

## Details and Descriptions of Colours

This section gives assessments for certain determinable characteristics of all the colours presently in my range, as well as a few informal remarks on their qualities and idiosyncrasies when used. Following the pattern already laid out on all my tube and can labels, and on my more recent colour charts, I give:

(1) The Colour Index Number: This is an international system for classifying and identifying pigments solely by their (often very complex) chemical formulae (e.g P(igment) R(ed) 106, Mercuric Sulphide known as Genuine Vermilion). The use of vague traditional or invented colour names is thus clarified, and so, in theory at least, is the vexed matter of what pigments manufacturers actually put into their paints. If a colourman is honest, each constituent pigment in a paint can be specified precisely, and the practice of secretly adulterating or even completely substituting cheaper alternatives is made impossible. Assuming, that is, the colourman is honest...I can certainly state that there are no secret additions to any of the paints in my range. What you read as the C.I number on the label is what you get.

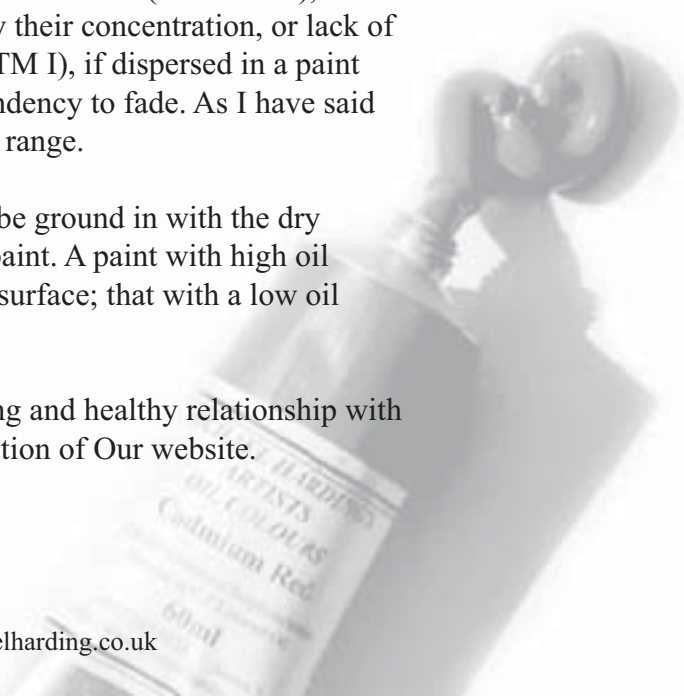
(2) Estimated Relative Drying Speed: Bearing in mind that all drying speeds will be affected by temperature, humidity and light levels, these give a broad calibration of comparative speeds, from the Very Fast, such as the Umbers, many of which, if used neat, will be touch dry within a hot summer day, to the Very Slow, which in unmixed state, might take up to a week.

(3) Transparency: This characterizes the ability of a given paint to cover over the substrate onto which it is painted. At the extreme of opacity there are the Cadmiums, at that of transparency, the Indian Yellows. Transparency should not be confused with sheer strength of colour, or tinctorial/ tint power, as it is revealed in mixes. Some transparent paints, e.g. the Phthalo Lakes, are ferociously strong when mixed with sturdily opaque ones.

(4) Lightfastness: This gives some indication of the resistance of a pigment to fading when exposed to very high light levels. Though the commonly used numerical system for this is the scale devised by the American Society of Testing and Manufactures (ASTM I-V), in practice the fade resistance of pigments is greatly affected by their concentration, or lack of it, in paint mixes. Thus an excellently lightfast pigment (ASTM I), if dispersed in a paint by addition of fillers, will in consequence show increased tendency to fade. As I have said before, there are no fillers added to the pigments in my paint range.

(5) Oil Content: This indicates broadly how much oil has to be ground in with the dry pigment or the lake dye in order to make it into a workable paint. A paint with high oil content will generally, but with exceptions, dry to a glossier surface; that with a low oil content will be leaner.

(6) Toxicity: This should be taken seriously if you want a long and healthy relationship with my paints. More advice is given in the Health and Safety section of Our website.



## Whites

(Unless otherwise stated, all paints are bound with Refined Cold-Pressed Linseed Oil)

**Titanium White No. 1** bound with the less yellowing Poppyseed oil, has now been discontinued. Recent sharp rises in the bulk price of this oil prevent me from offering this paint at a realistic price. But I have begun manufacturing as an acceptable substitute:

### **Titanium White ( Safflower Bound).**

**PW6. Slow Drying. Very Opaque. Lightfastness Excellent. Low Oil Content.**

Safflower oil dries to a more robust film than Poppyseed, which means that this paint can be overpainted with less risk of later cracking than the latter. It yellows comparably to Poppyseed, and handles in a similar way. This is the most brilliant White in my range, suitable for cool, opaque light hues, and generally as a highly keyed mixer.

### **Titanium White No. 2.**

**PW6& PW4. Average Drying. Very Opaque. Lightfastness Excellent. Low Oil Content.**

This paint is bound with Linseed Oil and contains a 25% addition of Zinc Oxide White in order to avert the tendency of pure Titanium Dioxide pigment to express or exude oil to the surface whilst drying, which then causes a more pronounced appearance of yellowing. Zinc Oxide incorporates this free oil more effectively, as well as adding a cooler brightness to the white. If you want a strong mixer which tends to lighten hues conspicuously, as well as making the Cadmiums rather chalky in appearance, then this is it. The handling qualities are not overly subtle, but this is the white most suitable for a bright and largely cool palette. It forms a strong film when dry.

### **Foundation White (Primer Alternative)**

**PW6 & PW1. Dries in 2-3 days. Very Opaque. Lightfastness Excellent. Very Low Oil Content. TOXIC.**

I was asked by a well-known artist to create a very lean, robust, fast-drying white which did not rely on extenders and siccatives for its qualities. So I made this 50/50 blend of Titanium and Lead Whites bound with linseed oil which combines a measure of the virtues of each. Since sizing alone can function as a priming on a surface, there is no specialist paint we can call an "oil primer" for artistic purposes. You simply have to mix this paint evenly with whatever proportion suits you of genuine artists' quality turpentine, and you have an oil primer which dries to a very strong film, and, under normal conditions, can be extensively overpainted within 4-5 days, unlike some more oil rich traditional Lead Whites which require weeks to six months to dry adequately for this purpose. It can also be used as a normal oil paint throughout a picture, and the addition of varying quantities of turpentine discloses a range of very interesting, smooth surface effects, which this paint displays.



**Zinc White.**

**PW4. Slow Drying. Slightly Transparent. Lightfastness Excellent. Low Oil Content.**

Perhaps the most under-appreciated of the Whites, Zinc Oxide was first used in 18th century France, and its early misuse as a canvas primer seems to have frightened artists away from examining its unique qualities. It has a cool transparency and a subtle power enabling one to create slightly hued mixes which retain their chromatic intensity and brightness, unlike those made by the blasting strength of the Titanium Whites. The softness of its surface when dry is not a disadvantage when it is used in this way, as the better drying paints will strengthen the mix.



**Flake White No.1** bound with Poppyseed oil, has been discontinued for the reason given above, rapid increases in the price of the oil.



**Flake White. (Formerly Flake White No.2)**

**PW1& PW4. Fast Drying. Slightly Transparent. Lightfastness Excellent. Very Low Oil Content. TOXIC.**

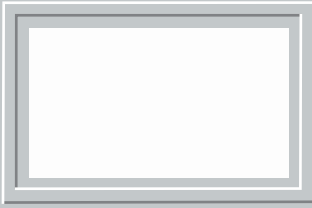
This is a blend, in Linseed oil binder, of 67% Lead Carbonate with 33% Zinc Oxide, which is added to increase the brilliance of the Lead White, as well as to mop up the surface oil which, on its own, it tends to exude on drying. The fine handling qualities of Lead White are also supplemented by the way in which the Zinc White constituent retains the brightness of a colour with which Flake White is mixed, preventing the hue from appearing excessively chalky. Since French colourmen began to add Zinc White to Lead in the later 19th century, this has become the most widely used of the Lead Whites today, whose strong paint film makes it suitable for use throughout a painting, in varying thicknesses, and in dilutions with turpentine.



**Cremnitz White. (Linseed Oil Bound)**

**PW1. Fast Drying. Slightly Transparent. Lightfastness Excellent. Very Low Oil Content. TOXIC.**

Pure Lead Carbonate in a binder which makes a heavy, tactile white with a very robust surface. So called because it was originally made in the Bohemian town of Kormeriz, called Cremnitz under the Hapsburgs. The ideal white for furrowed, granular or impasto mark-making. Sometimes called a “silver white” as a description of its mild luminosity, when used unmixed it tends to dry with a slight expression of oil to the surface, giving it a warmer, parchment-like effect. A wonderful all round mixer for middle-value hues, which supports colours without annulling them.



**Cremnitz White in Walnut Oil.**

**PW1. Average Drying. Slightly Transparent. Lightfastness Excellent. Very Low Oil Content. TOXIC.**

The use of walnut oil in paint can be traced back even further than that of linseed. When 15th century artists began to add oil to their tempera colours it was walnut oil that seemed the obvious choice. Jan van Eyck in Flanders and Antonello da Messina in Italy both knew of its handling properties; from that time on it was widely used by just about all the great artists, being more a question of who did not use it rather than who did.

I thought it would be interesting to bring back this oil as a binder for lead white. It survived as the binder for the white made by French colourmen selling to the Impressionists, but it seems to have fallen out of use by the end of the 19th century. I believe the reason for this was its expense. Even today it costs about 3 times the price of linseed oil. But since lead paint needs little oil, the increased cost is less evident. Some accounts I have read speak of its tendency to go rancid, but I suspect this is less of a reason for its demise and more an offered excuse to drop it in favour of other, cheaper oils. Upon researching this matter I can find no evidence of the oil spoiling in any way, particularly while incorporated into the form of an oil paint. There was in fact good reason why walnut oil was preferred as a binder for whites: it has the reputation for yellowing slightly less than linseed, and so paler and cooler colours bound with it underwent less change in drying. The film of dry walnut-bound paint is not quite as strong as that bound with linseed, but it is stronger than that of poppyseed oil, and this permits walnut-bound paint to be overpainted in a way which would risk later cracking if poppyseed oil had been used. Walnut oil dries at a rate comparable to linseed. I have read accounts of how it was particularly useful for the very detailed manipulation demanded by work such as portraiture. I suppose the works of the 15th century masters cited above demonstrate just how refined its handling could be.

It is the feel of this paint under the brush, I think, which constitutes the most compelling argument for its revival. My artist friends have characterized its texture with words like “voluptuous” and “silken”. There is certainly a flow to it which is quite distinct from that experienced using the other oils. One can sense how this had to be the only means by which those precise yet creamy highlights of ruff collars and shot silks were attained by baroque portraitists. Whilst retaining the properties we so value in lead white, walnut oil adds to this paint a cool smoothness which is quite unique. Some of the artists who have tried it tell me that from now on they will paint only with this white.

## Yellows and Oranges



### **Lemon Yellow.**

**PY31. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content. TOXIC.**

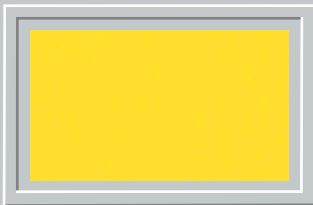
Sometimes known as Barium Yellow, this is Barium Chromate, introduced into painting after the Lead Chromates, circa 1820. Unlike them, it has proved to be permanent and non-reactive. Often considered to be obsolete, I am probably the only colourman to make it. By itself a sick looking, acidic yellow with weirdly green overtones, its low tint power facilitates mixes with Magenta and the cooler reds, producing beautifully modulated greys sought in certain passages of flesh painting.



### **Bright Yellow Lake.**

**PY3 (but soon to be changed). Slow Drying. Transparent. Very Good Lightfastness. High Oil content.**

At present I am working on a re-specifying of the pigment of this paint in order to upgrade its permanence. But the characteristics will remain the same: an Arylide organic lake pigment, of itself very fat and transparent, but which has an enormous tint power, shooting right through mixes with a pervasive range of bottle green undertones. Beginners should handle it with care when adding it to other paints! It can heighten the Phthalo lakes without making them opaque, and when it is made itself opaque with the addition of white the results are almost luminous.



### **Cadmium Yellow Lemon.**

**PY35. Fast Drying. Semi-Opaque. Excellent lightfastness. Low Oil Content.**

Cadmium Sulphide, with, as its name suggests, a greeny, tangy, sulphurous edge to it which does not run through mixes with quite the same strength as an Arylide lake. An inorganic pigment which lightens and increases the opacity of warm mixes without overthrowing them. The Cadmium range of pigments was introduced into production 1840-1890, as soon as costs permitted, and has proved the most artistically reliable of all the metal compounds discovered in the 19th century.



### **Yellow Lake.**

**PY1. Slow Drying. Transparent. Very Good Lightfastness. High Oil Content.**

One of the oldest established organic lakes, Arylide Yellow G, this is a warmer version of Bright Yellow Lake, with similar properties. Deceptively transparent but with strong tint power, it runs through mixes with a milder and more golden range of undertones.



**Cadmium Yellow.**

**PY35. Fast Drying. Opaque. Excellent lightfastness. Low Oil Content.**

Cadmium Sulphide, but with a greater degree of calcination than that used for the Cadmium Lemon Yellow, producing a very dense and lean mid-shade warm yellow which is virtually indispensable as a foundation colour for warm mixes of all kinds.



**Aureolin (Cobalt Yellow)**

**PY40. Average Drying. Transparent. Excellent Lightfastness. Average Oil Content.**

A transparent straw-ochre yellow with strange yet rich greenish undertones. It was produced in the 1850's as an inorganic replacement for the venerable but unreliable organic yellow gum known as Gamboge. In glazes and thinned layers it displays a Renaissance-like range of muted golds which, over whites, can be quite fiery, but in or over deeper layers, exhibit a mustardy, heavier patina.



**Yellow Lake Deep.**

**PY1.1. Slow Drying. Transparent. Very Good Lightfastness. High Oil Content.**

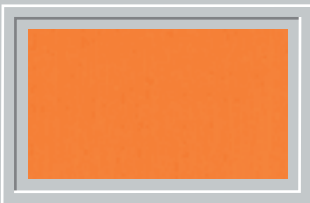
A much warmer version of PY.1, Arylide Yellow G, exhibiting beautiful yet subtle bronze-gold undertones in complex mixes, and which has the high tint power to let these influence even the heaviest combinations of earths.



**Cadmium Yellow Golden.**

**PY35. Fast Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

A unique shade of Cadmium Sulphide which bridges the yellow/orange frontier with a pigment that seems destined to be mixed with the earths, ochres and mid-reds, and which infuses these with a glow more palpable than that of the organic lake yellows.



**Cadmium Yellow Deep.**

**PY35. Fast Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

A warmer version still of Cadmium Yellow Golden, giving a transitional colour more powerful than those obtained by mixing Cadmium Reds and Cadmium Yellows. Often used to warm the mid-tones and lights of some flesh painting.





**Indian Yellow.**

**PY83. Average Drying. Transparent. Very Good Lightfastness. High Oil Content.**

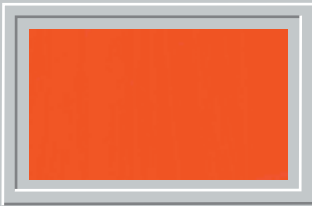
Diarylide Yellow HR, a synthetic organic lake which replaces the very organic, legendary, but long obsolete euxanthic acid (made by warming the urine of Indian cows fed on mango leaves). The modern organic equivalent matches the beauty of the colour used for centuries in Mughal miniatures, but has greater tint power and reliability. If brushed thinly over hued backgrounds it presents a uniquely vibrant warm mustard yellow.



**Indian Yellow Red Shade.**

**PY83 & PR101. Fast Drying. Transparent. Very Good Lightfastness. High Oil Content.**

Same as Indian Yellow but with the addition of an Iron Oxide pigment used in wood dyes, which gives a very rich, beautiful, gingery red shade to the blend, as well as greatly accelerating the drying speed, to the point that this paint can be used as a drying agent in mixes with others.



**Orange Lake.**

**PO 13 (but soon to be changed). Slow Drying. Transparent. Good Lightfastness. High Oil Content.**

This quite powerful, organic, fruity red-orange will at some point be replaced by a more lightfast pigment; at present I am researching substitutes.



**Cadmium Orange.**

**PO 20. Fast Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

A strong, in-your-face deep orange that has high tint power and opacity, yielding surprisingly pinky hues in mixes with Titanium Whites.



**Cadmium Red Light.**

**PR 108. Fast Drying. Opaque. Excellent Lightfastness. Low Oil content.**

A crisp, zingy red with the usual Cadmium characteristics, high tint power and opacity, and which can present warm, almost fiery hues when mixed with a more transparent White, such as Zinc.

## Reds

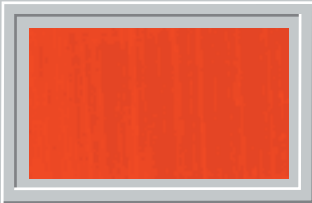




**Cadmium Red.**

**PR 108. Fast Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

A cooler, plummier red in the Cadmium range which yields maroon hues and which can be used to make heavy, greenish blacks when added to the Phthalocyanine Green Lakes, to which it is approximately complimentary.



**Scarlet Lake.**

**PR 170. Average Drying. Semi-Opaque. Excellent Lightfastness. High oil Content.**

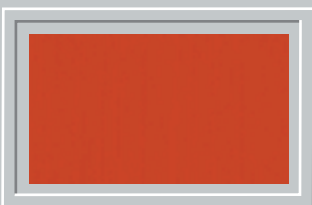
An organic red, Naphthol Red F5RK, which though a lake dye, has a strength appropriate to a granular pigment. It is a strong, slightly bluish red which in small additions can noticeably cut through mixes to yield low, smouldering scarlet undertones. Its hues are strong and cool, almost lipstick.



**Naphthol Red.**

**PR 188. Average Drying. Semi-Opaque. Excellent Lightfastness. High Oil Content.**

A well-established organic pigment, Naphthol Red HF3S, which can be used transparently or opaquely according to choice. In unmixed state it is a pure and slightly fiery red with high tint power, and a range of yellowy-orange undertones, which become very noticeable in hues, which produce much brighter and warmer pinks than are attainable with the Cadmium Reds. When mixed with Zinc White these can appear almost fluorescent.

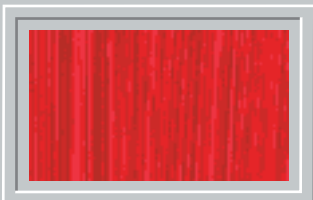


**Genuine Chinese Vermilion.**

**PR 106. Average Drying. Very Opaque. Excellent Lightfastness. Very Low Oil Content. TOXIC.**

If I were to be asked of which pigment I was most proud, I think this would be it. Mercuric Sulphide Vermilion was used in China from early times, and in Europe since the 8th century. With the introduction of the Cadmium Reds manufacturers considered that they could offer these as cheaper alternatives, but I disagree. As the only colourman to make the genuine article, as opposed to the rather obvious approximations that are blends, I can say that its particularly tawny, even slightly fiery, deep red cannot be reproduced by these substitutes. As far as weight, colorific density and price go, it is in a class of its own, but if you wish to explore a deceptively mild range of deep warm mixes with earths, as well as some subtle high hues, then this is an expense worth bearing. Do bear in mind that Mercury compounds are not to be treated as a joke, particularly in circumstances where children could come into contact with them.





**Cadmium Red Deep.**

**PR108. Fast Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

The deepest of the Cadmium range, this red has distinct bluish undertones which become very salient in some very purplish hues.

**Scarlet Lake Deep.**

**PR 48.3 (but presently under review) Fast Drying. Transparent. Very Good Lightfastness. High Oil Content.**

This is an organic lake which has to be used thinly, or at least with regard to its very high oil content, which forms a slick surface when dry. A very fast drier, makes a great range of strawberry pinks, but I am presently researching a substitute which will upgrade its lightfastness, particularly when it is dispersed in hues.

**Alizarin Crimson.**

**PR 83. Slow Drying. Transparent. Good Lightfastness. High Oil Content.**

The oldest synthetic organic lake, introduced in 1868, and the only one of the coal-tar lake range to have survived in use until the present, the others having been found to be too impermanent for artistic use before the end of the 19th century. Itself a replacement for the somewhat unreliable organic Natural Madder (a dye made from a crushed plant root), Alizarin is frowned upon by certain Americans because its lightfastness (II-III on the ASTM scale), does not match that attained in the more recent organic pigments. But its clarity and subtly beautiful bluish undertones are unique, and, since its introduction, portraitists have greatly prized its range of cool, rather smoky hues, so well suited for rendering facial flesh. So I continue to make this paint, and since I do not let it down with any more powder than is necessary to stabilize the lake component, I can claim that its permanency has been optimized.

**Magenta.**

**PR 122. Average Drying. Transparent. Excellent Lightfastness. High Oil Content.**

Quinacridone Y, a very lightfast organic pigment, with strong bluish overtones which shine through if it is used as a glaze. When made into hues it presents a wonderful range of decadent, strong cool pinks which evoke rich satins. When added 50/50 to Ultramarine the results are a spectacular range of violets, which, when hued themselves, have an almost stain-glass quality. In mixes with yellow lakes the results are ranges of diaphanous, ambivalent pinks marvellous in certain flesh painting.





**Brilliant Pink.**

**PW4, PW6 & PR209. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

After tremendous harassment from customers, I blended this colour to satisfy their craving for a cheeky, fruity (dare one say girly?) luminous pink, which has intense presence notwithstanding the Zinc White constituent. Yes, I can confirm that women and colour-field painters love it, and some even use it in flesh passages. But I think it could well be characterized as “decorative”. The complementary vibrations it sets up with the greens, particularly Emerald Green, have to be witnessed to be believed. It forms a lean surface, and since the red is supplied by Quinacridone, a very permanent organic pigment, the undertones are bluish yet warm, which are disclosed in further hues and mixes.



## Violets

**Cobalt Violet Light.**

**PV14. Fast Drying. Semi-Opaque. Excellent Lightfastness. Average Oil Content.**

First made from the rare ore of Cobalt Phosphate in the mid-19th century, this is now a synthetic inorganic pigment, of which the lighter shade is closer to the original, natural version. It has a very delicate shade of violet which appears quite opaque in mass-tone, but which quickly becomes transparent when applied thinly, and when glazed over a white ground, gives a very interesting range of bluish pinks. The hues are equally restrained.



**Cobalt Violet Dark.**

**PV14. Fast Drying. Semi-Opaque. Excellent Lightfastness. Average Oil Content.**

This shade of Cobalt Phosphate was only obtainable when the natural ore was superseded by more refined processes of manufacture. It has a heavier, richer appearance than its lighter counterpart, but its comparatively weak tint power means that it will not unduly push mixes towards a deeper bluish result. Interesting effects when glazed over with yellow lake colours.





**Manganese Violet.**

**PV16. Average Drying. Semi-Opaque. Excellent Lightfastness. Average Oil Content.**

Manganese Ammonium Pyrophosphate, a heavy, bold Violet which was first made in Germany in 1868; one of the mid-19th century wave of synthetic inorganic metal salts which so changed the artist's palette. It has very mild reddish overtones which do not cut through mixes, and which some find useful when making reflex or shadowy greys. Its average tint power allows it to be added without greatly lowering the tonality of the result.



**Ultramarine Violet.**

**PV15. Average Drying. Transparent. Excellent Lightfastness. Average Oil Content.**

A variant of Ultramarine pigment, achieved when slightly altering the manufacture of the blue shade, Sodium Sulphosilicate, by heating it with Chloride. The result is a weaker, more violet pigment which has low tint power and a degree of transparency that lends itself to being exploited in glazes or thin bodycolour. In hues it becomes a high-keyed, rather fluffy mauve which landscapists have found apposite for the brighter tones of clear skies and for the modelling of sunlit clouds.



## Blues

**Prussian blue.**

**PB27. Very Fast Drying. Transparent. Very Good Lightfastness. High Oil Content.**

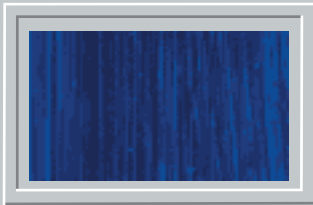
Ferri-ammonium Ferrocyanide, discovered in Berlin in 1704 and introduced through the early 18th century, was one of the first synthetic inorganic pigments and also one of the most controversial. The earlier and less purified versions had a mixed reputation; they were said to fade in hues, or even to migrate or leech through succeeding paint layers. But modern standards of washing have dispensed with the tendency to fade, and the migratory properties ascribed to this colour are no longer reported: I suspect that this was the result of poor stabilizing. At any rate, Prussian Blue, like Alizarin, is one of those colours some painters find essential. Its inky depth when unmixed is belied by a range of uniquely intense blues resulting from hues, particularly with Zinc White. On its own and in more concentrated mixes it exhibits a slight bronzy sheen which can be used almost like a complementary glaze. Its tint power is frightening, beginners beware!



**Phthalocyanine Blue Lake.**

**PB15.3 Fast Drying. Transparent. Excellent Lightfastness. High Oil Content.**

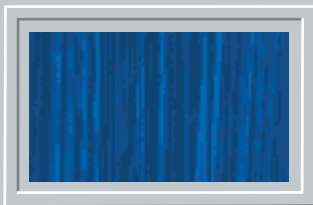
A Chlorinated Copper invented in 1935, this was one of the first synthetic organic pigments to be accepted as reliably permanent. It is sometimes seen as a modern replacement for Prussian blue, but its unmixed colour is slightly more cyan, and in hues it exhibits a unique range of throbbing, intense, greenish blues which are quite distinct from the latter. Having the most powerful tint power of any colour in my range, this paint will blow any mix apart; if you wish to avoid doing so, add it in tiny quantities and with caution! Its ferrous content makes it a great drier, and like Prussian Blue it shows a tendency to bronze on drying.



**Ultramarine Blue.**

**PB29 Fast Drying. Transparent. Excellent Lightfastness. Average Oil Content.**

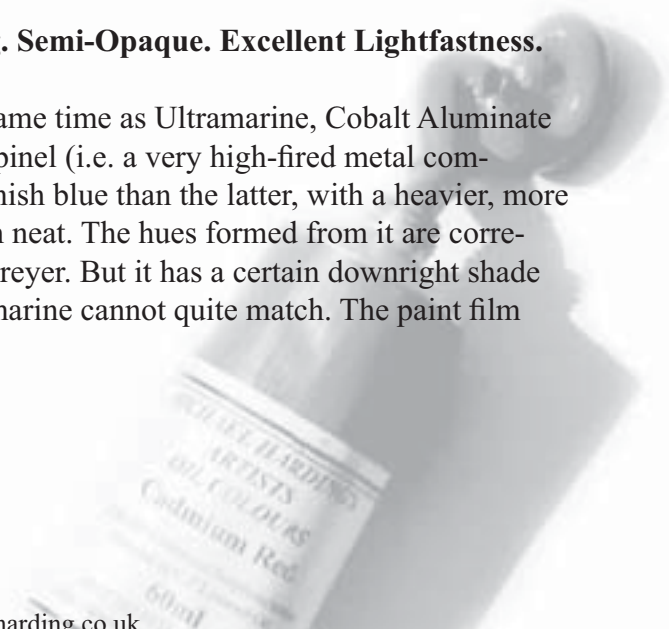
An obviously beautiful mid blue. The discovery in the 1820's, of a Sodium Sulphosilicate compound, which had appeared as a mysterious blue deposit on soda-ash furnaces, was a liberating moment for financially challenged artists everywhere. Up to then the only available version of this compound was the often unobtainable Lapis Lazuli ore, mined in Persia and China, a pigment so horrendously expensive that it was frequently included as part of an artist's commission fee. Ultramarine has a high tint power which produces strong reddish blue hues, and makes wonderful violets with Magenta and the Red Lake colours. It is useful in greens and greys. The only chemical weakness is a recorded sensitivity to atmospherically borne acids, which can bleach it out. One of the more difficult paints to make, as it forms an intractable runny syrup when first ground into oil, which has to be stabilized with filler.

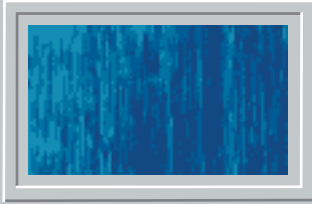


**Cobalt Blue.**

**PB28. Very Fast Drying. Semi-Opaque. Excellent Lightfastness. Average Oil Content.**

Introduced at about the same time as Ultramarine, Cobalt Aluminate is a synthetic inorganic spinel (i.e. a very high-fired metal compound). It is a more greenish blue than the latter, with a heavier, more mineral appearance when neat. The hues formed from it are correspondingly heavier and greyer. But it has a certain downright shade which the cheaper Ultramarine cannot quite match. The paint film when dry is quite soft.

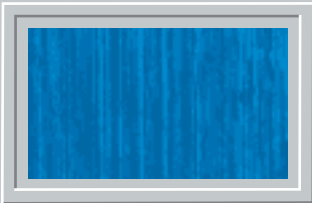




**Cerulean Blue.**

**PB36. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

Cobaltous Stannate was introduced in 1870 under the name “Coeruleum”, i.e sky-blue, in imitation of a Roman pigment of that name. It is a subtle greyish turquoise which some discerning painters value for its rather mild hues, apposite for landscape and seascape.



**Phthalocyanine Blue and Zinc White.**

**PB15.3 & PW4. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

I devised this blend as a replacement for Manganese Blue, a compound introduced in the 1950's but now no longer manufactured. This is far more intense than Manganese, with a vivid, almost luminous appearance, which recalls the rich Lapis skies of Veronese and other Venetian painters. The phenomenal tint power of the Phthalo component means that it can be hued much more, with little loss of brightness. A mixture of organic and inorganic pigments, it demonstrates just what can be attained with modern pigment strengths.



**Phthalocyanine Turquoise.**

**PB 15.3 & PG7 & PW4 & PW6. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

Another blend to supplement the sea-green range, this is a powerful mixer which discloses airy undertones when hued further, and which landscapists find indispensable. The addition of Titanium White and Phthalocyanine Green to the blue hue give it very strong covering power which holds out over large areas of application.



**Kings Blue Light.**

**PB29 & PW4 & PW6. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

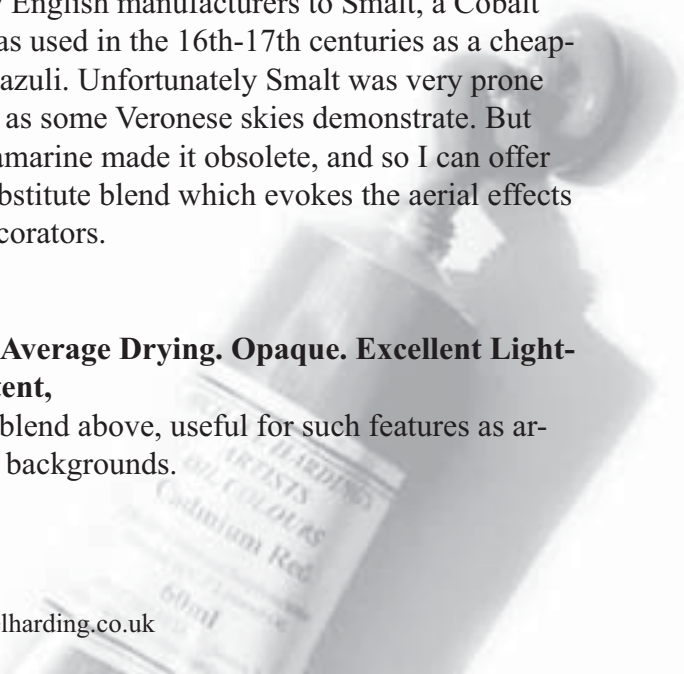
This name was given by English manufacturers to Smalt, a Cobalt based pigment which was used in the 16th-17th centuries as a cheaper alternative to Lapis Lazuli. Unfortunately Smalt was very prone to fade into a light grey, as some Veronese skies demonstrate. But the introduction of Ultramarine made it obsolete, and so I can offer a completely reliable substitute blend which evokes the aerial effects of the great Venetian decorators.

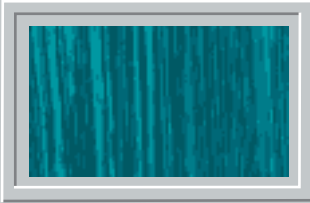


**Kings Blue Deep.**

**PB29 & PW4 & PW6. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content,**

A deeper version of the blend above, useful for such features as architectural modelling in backgrounds.



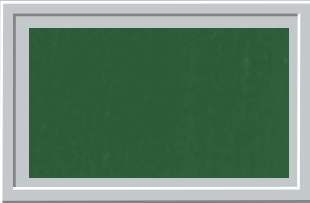


**Cobalt Turquoise Deep.**

**PG19. Fast Drying. Semi-Opaque. Excellent Lightfastness. Low Oil Content.**

A heavy, dense blue-green, with low tint power, introduced, with so many inorganic metallic pigments, 1830-40. It is a compound of Cobalt and Zinc Oxides, with grey-blue undertones which do not overturn mixes and form interesting effects when combined with the Yellow Lakes.

## Greens



**Oxide of Chromium.**

**PG17. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

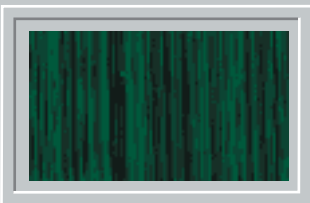
Another mid-19th century metallic oxide, with covering power but not much tinting strength. It is a heavy, vegetable green which can be surprisingly enlivened by adding yellows. Landscapists find that its range in mixes and hues makes it a staple green. It acts very well as a complementary to active red hues.



**Terre Verte.**

**PG23. Fast Drying. Transparent. Excellent Drying. Average Oil Content.**

Green Earth, a complex of Ferrous Silicates in Aluminium and Magnesium clays, is one of the few naturally-occurring inorganic pigments still to be offered by colourmen. It has a very soft texture with very low tint power, beloved of portraitists who use it as a glaze over Alizarin Crimson hues. Some makers add other pigments in order to give it a spuriously enhanced tint power which annuls these qualities. I do not.



**Phthalocyanine Green Lake.**

**PG7. Fast Drying. Transparent. Excellent Lightfastness. High Oil Content.**

Polychloro Copper Phthalocyanine probably ties with Phthalo Blue as the strongest pigment in the range. Atomic tint power, add it with great care! Ferocious acidic blue-green hues and blue undertones which come to prominence in mixes with yellows. In common with the Blue it displays, on drying and when used virtually unmixed, a certain tendency to show surface bronzing.



**Phthalocyanine Green Yellow Shade.**

**PG36. Fast Drying. Transparent. Excellent Lightfastness. High Oil Content.**

A variant of the Phthalo Green compound with a greater range of gingery yellow undertones which are immediately apparent in hues. This is due to increased numbers of Chlorine and Bromine atoms. The tint power is less than that of straight Phthalo Green but the range of clean, beautiful, pine greens obtainable from it is quite unique.



**Viridian.**

**PG18. Very Fast Drying. Semi-Opaque. Excellent Lightfastness. High Oil Content.**

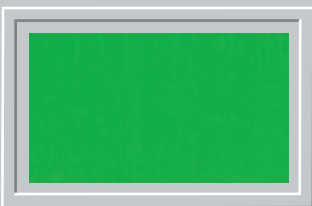
As one of the fastest driers in the range this hydrated variant of Chromium Hydroxide, introduced in the mid 19th century, is a valued support colour used for influencing greys in underpainting. The vivid blue undertones apparent in thin layers are soon eclipsed in thicker applications. Landscapists and some portraitists still prefer it to the more brutal power of the Phthalo Greens. When combined with reds an interesting range of blue-greys results.



**Cobalt Green Deep.**

**PG50. Average Drying. Semi-Opaque. Excellent Lightfastness. Average Oil Content.**

A Cobalt Titanate compound made into a spinel by being cooked at high temperature. An unintensified blue green which nevertheless is valuable in influencing low hues and blacks. Little tint power in higher keyed mixes, but described to me by one artist as the one colour that captures the foliage of English landscape.



**Bright Green Lake.**

**PY3 & PG7. Average Drying. Transparent. Very Good Lightfastness. High Oil Content.**

I made this blend of the organic pigments Arylide Yellow and Phthalo Green to fill the gap previously occupied by the Lead Chromate Greens, long discontinued by manufacturers because of their tendencies to darken or react with other paints. This paint differs from them not only in being a permanent Lake, but also in sheer power. A fruity, shouty, tropical green with exotic undertones, it almost fluoresces on its own, and cuts right into mixes to reveal light sappy yellows.





**Permanent Green Light.**

**PY3 & PG36 & PW4 & PW6. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

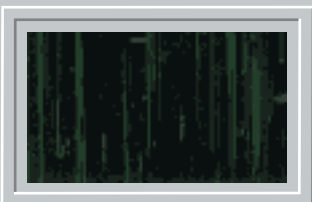
Permanent or “Victoria” Green was the generic name given by 19th century English Manufacturers to a mid green, slightly bluish in undertones, made from a variety of blends. My own recipe combines Arylide Yellow and Yellow Shade Phthalo Green to give a very rich, earthy hue in Zinc and Titanium Whites. Much stronger than Terre Verte, it sometimes fulfils the same role in providing reflex tones for portraiture and figure painting.



**Emerald Green.**

**PY3 & PG7 & PW4 & PW6. Average Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

Another blend of organic lake colours ( Arylide yellow and Phthalo Green) with the two whites to give a safe and permanent substitute for the original Emerald Green, the notorious Copper Aceto-Arsenite, a brilliant green introduced circa 1810 and long since abandoned as being impermanent, highly reactive with other pigments and highly poisonous! My blend has none of these disadvantages. Some artists detest this uniquely strident colour, others love its acerbic tang, which invites an almost Fauve series of related mixes.



**Permanent Sap Green.**

**PG7 & PBr7. Fast Drying. Semi-Opaque. Excellent Lightfastness. High Oil Content.**

Sap Green is a generic name for a rich deep green. Colourmen successively changed its composition through a variety of natural organic lakes, often unstable. Some years ago I made use of Hooker’s Green, an organic synthetic pigment, before I replaced it, for the sake of greater permanence, with this blend of Phthalo Green and Burnt Umber. This green has an exceptionally rich, earthy, mossy range of yellow undertones which suggest all kinds of vegetation and undergrowth.



**Unbleached Titanium Dioxide.**

**PW6.1. Fast Drying. Opaque. Excellent Lightfastness. Low Oil Content.**

Before Titanium Dioxide is refined to make it white it contains a measure of Iron Oxide, which gives it a subtle linen or limewash pinky-brown shade. As well as making it a good drier, such a presence makes this paint an ideal ground or underpainting colour, with good texture and a lean surface. Some painters use it as a mixing agent in flesh painting.

## Earths and Antinomics





**Genuine Naples Yellow Light.**

**PY41. Very Fast Drying. Opaque. Excellent Lightfastness. Very Low Oil Content. TOXIC.**

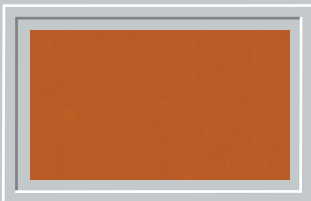
Lead Antinomite, in natural versions, seems to have been used as a pigment since the 5th century B.C, and has been manufactured since the 1400's, being one of the most relied-upon colours, and in constant demand. I am now the only colourman left making the genuine article, as opposed to the unsatisfactory blends which have been offered as substitutes. I continue to do so because its vivid, dense, almost primrose yellow cannot be mimicked, as portraitists and figure painters will attest. It is more powerful and yet more muted than its equivalents among the Cadmium range. Its handling characteristics are incomparable. Because it tends to react with steel rollers, to this day it is still ground with stone.



**Genuine Naples Yellow Dark.**

**PY41. Very Fast Drying. Opaque. Excellent Lightfastness. Very Low Oil Content. TOXIC.**

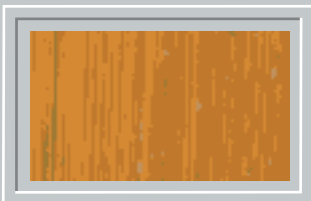
This is a darker counterpart of the two Lead Antinomiates, which is closer to the shade offered by makers in more recent times, before all of them except me decided to replace the genuine pigment with not very accurate substitute blends. A classic shade, good for low flesh undertones.



**Yellow Ochre Deep.**

**PY42. Very Fast Drying. Transparent. Excellent Lightfastness. Average Oil Content.**

A synthetic Iron Oxide in a beautifully rich shade, with very dense warm undertones. A good modelling pigment, which works well into yellow and red highlights.



**Yellow Ochre.**

**PY42. Very Fast Drying. Opaque. Excellent Lightfastness. Average Oil Content.**

A higher-keyed and more greeny-gold shade of manufactured Iron Oxide. It hues well to yield mustardy yellows quite close to Genuine Naples Yellow Dark.



**Naples Yellow.**

**PBr24. Fast Drying. Semi-Opaque. Excellent Lightfastness. Low Oil Content.**

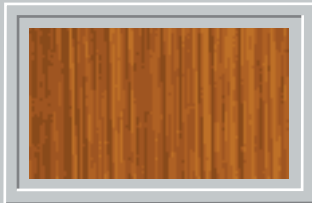
This is Titanium Antimony Chromiumoxide, a synthetic inorganic compound which I used to make a good mid-range substitute Naples Yellow whilst I was seeking out a source of genuine Lead Antinomite. Now that I have one, it seems that many artists wish me to retain this beautifully golden paint which makes bronze-like hues and works very well with the low Earths.



**Transparent Oxide Yellow.**

**PY42. Very Fast Drying. Transparent. Excellent Lightfastness. Average Oil Content.**

This Iron Oxide has been used as a wood dye, and I realized that its capacity to enrich the grain of hardwood made it a wonderful candidate for paintmaking. It has great warmth with gingery undertones quite different to those seen in the Indian Yellows. Because the pigment particles are very small, it could almost be mistaken for a lake. It has huge tint power which pulls whites and other yellows into a golden, rich Titianesque zone of warm low tones. Try it with Aureolin and the Earths.



**Raw Sienna.**

**PBr 7. Very Fast Drying. Semi-Opaque. Excellent Lightfastness. Average Oil Content.**

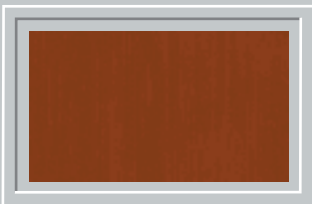
Used as a ground tone and for underpainting since the 17th century, this is one of the indispensable Earth Iron Oxides, and apart from Terre Verte, the only naturally occurring clay I still source for my paints. As the name suggests, the best grades come from central Italy, where I derive my own supply.



**Raw Umber.**

**PBr 7. Very Fast Drying. Transparent. Excellent Lightfastness. Average Oil Content.**

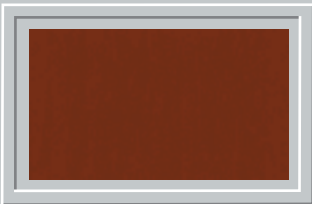
One of the fundamental Earths used as an Imprimatura pigment to draught out compositions on a Raw Sienna ground, as many Rubens sketches evidence. Depending on the degree of transparency, it can exhibit red or greenish undertones.



**Venetian Red.**

**PR 101. Very Fast Drying. Semi-Opaque. Excellent Lightfastness. Average Oil content.**

Formerly a natural Iron Oxide, this is now manufactured to greater standards of purity. A heavy red, which yields fruity fleshy hues, and makes tones of great sonority when mixed with the Yellow Lakes.



**Indian Red.**

**PR 101. Very Fast Drying. Semi-Opaque. Excellent Lightfastness. Average Oil Content.**

A deeper and cooler shade of synthetic Iron Oxide with great colorific density and which makes hues with conspicuously purplish undertones, and which some painters value for rendering flesh tones in interior light.



**Transparent Oxide Red.**

**PR 101. Very Fast Drying. Transparent. Excellent Lightfastness. Average Oil Content.**

An Iron Oxide manufactured to such small pigment particle size that it shows, like its Yellow counterpart, almost lake-like characteristics. Terrific tint power which produces wonderful results in mixes with yellows, and which can give gravity to mid-red tones.



**Red Umber.**

**PBr 7. Very Fast Drying. Transparent. Excellent lightfastness. Average oil Content.**

I decided to make this variant shade of Burnt Umber as a result of my observations of 16th-17th painting, which suggested that this pigment had lighter and redder characteristics than those it assumed when manufacture in bladders, and then tubes, began a century later. Raw Umber is calcined to make this pigment, and the extent of Manganese Dioxide mixed with the Iron Oxide determines the range of undertones; here much warmer than is usual.



**Burnt Sienna.**

**PBr 7. Very Fast Drying. Semi-Opaque. Excellent Lightfastness. Average Oil Content.**

One of the calcined Iron Oxide Earths, of such antiquity and usefulness it barely needs an introduction. It makes rich but subdued pinks, which reveal how transparent and warm are its undertones. Its tint power is noticeably stronger than the more opaque Earths.



**Burnt Umber.**

**PBr 7. Very Fast Drying. Transparent. Excellent Lightfastness. Average Oil Content.**

A version of Burnt Umber which has heavier and more greenish undertones than the Red variant. This is the colour in its presentation of the last two centuries, invaluable for underpainting and showing a range of sandy pinks in hues.



## Blacks

**Paynes Grey.**

**PBk 9 & PB 29 & PY 42. Average Drying. Semi-Opaque. Excellent Lightfastness. High Oil Content.**

A blend of Ivory Black, Ultramarine and Iron Oxide Yellow, which gives a markedly cool black substitute. The blue undertones are similar to but much milder than those of Prussian Blue. Some painters prefer this blend for its restrained tint power, and use it in cool reflex tones in flesh painting.



**Lamp Black.**

**PBk 6. Average drying. Opaque. Excellent Lightfastness. High Oil Content.**

So named because it was originally derived from the soot of oil lamps, this is pure Carbon, and probably the first pigment our ancestors ever used to decorate their caves. A soft, slightly warm shade of black whose lean surface gives it a greyish aspect. Probably not the best choice for unmixed underpainting on account of its tendency to move whilst drying, but this can be remedied with the addition of good drying Earths.



**Ivory Black.**

**PBk 9. Average Drying. Semi-Opaque. Excellent Lightfastness. High oil Content.**

An impure amorphous Carbon in Calcium Phosphate, Ivory Black is no longer made from burning ivory scraps, but from charred animal bones. It is denser in shade and cooler than Lamp Black with stronger tint power. The most frequently used black in the range.

