purity, and security processing, most of these pigments is considered non-toxic, compliance with safety rules and requirements for food contact and toy.

They need to satisfy the highest demands for heat stability and chemical inertness as well as weather and light fastness, while taking account of the ecological aspects of the end product. The complex inorganic color pigments are the most stable class of pigments developed in the color industry up to present. TRANSDUR® pigments belong to this class. Their unique fastness properties are directly related to high-temperature processing (above 800°C/ 1500°F), which yields homogeneous crystalline complex inorganic color pigment compounds. This high-temperature-process requires a very precise control over the chemical and technical parameters, which has been made possible by the most up to date state of the facilities for the production of TRANSDUR® pigments.

Complexed Inorganic Colored Pigment



随着工业产品品质和性能不断提升, 我们的油漆, 塑料, 建材以及陶瓷行业需要更具耐久性的颜料产品。因此, 混相金属氧化物颜料无疑在配方中将占据越来越大的比重。

混相金属氧化物颜料中金红石晶格吸纳了氧化镍, 氧化铬(III)或氧化锰等作为发色组分, 从而填补了二氧化钛中原来的晶体缺陷, 形成更完整的晶体结构, 提高了晶格稳定性。但这类颜料不能认为是镍、铬或锡化合物或其单纯的氧化物。混相金属氧化物颜料的惰性很高, 其热水渗出量在2ppm以下, 人体的胃酸根本无法使其溶解, 因此即使进入胃肠道, 也对人体无害, 因此大部份此类颜料被视为无毒、无害。

他们需要满足产品在热稳定性和化学惰性, 以及牢固度和耐晒性的高度需求, 同时也需关注最终产品在生态方面的表现。目前, 混相金属氧化物颜料在颜料行业中, 已发展为最稳定的一类。TRANSDUR® 颜料是其中之一。其非凡的牢固性能直接来源于高温处理工艺(温度高于800°C/1500°F), 在此工艺下形成了均匀的结晶混相金属氧化物颜料。执行高温处理工艺, 需要对化学以及物理参数进行极端精确的控制, TRANSDUR® 颜料生产过程中使用的最新现代化设备让这成为了可能。

NICKEL RUTILE PIGMENTS

镍金红石颜料



The structure of rutile yellow is based on the rutile crystal modification of titanium dioxide. These types of pigments offer outstanding hiding power, light fastness and resistance to temperature, chemicals (including acid and alkali) and weathering. Detailed know-how and process control of each of the manufacturing steps is needed to achieve optimised pigment performance.

For rutile yellows, different colors can be obtained by variation of the calcination temperature. A higher calcination temperature results in darker grades with higher chroma.

In combination with organic pigments TRANSDUR® Yellow can enhance color saturation and light fastness in coatings as well as in plastic applications.

金红石黄的化学结构是基于钛白粉的金红石结晶改性。这类颜料能提供杰出的遮盖力, 以及耐光、耐温, 耐化学品(包括酸和碱)和耐候的特性。如果想使颜料性能发挥到最佳状态, 需要掌握详尽的技术细节, 对工序中的每一个步骤进行精确的控制。

对于金红石黄来说, 不同的色泽可以通过改变煅烧温度得到。在一个更高的煅烧温度下, 颜料将在得到更高色度的同时, 得到更暗的色泽。

通过与有机颜料的混合使用, TRANSDUR®黄能够如同对塑料制品的效果一般, 加强涂料的色彩饱和度以及耐光性。

Color Index 索引号	Product Name 产品型号	Full Shade 全色	Reduction 1:1 冲淡 1:1	Density 密度 (g/cm³)	Oil Absorption 吸油量 (g/100g)	Av. Primary Particle Size 平均粒径 (µm)	Acid Resistance 耐酸性	Alkali Resistance 耐碱性	Heat Resistance 耐热性 (°C)	Light Fastness 耐光性	Weather Fastness 耐候性
TransDur P.Y.53	Y-608			4.6	9-13	1.1	5	5	800	8	5
	Y-531			4.5	8-14	1.1	5	5	1000	8	5
	Y-532			4.5	8-14	1.1	5	5	1000	8	5
	Y-607			4.6	9-13	1.1	5	5	800	8	5
	Y-504			4.7	10-20	1.1	5	5	1000	8	5
	Y-503			4.7	11-17	2.5	5	5	1000	8	5

CHROMIUM RUTILE PIGMENTS

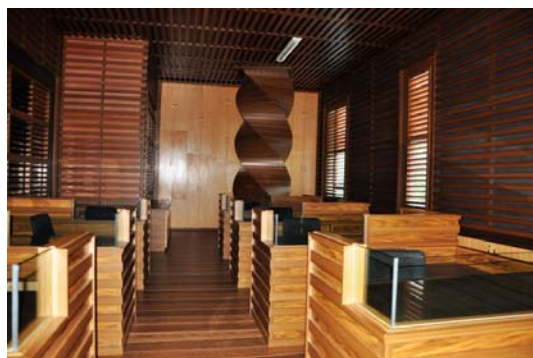
铬金红石颜料

Nickel and chrome rutiles are available in a large variety of color shades and can be custom formulated to meet specific applications and requirements.

Excellent dispersibility and less shear sensitive colors are offered with the TRANSDUR® chromium and nickel rutile line.

镍和铬金红石可以满足生产各种色光的颜料的需要，并且可以进行配方上的调整以适应不同客户的特殊应用要求。

TRANSDUR®的镍和铬金红石系列，将为您呈现优秀的分散性能以及更低的剪切敏感性。



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TransDur P.B.R.24	BR-46			4.7	11-20	2.5	5	5	1000	8	5
	BR-22			4.5	12-18	1.1	5	5	1000	8	5
	BR-25			4.7	11-20	2.5	5	5	1000	8	5
	BR-42			4.5	12-18	1.1	5	5	1000	8	5
	BR-45			4.7	11-20	2.5	5	5	1000	8	5
	BR-43			4.7	10-20	1.2	5	5	1000	8	5

(INVERSE) SPINEL PIGMENTS

尖晶石颜料

Cobalt blue pigments are generated in the typical spinel crystal modification. The color shades range from a red shade blue to a green shade blue by increasing the trivalent chromium content in the crystal structure. The hiding power increases correspondingly with increased chromium content as seen in BL-51.

TRANSDUR® Blue 84 is a high strength P.B.I. 28 with a strong red shade hue.

Cobalt titanium green pigments have a structure typical of an inverse spinel. Cobalt blue and green pigments prevent warpage in polyolefins.



钴蓝颜料生产自典型的尖晶石晶体改性工艺。通过增加结晶结构中三价铬的含量，色光的变化范围可从红光蓝到绿光蓝。且正如我们看到的，随着铬含量在蓝51范围内增加，遮盖力也相应地提高了。

TRANSDUR® 蓝 84是一种带有强烈红光色调的高强度的P.B.I.28品种。

钛钴绿颜料有着典型的反尖晶石结构。其中钴蓝和绿色颜料可以防止聚烯烃中的翘曲现象。

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TransDur P.B.28	BL-84			4.2	15-23	0.8	5	5	1000	8	5
	BL-82			4.2	17-26	0.8	5	5	1000	8	5
	BL-83			4.3	19-29	0.8	5	5	1000	8	5
	BL-85			4.6	28-37	2.5	5	5	1200	8	5
TransDur P.B.36	BL-51			4.8	14-20	0.9	5	5	1000	8	5
TransDur P.G.50	G-4G			5.1	9-14	1.2	5	5	1000	8	5
	G-5G			4.3	13-23	0.8	5	5	1000	8	5
	G-6G			4.5	11-20	2.5	5	5	1000	8	5

BROWNS

棕色

Iron chromite brown pigments produce colors from a warm chocolate brown as seen in TRANSDUR® BR-854, and blue shade brown seen in TRANSDUR® BR-859

铁铬棕颜料可以如应用在TRANSDUR® 棕854一般，提供一种柔和的巧克力棕的色泽，也可以如应用在TRANSDUR® 棕859中一般，提供一种蓝相棕的色泽。

BLACKS

黑色

The black pigments here fall into two distinct classes.

TRANSDUR®Black -62 and TRANSDUR®Black -61are an Iron manganese copper black pigment that absorbs the visible region, but reflects at wavelengths in the near infrared. The acid soluble iron content is kept low. This kind of pigment is used to prevent heat build-up that may be caused by sun light or IR radiation.

TRANSDUR®Black 91, TRANSDUR®Black 92 and TRANSDUR®Black 95 are black spinel pigments based on copper and cobalt respectively, and absorb in the IR region.

黑色颜料再此处分不同的两类。

TRANSDUR®黑 62 和TRANSDUR®黑 61是一种铁锰铜黑，吸收可见光，反射近红外光，其中酸溶性铁的含量被保持在一个很低的水平。这一种类的颜料可以有效防止因高温曝晒和红外辐射引起的热量积聚导致损耗的现象。

TRANSDUR®黑 91, TRANSDUR®黑 92以及TRANSDUR®黑95分别是以铜和钴作为主要成分的黑色尖晶石颜料，且吸收区域在红外光区内。



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TransDur P.BR.29	BR-854			4.2	14-21	1.0	5	5	800	8	5
	BR-859			4.9	11-17	1.2	5	5	1000	8	5
TransDur P.BK.26	BK-62			5	13-23	0.8	5	5	800	8	5
	BK-61			5.1	18-27	2.2	5	5	600	8	5
TransDur P.BK.28	BK-91			5.2	15-25	1.0	5	5	800	8	5
	BK-92			5.4	15-21	2.5	5	5	1000	8	5
	BK-95			5.1	12-22	2.5	5	5	750	8	5

(ENCAPSULATED) BISMUTH VANADATE PIGMENT

钒酸铋颜料

TRANSDUR® Y100 is green shade bismuth vanadate pigments with outstanding application properties like improved opacity, high gloss, excellent weather and light fastness and good tinting strength. They are easily dispersible and can be used in solventbased as well as in waterborne systems including aqueous dispersions.

TRANSDUR® Y106 is slightly reddish compared to TRANSDUR® Y100 features an extraordinary high tinting strength.

TRANSDUR® Y101 is Silica encapsulated green shade bismuth vanadate pigments. For some applications stability properties of bismuth vanadate regarding heat, SO₂ or alkali resistance are not sufficient. Especially plastic applications require a stable color shade even at very high temperatures. To fulfill these requirements, Hongda developed highly stabilized bismuth vanadate pigments. Due to the improved encapsulation technology, these pigments show improved application properties like extreme heat resistance and improved acid, alkali and SO₂ resistance.

TRANSDUR® Y100 是钒酸铋颜料，他们都有着杰出的应用性能，如被大大改进的透明度，很高的光泽度，优异的耐候性和耐光性和良好的着色力。他们很容易分散，可以被应用于如类似于包括水性分散体的水性体系的溶剂型内和塑料。

TRANSDUR® Y106 比TRANSDUR® Y100 较偏红相和表现出了及其优异的着色力。

TRANSDUR® Y101 是种用硅胶封装的呈现绿光的钒酸铋颜料。而一般来说，钒酸铋颜料在应用稳定性诸如耐热、耐二氧化硫以及耐碱等性能上存在一定的不足。特别是塑料制品，尤其需要在很高的温度下也能保持稳定的色光。为了满足稳定性的需要，Hongda 针对性地研发了具有高稳定性的钒酸铋颜料。由于在封装上的工艺改进，这些颜料在应用稳定性方面表现出了很大的进步，如极高的热稳定性和明显改善的耐酸性，耐碱性以及对二氧化硫的耐性。



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TransDur P.Y.184	Y100			5.9	17-27	0.4	5	5	200	8	5
	Y101			5.7	19-29	0.4	5	5	270	8	5
	Y106			5.8	18-28	0.4	5	5	200	8	5