

WINSOR & NEWTON™

DESIGNERS GOUACHE



By Appointment to
HRH The Prince of Wales
Manufacturers of Artists' Materials
Winsor & Newton
London



Opaque Water Colour

English

Winsor & Newton™ have been producing Designers Gouache since 1935 and to this day we continue to offer the finest artists' gouache range available, using the highest quality materials and our unique expertise.

History of Gouache

Gouache is actually both a technique and a product.

The technique, dating to before the Renaissance, refers to the use of white to achieve opacity in water based colours. Originally used for illuminating manuscripts, it was Paul Sandby in the 18th century who first used the painting technique extensively and later the Pre-Raphaelites. Opaque techniques were further popularised by the Impressionists and Post-Impressionists, in their use of pastel, lithography and wood cuts.

Gouache, the product, was a result of this interest in both opaque and water based products. Poster colour appeared after the First World War and this was significantly improved upon by **Winsor & Newton**, with the introduction of Designers' Opaque Water Colour in the 1930's.



Introduction

Designers Gouache colours are a range of opaque water colours, so called because they were developed for and continue to be used by designers, illustrators and commercial artists to create crisp vibrant visuals and illustrations in solid colour. However, gouache is also widely used in fine art as an opaque water colour, or in combination with Artists' Water Colour. It is also used widely by colleges to teach the theory of colour mixing.

First introduced by **Winsor & Newton** in 1935 as 'Designers' Opaque Water Colour'; the range rapidly achieved the standard of reputation common to **Winsor & Newton** and more than 70 years later is accepted as the finest quality Designers Gouache on the market.

Today the Designers Gouache range benefits from significant developments in technology, manufacturing methods and the availability of the finest grade pigments to enable us to produce the widest and most lightfast palette available. The range contains both pure single pigment colours for the brightest, strongest mixes as well as accurate premixed colours as we also recognise that convenience is required at times. In addition gouache includes some uniquely bright colours because sometimes brilliance of colour is more important than anything else – all of this plus improved working properties. The range today is also smoother, flatter, more opaque and stronger than ever before.



1930's



1977

1986

2007

Why use Gouache?

Gouache is a very versatile paint which can transcend the boundaries of many mediums. It can make a wash like a water colour, blend like an oil colour and dry brush like acrylic.

It can be used thinly for a wash at the start of a painting then applied in thicker layers towards the end. Due to its opaque nature it can be applied in solid colours, allowing you to paint in layers from dark to light.

It is a direct and quick drying paint with superb covering power which is achieved by the high levels of pigmentation (not by the use of fillers or opacifiers). Unlike transparent water colour, where you need to plan and reserve the white of the paper, gouache is more controllable and enables you to remove mistakes and re-paint.

Who uses it?

- **Designers** – its ease of use, brilliance, quick drying and matt finish make it the most popular designers' and illustrators' colour. The opaque matt finish makes for more accurate reproduction at artwork stage as it minimises reflections.
- **Fine artists** – use it in conjunction with water colour or on its own as opaque water colour. Its brilliance and opacity give it solidity, excellent for abstract work and extra details. Strong effects also result from the contrast of working on coloured backgrounds which are left partly exposed.



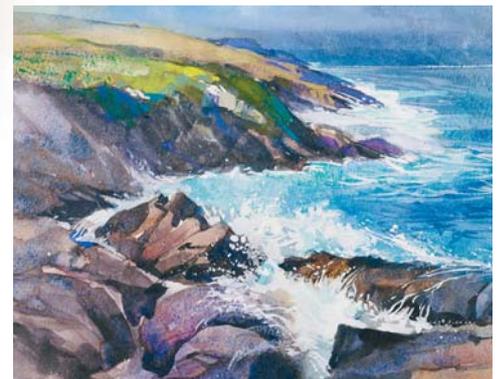
Mark Jessett painting with Designers Gouache



Illustration with lettering



Gouache on coloured grounds

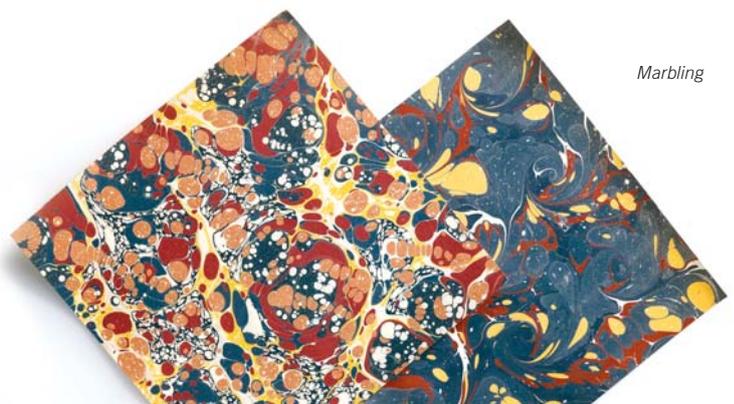


Opaque white creates dramatic foam in seascapes

- **Calligraphers** – gouache is used by calligraphers because of its excellent flow, opacity and permanence.
- **Marblers** – the high pigmentation and gum arabic base make it a common choice with professional marblers.



Calligraphy



Marbling

Product Range

Designers Gouache has recently benefited from a wide ranging review in our research and development laboratory. It has been updated and now offers a wide and balanced spectrum of 85 colours. Each colour has been specially formulated to offer the greatest choice and flexibility, ensuring that all users/artists can choose the best palette to suit their work.

The range of 85 colours includes 17 new exciting bold colours, including 3 cadmiums and 2 ultra bright Operas (see Technical section for full details). We have also modified 26 colours improving their brilliance, permanence ratings and mixing abilities. The remaining 42 colours are unchanged – proving they cannot be bettered. There are 26 discontinued colours (please see technical section).

All colours are available in 14ml tubes (except Bleedproof White, Process White & Photo Opaque); a selected number of whites, blacks and metallics are available in 30ml, 60ml and 100ml pots and 37ml tubes. There is also a selection of box sets available, which are a perfect introduction to gouache. (See colour chart for product sizes available).



Characteristics & Benefits

Raw materials

Choosing the raw materials for the Designers Gouache range requires years of knowledge and expertise from our chemists. We select materials from thousands of sources across the globe to ensure that we have the highest quality to make the most superior formulations. Once accepted as a **Winsor & Newton** ingredient, each raw material is subjected to scrupulous quality control checks at the time of delivery to ensure that it meets with our high standards before the manufacturing process begins.

Formulation

Good quality gouache colour is a combination of pigment and gum arabic. Gum arabic is the binder that holds the pigment, giving it that perfect creamy 'flowing' consistency. (NB some brands may have chalk added to the pigment to improve the opacity by a much cheaper method which in turn affects the flow and the brilliance of colour).

Every colour within the range has an individual formulation to take advantage of each and every pigment characteristic and ensure tube stability.

Pigments

Pigments are sourced from many different places, some are natural products - notably the earths (umbers, ochre's etc); some are from metal compounds and are often referred to as 'traditional' or 'genuine' (cadmiums, cobalts, titanium) and there is an ever growing range of organic pigments available as a result of the distillation of petroleum: these are often termed 'modern'. In total there are 64 different pigments used in the Designers Gouache range.

Within the Designers Gouache range there are 34 single pigment colours in order to provide the widest handling properties and maintain clean mixing. We always try to use single pigments wherever possible as they are purer in hue and cleaner in colour than mixtures of pigments. This provides a larger number of clean, vibrant colour mixes before resulting in muddy colours, which is a major benefit to artists.

In addition to the single pigment colours there are 51 colours that are produced using carefully selected mixtures of pigments. These are equally important as we understand that it is difficult and time consuming for an artist to consistently mix some colours by hand. By **Winsor & Newton** mixing these colours in the manufacturing process the artist is saving time and colour otherwise wasted on incorrect mixing. We therefore provide these mixed colours to ensure the widest spectrum, without compromising brilliance and opacity.

Pigment strength

It is widely misunderstood that gouache is opaque as a result of adding chalk or other such materials. The **Winsor & Newton** Designers Gouache range is opaque due to the exceptionally high levels of pigmentation in the formulation, which results in unsurpassed covering power and clean colour mixing. As a result of the range review many colours now also have increased pigment strength.

Spectrum/Colour Range

One of the main reasons artists choose

Winsor & Newton is our colour spectrum.

The Designers Gouache range offers a wide and balanced spectrum of 82 tube colours (3 additional colours in pots only). These colours have been chosen according to mass tone (colour from tube), colour bias (undertone), colour strength and relative opacity. The range includes bright colours for designers and more lightfast ones for fine artists. The resultant colour range ensures that all artists can obtain the palette which best suits their work, and also that all colours can be safely intermixed.

We have now introduced a number of super bright new colours, such as the Opera Pink and Opera Rose.

Opacity

All the Designers Gouache colours are more opaque than Artists' Water Colours. However, the degree to which they cover does vary. The relative opacity of the colours is marked on the colour chart.

Bleeding/Staining Colours

When overpainting in layers, the relative 'staining' (bleeding) properties of the colours are also indicated on the colour chart. (see also Layering Colour in Hints and Tips)

Series

Due to the wide range of pigments used in the range it is necessary to use a series system. The series indicates the relative price of the colour and is determined mainly by the cost of the pigment. Designers Gouache has four series with Series 1 being the least expensive and Series 4 the most expensive.

Permanence

Designers Gouache has the same ratings as the other **Winsor & Newton** artists' quality ranges. AA and A rated colours are recommended as permanent for fine artists, guaranteeing that work created using these colours will last for centuries. Some of the brighter colours within the range are only available as B or C rated. This is because in certain areas of the spectrum, particularly magenta, pigments are not available to achieve permanence as well as brightness and opacity. As a commercial designer's original art work is unlikely to be required after reproduction, brightness takes priority. However, we strive to deliver the best possible lightfastness we can and have recently been able to improve many of our colours to A ratings. (See also Technical Section)



Using Designers Gouache - Hints and Tips

Surfaces and Grounds

For fine art painting, acid free water colour papers (either white or tinted) are recommended to accommodate the widest variety of techniques and ensure long term stability.

Designers and illustrators often choose illustration board or hot pressed water colour paper, both of which have a flat finish which reproduces well.

Textured paper, coloured paper or mount board may also be used to achieve different finishes; it is recommended that heavier weights are used to give a more stable surface for the paint, especially if a number of layers will be applied.

Layering Colour

Designers Gouache is intended to be applied fairly thickly in comparison to water colour. If diluted with too much water it may 'powder off' the surface when dry. If applied in too many thick layers it may have a tendency to crack, due to the under layers absorbing water and Gum Arabic from the newly applied paint; this only becoming apparent when dry. We would advise that fewer layers are definitely best when working with gouache. (see also "Thick Colour/Adding Texture" in Mediums Section).

Gum Arabic can be added to Designers Gouache when painting in layers to reduce cracking. Gum Arabic should also be added to the colour when airbrushing to ensure that the colour is not over thinned. However, the addition of Gum Arabic should be kept to a minimum as it increases brilliancy, gloss and transparency if used in large quantities.

When using a lighter colour over a darker colour, ensure that the lighter colour has a high opacity rating. Avoid over painting colours which are rated as 'bleeding' on the colour chart. If you need to overpaint such colours, use Bleedproof White as an in between layer. (see also under Whites).



Mediums

Designers Gouache can be used with water and mediums or water alone. Through the use of various mediums the creative potential of Designers Gouache can be enhanced and extended even further. Mediums are additives which alter or enhance the characteristics of the colour. They are used to change the rate of drying, increase gloss, improve flow, provide texture etc.

Thick Colour/Adding Texture

If you want to apply colours more thickly try using Winsor & Newton Aquapasto, a semi transparent gel medium which allows you to build up relatively thicker layers without fear of cracking or flaking when dry. Aquapasto also helps the colour go further and increases its transparency. For increased texture use Texture Medium which contains fine particles and can be used to give the impression of depth and structure to paintings, it is ideal for emphasising areas such as sandy beaches or the bark of a tree in figurative paintings.

Improving Flow

Water Colour Medium has the same characteristics as Gum Arabic, but also increases the wetting of the paper which will improve the flow of washes across the surface. (Caution: Water Colour Medium should not be used with acid sensitive colours - those containing Ultramarine.)

Alternatively Ox Gall liquid is a wetting agent and can be used to improve flow when mixed directly with Designers Gouache.

Slow Drying

Blending Medium is used to slow the drying rate of Designers Gouache allowing you more time for blending. It is particularly useful in hot climates where artists would like their colours to stay open and workable for longer periods of time.

Lifting Colour – making corrections

Lifting Preparation allows dry washes, including staining colours, to be more easily lifted from paper with a wet brush or sponge. It is an ideal preparation with which beginners can prime the paper allowing corrections to be made more easily to their painting.

Resistance to water

Acrylic Matt Medium can be used to achieve water resistance – however care should be taken with the amount used as some colours can react and change colour or consistency. The addition of matt medium will also deepen the tone and reduce the matt finish – so always try a small area first.

Using Designers Gouache in conjunction with other water based media

Designers Gouache, Artists' Water Colour and Cotman Water Colour can be fully intermixed. Although Designers Gouache can be mixed with Artists' Acrylic and Galeria, care should be taken as some colours can react. The pinks and violets in Designers Gouache can have a tendency to change colour on combination with acrylic. Some other Designers Gouache colours may also be sensitive to alkali and produce gelatinous or lumpy mixtures. All combinations should be tested on the palette prior to use.

Varnishing/Finishing

Gouache paintings are best left unvarnished as the depth, darkness and finish of the work can be drastically affected by varnishing (which would not be removable). As they are most often painted on paper they should be framed behind glass due to the vulnerability of the paper.

Brushes

A variety of brushes are suitable for use with Designers Gouache, depending on the technique used and the finish required. Sable brushes are ideal, due to their excellent colour carrying capacity, ability to point and to spring back into shape. These characteristics allow the artist to work faster and more accurately. Ranges such as Artists' Water Colour Sable with its Pointed Round brush are recommended for long, fine strokes.

Sceptre Gold II (sable/synthetic blend) and Cotman (synthetic) ranges offer lower priced alternatives to pure kolinsky sable.

Bristle brushes such as hogs are also useful if more expressive brush marks are desired.

Mixing Surfaces/Palettes

The recommended palette surface for mixing Designers Gouache is porcelain. There are a variety of shapes and sizes available, some include dividers to prevent colours mixing on the palette by accident.

Palettes made of other materials such as plastic or metal are available however these are not as good as "cissing" of the colour can occur – which is when the colour beads together.

Recommended Colour Palette

Basic palette

Your initial palette should provide a wide colour spectrum and should have a good balance between strong tinting and weaker tinting colours. The common practice is to maintain a broad palette of about twelve colours and add to it for specific requirements. We recommend the following as a basic colour palette.

Lemon Yellow, Permanent Yellow Deep, Flame Red, Cadmium Red, Alizarin Crimson, Phthalo Blue, Ultramarine, Winsor Green, Burnt Umber, Yellow Ochre, Burnt Sienna, Permanent White.

There are a selection of whites, blacks & metallics available depending upon your needs:

The Whites

- Permanent White is the most popular white in the range. It is the strongest and most opaque white. Permanent White has been modified so that it can now be used for mixing.
- Zinc White has a lower tinting strength and is therefore sometimes preferred for colour mixing, as it produces subtler tints and shades.
- Bleedproof White is used by designers to prevent under-layers from bleeding through. This is a temporary solution and is not appropriate for fine art use as bleeding will occur eventually. (only available in 30ml pots)
- Process White is designed for use in photographic retouching, where it will reproduce its true value. (only available in 30ml pots)

The Blacks

- Ivory Black is less opaque with lower tinting strength and makes brown (warm) greys and sepia tones when mixed with white.
- Jet Black is a rich, deep, opaque black which makes blue greys when mixed with white.
- Lamp Black is a less opaque black of lower tinting strength, giving paler, blue (cool) greys when mixed with white.

Metallics

Gold and Silver are available in 14ml tubes and 30ml pots within the Designers Gouache range, however the formulations differ slightly. The gold and silver formulations used in the pots are metallic based, whereas the tube formulations use mica based pigments which have a metallic sheen but contain no metal. The pot colour is a little more fluid and generally stronger and more opaque. The tube colours will not tarnish.

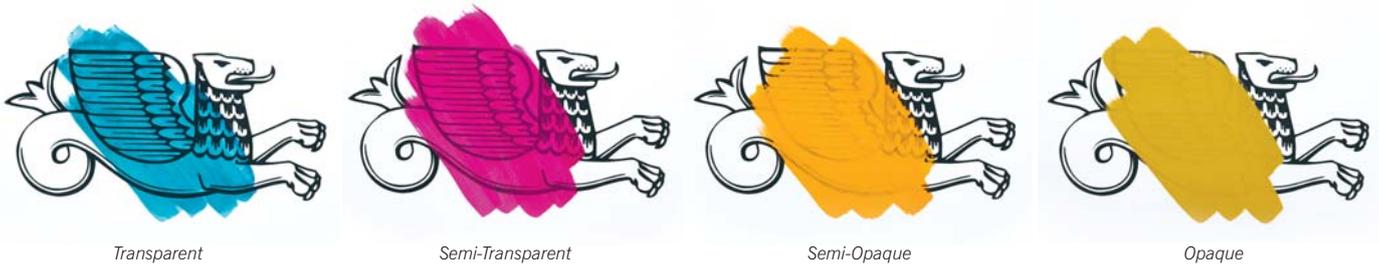
Photographic Opaque

Photographic Opaque is used on negatives for spotting pinholes or to block out backgrounds, so that when the negative is processed these will not appear in the final photograph. (60ml pots only – Not available in the USA).

Handling Properties

Covering power

The covering power of the **Winsor & Newton** Designers Gouache colour range is unsurpassed due to its high pigment content. The natural attribute of each of the pigments will also add to the level of opacity.



Brilliance of Colour

The brilliance of colour achieved with Designers Gouache is stunning; every colour is bold and vibrant as a result of the meticulous work that goes in to selecting the pigment, the pigment quality and the concentration of pigment in the colour.

Even Flow

Designers Gouache is renowned for its smooth even flow; it glides across the surface resulting in a flat, non-streaky finish. (see Layering Colour in Hints and Tips Section)

Matt Finish

As a result of the high level of pigmentation **Winsor & Newton** Designers Gouache dries to a matt finish. This reduces reflection when photographing the designers work.

Drying Time

One of the natural attributes of gum arabic - the binder used in Designers Gouache - is that it is quick drying. This faster drying allows quick working techniques and preliminary sketching to be done. Also as with water colour, work can be finished quickly and as a result travelling with work is much easier.



Colour Mixing

The objective of colour mixing in painting is to create the largest number of options from the minimum number of colours and to be able to mix the colour you want. The ability to succeed depends initially on the quality of the colour. **Winsor & Newton** was founded in 1832 by an artist and chemist determined to improve the range of colours available to painters and provide colours of greater permanence.

Serving these aims decade after decade requires the understanding and application of colour theory by **Winsor & Newton** to their ranges.

Basic Colour Theory (subtractive colour mixing)

For reasons of simplicity, we are taught when young that the three primary colours - red, blue and yellow are all that are required for colour mixing. In fact, in pigment form every colour has both a masstone and an undertone which is different to the next colour.

Looking at Illustration 1 below for example, a blue pigment will have either a red undertone or a green undertone in comparison to another blue pigment. Ultramarine is a red shade blue whilst Prussian Blue is a green shade blue.

The undertone or bias of each colour however, is relative to the next one. For example, Winsor Blue is a red shade in comparison to Phthalo Blue, but both would be classed as green shade blues. The colour bias is often most easily seen in a tint (as shown right).

So, red, blue and yellow alone are not the whole story and in fact six colours provide a wider base for colour mixing: a red with a yellow bias, a red with a blue bias, a blue with a green bias, a blue with a red bias, a yellow with a red bias and a yellow with a green bias.



Phthalo Blue

Winsor Blue

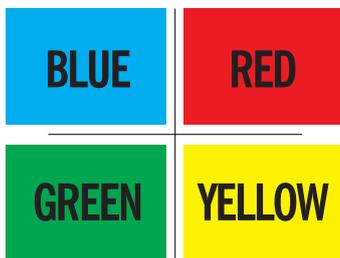
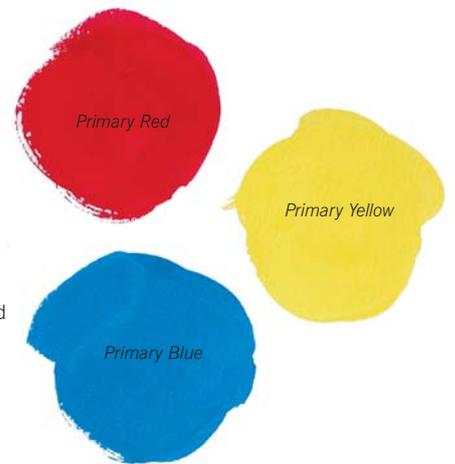


Illustration 1

Applying this in Practice

The true nature of each colour are best seen on the Designers Gouache Hand Painted Colour Charts produced by **Winsor & Newton**. Printed tint cards can only indicate colours as closely as is possible within the limitations of the printing process.

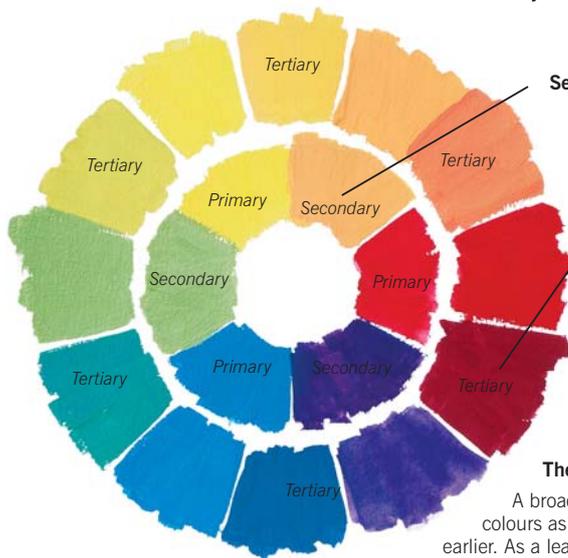
So, in practice: if an artist wants to mix green; blue and yellow are used. Looking at Illustration 1, the greenest or cleanest green is made by using a green shade blue and a green shade yellow.



Three Primary Colours

Of course, the use of three primary colours alone remains a good learning exercise. In this case, it is necessary to choose the red, blue and yellow which are the purest, e.g. the red which is as mid way as possible between a blue shade and yellow shade. This ensures the cleanest violets and the cleanest oranges when using only one red.

The three primary colours recommended for Designers Gouache are: **Primary Yellow, Primary Blue and Primary Red.**



Secondary Colours – if any two primary colours are mixed together, the result is a secondary colour.

Tertiary Colours – are the mixtures made from a primary and its secondary in the colour wheel.

NB. Complimentary colours – are those that lie opposite each other on the colour wheel. If you place complimentary colours next to each other in painting, it has the effect of making each one appear more intense. If you mix them together you will achieve deep, dense darks.

The Six Colour System

A broader spectrum can be mixed with six colours as discussed under Basic Colour Theory earlier. As a learning exercise, the move from three colours to six also begins to introduce other variables like opacity, tinting strength and covering power. Here is the recommended six colour palette for Designers Gouache: **Lemon Yellow, Permanent Yellow Deep, Flame Red, Alizarin Crimson, Ultramarine and Phthalo Blue.**



Traditional Colour Mixing Theory for Painters versus 'CMYK' the "4 Colour Process"

CMYK is an abbreviation used to describe the following colours, sometimes known as the 4 Colour Process.

C – Cyan, a bright greenish blue

M – Magenta, a blue shade red

Y – Yellow, a middle yellow

K – Black

The three printing ink colours are cyan, magenta and yellow, and across the world these are used in print technology. As there are limitations within printing and painting theories this gives rise to different primaries being used.



More commonly used in photography, printing and design, these colours can be found in the Designers Gouache range: Permanent Rose (CMYK Magenta), Primary Blue (CMYK Cyan), Primary Yellow (CMYK Yellow), Ivory Black (CMYK Black). These colours are often recommended on teaching courses where the work is required to reflect what would be produced from a common colour printer.

But, remember that each artists' colour has a masstone and an undertone, that artists require a package of handling properties and that permanence is also important. The recommended primaries therefore offer the best practical mixing properties combined with permanence wherever possible. However, it is at the discretion of each individual artist to choose their own primary colour to achieve the results they desire.

Proportions Used In Colour Mixing

A secondary colour is not necessarily achieved by mixing equal proportions of primary colours. Using the three primary colours of your choice, combine the primaries in different proportions to show the spread of possible colours, e.g. mix red with yellow to show the range of oranges produced. We recommend that you start using only small amounts of colour when mixing until you achieve the desired result.

For further detailed information on colour mixing and hint and tips please refer to www.winsornewton.com

Technical Section

Colour Chart



Key to Coding

AA	Extremely Permanent	□	Transparent
A	Permanent	▨	Semi-Transparent
B	Moderately Durable	▩	Semi-Opaque
C	Fugitive	■	Opaque
(iii)	Bleached by acids, acidic atmospheres	S	Series number
		BL	Colours may bleed

ASTM

I Permanent for artists' use
 II Permanent for artists' use
 III, IV & V have a lower lightfastness rating and are provided for brilliance of colour
 Where no ASTM rating is listed, please refer to the Winsor & Newton permanence rating

Sizes available

- 14ml Tubes - All colours (except Bleedproof White & Process White)
- 30ml Pots - Metallics & Whites
- 37ml Tubes - Whites and Blacks only
- 100ml Pots - White only (not available in the USA)

This colour chart is produced within the limitations of lithographic colour printing and is intended as a guide only.

New Colours

Colour Code	New Colours	Reason for New Colour	Benefit
455	Brilliant Purple	New colour position to increase spectrum across the range	Very bright
094	Cadmium Red	Replaces Cadmium Red Pale with a brighter colour	Very opaque and lightfast
106	Cadmium Scarlet	New colour position to increase spectrum across the range	Very opaque and lightfast
108	Cadmium Yellow	New colour position to increase spectrum across the range	Very opaque and lightfast
191	Cobalt Turquoise Light	New colour position to increase spectrum across the range	Very bright, excellent lightfastness, good opacity
425	Naples Yellow Deep	New colour position to increase spectrum across the range. Single Pigment	Excellent lightfastness, subtle colour, good opacity
440	Opera Pink	A modern fluorescent pigment offering the brightest pink available	Brilliance
448	Opera Rose	A modern fluorescent pigment offering the brightest rose available	Brilliance
466	Perm Aliz Crimson	Lightfast alternative to Alizarin Crimson	Brighter, more opaque and lightfast than Alizarin Crimson
502	Permanent Rose	New colour position with good lightfastness. CMYK magenta	Very high lightfastness, wide range of mixed hues
505	Perylene Black	New colour position to increase spectrum across the range	A single pigment black with a subtle green undertone
507	Perylene Maroon	New colour position to increase spectrum across the range	A single pigment deep maroon. Very high lightfastness
470	Perylene Violet	New colour position to increase spectrum across the range	A single pigment deep violet. A popular position amongst modern pigments. Unique to Winsor & Newton . Very high lightfastness
550	Quinacridone Magenta	New colour position offering improved lightfastness in area of spectrum	Single pigment, high brightness, very lightfast
667	Ultramarine Green Shade	New colour position to increase spectrum across the range	Single pigment, very bright and lightfast
726	Winsor Red	A single pigment, bright and lightfast red to increase spectrum across range	Single pigment, very bright and lightfast
733	Winsor Violet (Dioxazine)	A lightfast dioxazine in this part of spectrum	Single pigment, very strong and lightfast

Modified Colours

Colour Code	Modified Colours	Reasons for Modification	Change in Hue
004	Alizarin Crimson	Moved to single pigment	No change
028	Bengal Rose	Improved brightness	Brighter with a paler masstone
046	Brilliant Green	To avoid environmental toxicity	No change
249	Flame Red	Improved lightfastness	Masstone bluer, undertone yellower
257	Flesh Tint	Improved lightfastness	No change
285	Gold Ochre	Improved lightfastness	Masstone slightly redder
345	Lemon Yellow	Brighter and cleaner	Brighter
360	Light Purple	Improved wash, level of opacity and brightness	Brighter
369	Linden Green	Improved lightfastness	Brighter
384	Marigold Yellow	Improved lightfastness	No change
447	Olive Green	Improved lightfastness, improved wash and level of opacity	Masstone brighter
452	Orange Lake Deep	Improved lightfastness and level of opacity	No change
453	Orange Lake Light	Made brighter and more lightfast	No change
482	Perm Green Deep	Improved lightfastness	No change
484	Perm Green Middle	Improved lightfastness	No change
508	Perm Yellow Deep	Improved lightfastness, brighter and cleaner	Masstone brighter, undertone redder
512	Permanent White	Improved light stability	No change
527	Primary Yellow	Improved lightfastness, single pigment	No change
552	Raw Sienna	Improved lightfastness, single pigment	Brighter
564	Red Ochre	Improved lightfastness	No change
599	Sap Green	Improved lightfastness and brighter masstone	No change
623	Spectrum Red	Improved lightfastness, level of opacity and brightness	Slightly yellower in masstone
625	Spectrum Violet	Improved brightness	Brighter masstone
627	Spectrum Yellow	Improved lightfastness, cleaner, brighter and more opaque	No change
678	Venetian Red	Improved lightfastness and brighter	No change
706	Winsor Blue	Improved wash; level of opacity and brighter masstone	No change

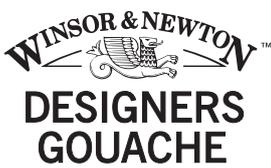
Discontinued Colours

Colour Code	Colour Name	Reasons for Discontinuation	Nearest Equivalent in Range
006	Alizarin Rose Madder	Poor lightfastness	Permanent Rose
022	Azure Blue	Can be mixed by the artist	Phthalo Blue + Winsor Green
092	Cadmium Primrose	Can be mixed by the artist	Cadmium Lemon + Cadmium Yellow Pale
097	Cadmium Red Deep	Replaced by cleaner brighter cadmiums	Cadmium Red + Red Ochre
102	Cadmium Red Pale	Replaced by cleaner brighter colour position	Cadmium Scarlet
148	Chinese Orange	Close to Venetian Red	Venetian Red
181	Cobalt Pale Hue	Can be mixed by the artist	Ultramarine Green Shade + Zinc White
260	Fluorescent Yellow	Poor lightfastness	None
270	Forest Green	Close to Permanent Green Middle	Permanent Green Middle
271	Geranium	Very close to Primary Red	Primary Red + Rose Tyrien
287	Golden Yellow	Very close to Cadmium Yellow	Cadmium Yellow
297	Grenadine	Poor lightfastness	Spectrum Red + Flame Red
309	Havannah Lake	Poor lightfastness. Mixed pigment colour	Perylene Violet
378	Madder Carmine	Very close to Alizarin Crimson	Alizarin Crimson
414	Mistletoe Green	Very close to Permanent Green Middle	Permanent Green Middle
463	Parma Violet	Close to Spectrum Violet	Spectrum Violet + Light Purple
467	Peacock Blue	Can be mixed by the artist	Phthalo Blue + Intense Blue
471	Periwinkle Blue	Close to Ultramarine	Ultramarine
930	Process Black	Close to Designers Lamp Black	Lamp Black
544	Purple Lake	Can be mixed by the artist	Light Purple + Black
574	Rose Carthame	Poor lightfastness	Winsor Red + Primary Red
591	Rose Malmaison	Poor lightfastness. New opera's are brighter	Primary Red + Rose Tyrien
603	Scarlet Lake	Very close to Flame Red	Flame Red
668	Ultramarine Deep	Very close to Ultramarine	Ultramarine
694	Viridian Lake	Can be mixed by the artist	Cyprus Green + Brilliant Green
708	Winsor Emerald	Can be mixed by the artist	Brilliant Green + Winsor Green + Zinc White

Label Information

Winsor & Newton were the first company to publish the contents of their colours in 1892, as we believe artists should be provided with as much information as possible.

Today, the Pigment, Permanence and Opacity details are printed on the labels, in our literature and on our website, www.winsornewton.com

	LABEL CODE	PERMANENCE	
OPACITY/ TRANSPARENCY RATING	A62050A 	Permanence B 	Brilliant Red Violet Pigment: PTMA toner PV1, Fluorescent dye/ resin based pigment, Pigment Fanal PV1, Colorant fluorescent/resine
BAR CODE			ASTM CONFORMITY & AP SEAL 
SERIES NUMBER	5095 7798	Brilliant Red Violet Series 1	COLOUR NAME
COLOUR NAME TRANSLATIONS		Rouge-violet Brillant Brillantrotviolett Rojo Violeta Brillante Violetto Rossastro brillante	PRODUCT CODE 0605 050 Made in England, London HA3 5RH www.winsornewton.com
TUBE SIZE		14 ml e	

Composition & Permanence Table

This table is designed to provide the essential information on the colour composition and performance of the entire Designers Gouache range.

To help you understand the table, the following notations are explained.

Colour Code - Code

This colour code column indicates the code number that is given to each of the colours. This is primarily for ease of reference for the retailer when stock holding, for catalogue purposes and to assist you in purchasing your materials.

Colour Name

This is the colour name, e.g. Alizarin Crimson

Unchanged/Modified/New Colour - U/M/N

Details by colour whether it is:

"U" Unchanged colour - these colours have not been changed

"M" Modified colour - these colours have been changed in some way.

The New, Modified and Discontinued Colours table details why the changes have been made and the effect, if any on hue.

"N" New colour - The table also provides details on each individual new colour, why it has been introduced, and its benefits.

Series No.

Our Designers Gouache range is split into 4 groups termed "Series". The series indicates the relative price of the colour and is determined mainly by the cost of the pigment. Series 1 is the least expensive colour and Series 4 the most expensive.

Chemical Description

This column provides the chemical description of the pigments used in each colour.

Colour Index

The Colour Index International is the standard compiled and published by both:

- The Society of Dyers and Colourists, and the
- American Association of Textile Chemists and Colorists

The Colour Index classifies pigments by their chemical composition.

This information will allow you to research specific pigment's working characteristics in reference books if you wish. The individual pigments are identified in two ways:

a) Colour Index Generic Name - C.I. Name

Each pigment can be universally identified by its Colour Index Generic Name. As an example; Cobalt Blue is Pigment Blue 28 abbreviated to PB 28.

Although the working properties of Winsor & Newton Designers Gouache are detailed in this leaflet, we publish the Colour Index Generic Names of the pigments to allow you to cross reference the working properties in other sources if you wish, e.g. Lightfastness, Opacity, Toxicity etc. . .

b) Colour Index No. - C.I. No.

Pigments can also be identified by their Colour Index Number.

It is considered an additional source of information to the Colour Index Generic Name. As an example: Cobalt Blue is 77346.

Of the two methods of reference, the Colour Index Generic Name is the most commonly used.

Permanence

The permanence of a Designers Gouache is defined as "its durability when laid with a brush on paper displayed under a glass frame in a dry room freely exposed to ordinary daylight and an ordinary atmosphere" Winsor & Newton have tested all colours for lightfastness and permanence in graded washes (from full strength to extreme dilution). Each wash has been exposed to the ASTM accelerated light level tests and assessed accordingly.

The actual grading system is as follows:

AA	Extremely Permanent
A	Permanent
B	Moderately Durable
C	Fugitive

For further information on some colours, the rating may include one or more of the following additions.

- 'A' rated in full strength may fade in thin washes.
- Cannot be relied upon to withstand damp.
- Bleached by acids, acidic atmospheres.
- Fluctuating colour; fades in light, recovers in dark.
- Should not be prepared in pale tints with Flake White, as these will fade.
- 'A' rated with a coating of fixative.

ASTM

The ASTM abbreviation stands for the American Society for Testing and Materials. This organisation has set standards for the permanence of art materials including a colour's lightfastness.

To measure lightfastness in Designers Gouache using this system, colours are applied on paper at 40% reflectance. This is the amount of light reflected from the paper through the diluted wash. The swatches are then tested in both sunlight and artificially accelerated conditions.

The results allow each colour to be rated from I-V according to its resistance to fading. In this system I and II are considered permanent for artists' use.

Winsor & Newton Designers' Gouache Colours marked N/L denotes the colour as "Not Listed" by the ASTM at the time of printing. "Not Listed" does not necessarily indicate a lack of lightfastness, but usually that the pigment has not yet been tested by the ASTM. In these cases it is recommended that the Winsor & Newton permanence rating, which is the rating system that evaluates colour on many aspects including lightfastness, should be used to indicate a colour's ability to resist fading.

Transparency/Opacity of Colours - T/O

In this table and the colour chart, the transparent colours are marked with , the semi-transparent colours are marked .

The semi-opaque colours are marked with and the opaque colours are marked with .

Permanent White can be added to all colours to increase opacity but will reduce the colour to a tint.

Bleed

In Designers Gouache some colours made from soluble dyes may bleed through superimposed colours.

These colours are marked 'BL'.

Should further information be required please see the Winsor & Newton website www.winsornewton.com.

Code	Colour Name	UMN	Series No.	Chemical Description	Colour Index		Permanence	ASTM	T/O	Bleed
					C.I.Name	C.I.No.				
004	Alizarin Crimson	M	1	1, 2-dihydroxyanthraquinone lake	PR 83	58000	B	IV	<input checked="" type="checkbox"/>	
028	Bengal Rose	M	2	Copper ferrocyanide	PR 169	45160:2	C	NL	<input checked="" type="checkbox"/>	BL
046	Brilliant Green	M	1	Arylamide yellow Titanium dioxide Chlorinated copper phthalocyanine	PY 3 PW 6 PG 7	11710 77891 74260	A	I	<input checked="" type="checkbox"/>	
455	Brilliant Purple	N	2	PTMA toner	PV 3 PV 2	42535 45175	B	V	<input checked="" type="checkbox"/>	BL
050	Brilliant Red Violet	U	1	PTMA toner Fluorescent dye/resin based pigment	PV 1	45170	B	NL	<input checked="" type="checkbox"/>	BL
052	Brilliant Violet	U	1	Ultramarine Fluorescent dye/resin based pigment PTMA toner	PB 29 PV 1	77007 45170	B(iii)	NL	<input checked="" type="checkbox"/>	BL
055	Brilliant Yellow	U	3	Arylamide yellows RN	PY 65/PY 74	11740/11741	A	II	<input checked="" type="checkbox"/>	
074	Burnt Sienna	U	1	Synthetic iron oxide	PY42	77492	AA	I	<input checked="" type="checkbox"/>	
076	Burnt Umber	U	1	Calcined natural iron oxide Synthetic iron oxide	PBr 7 PY42	77491 77492	AA	I	<input checked="" type="checkbox"/>	
086	Cadmium Lemon	U	4	Cadmium zinc sulphide	PY 35	77205	A	I	<input checked="" type="checkbox"/>	
089	Cadmium Orange	U	4	Cadmium zinc sulphide Cadmium sulphoselenide	PY 35 PR 108	77205 77202	A	I	<input checked="" type="checkbox"/>	
094	Cadmium Red	N	4	Cadmium sulphoselenide	PR 108	77202	A	I	<input checked="" type="checkbox"/>	
106	Cadmium Scarlet	N	4	Cadmium sulphoselenide	PR 108	77202	A	I	<input checked="" type="checkbox"/>	
108	Cadmium Yellow	N	4	Cadmium zinc sulphide Cadmium sulphoselenide	PY 35 PO 20	77205 77199	A	I	<input checked="" type="checkbox"/>	
111	Cadmium Yellow Deep	U	4	Cadmium zinc sulphide Cadmium sulphoselenide	PY 35 PR 108	77205 77202	A	I	<input checked="" type="checkbox"/>	
118	Cadmium Yellow Pale	U	4	Cadmium zinc sulphide	PY 35	77205	A	I	<input checked="" type="checkbox"/>	
137	Cerulean Blue	U	4	Cobalt stannate	PB 35	77368	AA	I	<input checked="" type="checkbox"/>	
178	Cobalt Blue	U	4	Cobalt aluminate	PB 28	77346	AA	I	<input checked="" type="checkbox"/>	
191	Cobalt Turquoise Light	N	4	Cobalt titanate	PG 50	77377	AA	NL	<input checked="" type="checkbox"/>	
211	Cyprus Green	U	2	Chlorinated copper phthalocyanine Titanium dioxide Copper phthalocyanine	PG 7 PW 6 PB 15	74260 77891 74160	A	I	<input checked="" type="checkbox"/>	
249	Flame Red	M	1	Naphthol carbamide Benzimidazolone orange	PR 170 PO 72	12475 211095	A	NL	<input checked="" type="checkbox"/>	
257	Flesh Tint	M	1	Naphthol AS-OL Benzimidazolone orange Synthetic iron oxide Titanium dioxide	PR 9 PO 72 PY 42 PW 6	12460 211095 77492 77891	A	NL	<input checked="" type="checkbox"/>	
283	Gold (tube)	U	3	Titanium dioxide coated mica/ synthetic iron oxides	N/A		A	NL	<input checked="" type="checkbox"/>	
285	Gold Ochre	M	1	Calcined natural iron oxide Synthetic iron oxide Arylamide yellow	PBr 7 PR 101 PY 74	77491 77491 11741	A	II	<input checked="" type="checkbox"/>	

Code	Colour Name	UMN	Series No.	Chemical Description	Colour Index		Permanence	ASTM	T/O	Bleed
					C.I.Name	C.I.No.				
322	Indigo	U	1	Copper phthalocyanine Carbon black Ultramarine	PB 15 PB k6 PB 29	74160 77266 77007	A (iii)	I	■	
327	Intense Blue	U	2	Copper phthalocyanine	PB15	74160	A	I	■	
331	Ivory Black	U	1	Bone black	PBk 9	77267	AA	I	■	
335	Jet Black	U	1	Aniline black	PBk 1	50440	A	I	■	
337	Lamp Black	U	1	Carbon black	PBk 7	77266	AA	I	■	
345	Lemon Yellow	M	1	Arylamide yellow	PY 3	11710	A	I	■	
360	Light Purple	M	2	PTMA toner	PV 3 PV 2	42535 45175	B	V	■	BL
369	Linden Green	M	2	Arylamide yellows Chromium oxide	PY 74/PY 3 PG 17	11741/11710 77288	A	NL	■	
380	Magenta	U	2	Rhodamine/alumina lake PTMA toner	PR 173 PV 2	45160 45175		NL	■	BL
384	Marigold Yellow	M	1	Benzimidazolone orange Pyrrole orange	PO 72 PO 73	211095 561170	A	NL	■	
422	Naples Yellow	U	1	Titanium dioxide Chromium titanate	PW 6 PBr 24	77891 77310	AA	I	■	
425	Naples Yellow Deep	N	1	Chromium titanate	PBr 24	77310	AA	I	■	
436	Neutral Grey 3	U	1	Titanium dioxide Carbon black Synthetic iron oxide	PW 6 PBk 7 PY 42	77891 77266 77492	A	I	■	
447	Olive Green	M	2	Arylamide yellow RN Chlorinated copper phthalocyanine Copper phthalocyanine	PY 65 PG 7 PB 15	11740 74260 74160	A	II	■	BL
440	Opera Pink	N	2	Fluorescent dye / resin based pigment	N/A	N/A	C	NL	■	
448	Opera Rose	N	2	Fluorescent dye / resin based pigment	N/A	N/A	C	NL	■	
452	Orange Lake Deep	M	1	Arylamide yellow BON arylamide red	PY 65 Pr 9	11740 12460	A	II	■	
453	Orange Lake Light	M	1	Arylide yellow RN BON arylamide red	PY 65 PR 9	11740 12460	A	II	■	
459	Oxide of Chromium	U	2	Chromium oxide	PG 17	77288	A	II	■	
466	Permanent Alizarin Crimson	N	3	Benzimidazolone	PR 176	12515	A	NL	■	
482	Permanent Green Deep	M	2	Chlorinated copper phthalocyanine Arylamide yellow	PG 7 PY 74	74260 11741	A	II	■	BL
483	Permanent Green Light	U	2	Arylamide yellow Chlorinated copper phthalocyanine	PY 3 PG 7	11710 74260	B	I	■	
484	Permanent Green Middle	M	2	Arylamide yellows Chlorinated copper phthalocyanine	PY 74/PY 3 PG 7	11741/11710 74260	A	II	■	
502	Permanent Rose	N	3	Quinacridone	PV 19	46500	A	I	■	
512	Permanent White	M	1	Titanium dioxide	PW 6	77891	A	I	■	
508	Permanent Yellow Deep	M	1	Arylamide yellow RN	PY 65	11740	A	II	■	
505	Perylene Black	N	3	Perylene	PBk 31	71132	A	NL	■	
507	Perylene Maroon	N	3	Perylene	PR 179	71130	A	NL	■	
470	Perylene Violet	N	2	Perylene	PV 29	71129	A	NL	■	
514	Phthalo Blue	U	1	Chlorinated copper phthalocyanine Copper Phthalocyanine	PG 7 PB 15	74260 74160	A	I	■	
523	Primary Blue	U	1	Copper Phthalocyanine	PB 15	74160	A	I	■	
524	Primary Red	U	1	Rhodamine/alumina lake Naphthol carbamide	PR 173 PR 170	45160 12475	B	NL	■	BL
527	Primary Yellow	M	1	Quinophthalone yellow	PY 138	56300	A	NL	■	
538	Prussian Blue	U	1	Alkali ferrirocyanide	PB 27	77510	A	I	■	
550	Quinacridone Magenta	N	3	Quinacridone	PR 122	73915	A	II	■	
552	Raw Sienna	M	1	Synthetic iron oxide Arylamide yellow	PY 42 PY65	77492 11740	AA	II	■	
554	Raw Umber	U	1	Synthetic iron oxide Natural iron oxide	PY 42 PBr 7	77492 77492	AA	I	■	
564	Red Ochre	M	1	Synthetic iron oxide Quinacridone violet	PR 101 PV 19	77491 46500	A	I	■	
593	Rose Tyrien	U	2	Rhodamine/alumina lake	PR 173	45160	C	NL	■	BL
599	Sap Green	M	2	Arylamide yellow Copper phthalocyanine	PY 74 PB 15	11741 74160	A	II	■	
609	Sepia	U	1	Calcined natural iron oxide Synthetic iron oxide	PBr 7 PY 42	77491 77492	AA	I	■	
617	Silver (tube)	U	3	Titanium dioxide coated mica	N/A	N/A	A	NL	■	
621	Sky Blue	U	1	Coprecipitated zinc sulphide / barium sulphate Ultramarine Copper phthalocyanine	PW 5 PB 29 PB 15	77115 77007 74160	A	I	■	
623	Spectrum Red	M	1	Naphthol carbamide Benzimidazolone	PR 170 PBr 25	12475 12510	A	II	■	
625	Spectrum Violet	M	1	PTMA toner	PV 3	42535	B	V	■	BL
627	Spectrum Yellow	M	1	Arylamide yellow	PY 74	11741	A	II	■	
656	Turquoise Blue	U	2	Copper Phthalocyanine Titanium dioxide Chlorinated copper phthalocyanine	PB 15 PW 6 PG 7	74160 77891 74260	A	I	■	
660	Ultramarine	U	1	Ultramarine	PB 29	77007	A	I	■	
667	Ultramarine (Green Shade)	N	1	Ultramarine	PB 29	77007	A(iii)	I	■	
676	Vandyke Brown	U	1	Synthetic iron oxide Calcined natural iron oxide	PY 42 PBr 7	77492 77491	AA	I	■	
678	Venetian Red	M	1	Synthetic iron oxide Arylamide yellow Naphthol AS-OL	PR 101 PY 74 PR 9	77491 11741 12460	A	II	■	
692	Viridian	U	3	Hydrated chromium oxide	PG 18	77289	AA	I	■	
706	Winsor Blue	M	3	Copper phthalocyanine	PB 15	74160	A	I	■	
720	Winsor Green	U	3	Chlorinated copper phthalocyanine	PG 7	74260	A	I	■	
726	Winsor Red	N	3	Pyrrole	PR 254	56510	A	NL	■	
733	Winsor Violet (Dioxazine)	N	1	Dioxazine	PV 23	51319	A	II	■	
744	Yellow Ochre	U	1	Synthetic iron oxide	PY 42	77492	AA	I	■	
748	Zinc White	U	1	Coprecipitated zinc sulphide/Barium sulphate	PW 5	77115	A	I	■	

DESIGNERS



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