Photo Printing Paper ebook

Written by www.PhotoPaperDirect.com

Photo

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Introduction

Welcome to our comprehensive guide on how to choose the photo paper that is right for your needs. With so many options and considerations for something that many people take for granted, this eBook will give you everything you need to know before you decide what is right for your home use/your companies requirements!

What is photo paper?

This is a paper which is designed to allow you in a very simple way to print high quality photographic images which immolate photo lab prints.

The versatile nature of photo paper has led to a vast array of options for you to choose from. Whether for personal or professional usage, photo paper nowadays has grown at the same rate as other areas of digital photography. In a word, fast!

Often times people ask us for the best photo paper available. However, this is an almost impossible question to answer, as it is completely dependent on the intended use and the necessities of the finished product. For us, the best photo paper is one that **does the job for an affordable price tag, no more no less.**

Rather than recommending one brand or one model over the other, you should find this eBook handy in comparing various options so you can define what is 'best' for you.

So, hopefully the information contained in these pages will give you some useful information on the technical differences along with the standard usages for all the different options available to you.

Whether it is the

1. Size of the paper you use,

2. The GSM (weight) of the paper

3. Finish (Matt, Satin, Gloss)

4. Or many of the other choices available. We will clear up any issues you may be having and questions you may have along the way

Photo paper size

There are a multitude of reasons you may want to print high quality images, leading to many choices to be made in terms of available paper sizes.

Choosing the correct paper size for your specific use is crucial for the required end product and may save you money and time by not using an oversized paper that needs to be trimmed.

Due to the massive variety of sizes available it can be hard to know exactly what is right for you, in terms of both the requirements of the job and also preventing waste and therefore unneeded expense!

The choice of the photo paper size depends on:

1. Your printer - Most of the regular desktop inkjet printers are A4 therefore it will take all sizes up to A4. To print A3 or larger sizes you would need a larger printer.

2. The size of your end product - If you need to frame it, then the size of the frame will determine the size or if the print is to be inserted in a photo album then the size of the insert etc.

Photo paper is available in a number of sizes to accommodate the various applications for which it may be needed. The most popular (in order of size) are:

10cm x 15cm or its imperial equivalent of 6x4 "- These are often referred to as photo cards. They are often used to print images for insertion into a photo album, without the need to cut the image. Printing in such an

economical way will reduce waste (and cost) and will fit nicely into almost any photo album (as it is standard photo size).

13cm x 18cm or in its imperial equivalent of **7x5"** – Slightly bigger than the previous size. Once again, paper of this size is generally used for the purpose of photo album creation, but without the need to cut the coated material and waste money. This size is a standard photo lab size and is one size up from the 10x15cm so will also fit nicely into albums.

A5 – These are half the size of an A4 sheet (that most people are familiar with) and larger than the previous size. Often used for invitation cards or fold to A6 to create greeting cards.

A4 – These are the most common photo paper size used for an almost infinite number of applications, from a large photograph to greetings cards, presentations, brochure creation, image printing etc. An A4 sheet is double the size of the previous A5 sheet. This is the largest size which will fit most of the desktop inkjet printers.

A3 – Twice the size of an A4 sheet and generally used for professional work, as they require a printer that can accommodate an A3 size. Again, A3 photo paper is used in many formats from calendar creation to presentation and image/photograph printing, graphic designs and more.

A3 Plus – These are often referred to as A3+ or oversized A3. Their actual size can vary depending on the manufacturer, however the most popular size is 330mm x 483mm. This is used mostly for graphic designers, professional printers (to have a proof print so you can get the A3 printed in full after trimming the edges). It requires an A3+ printer, as a regular A3 size printer won't accept this paper.

In the case of home users, the most popular choices are 10cm x 15cm, 13cm x 18cm, A5 and A4.

Remember, if you are considering printing an A3 media, first ensure that your printer can accept this size!

Finally, make sure that you set the size correctly in your printer's driver and the feeding tray as per the paper you have loaded. Fortunately, all printers these days have 10x15cm, 13x18cm, A5, A4 sizes available to select. In the case of A3 and A3+ make sure your printer is suitable.

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Photo paper weight

Paper is traditionally described by weight to illustrate how heavy and how thick it is to touch. Naturally, the same goes for photographic paper.

The method that suppliers use to rate the weight of the paper is pretty simple: It is achieved by giving the paper weight per square metre, or in short - GSM {Grams per Square Metre (g/m²)}.

The common belief is that the heavier the paper is, the better its quality is due to feeling thicker to touch. However this is often misleading, especially when talking about photo papers as opposed to plain copier paper. Photographic paper is a highly specialized media, available in different shapes and (more to the point) they are created using different manufacturing technologies which, on occasion, make GSM weight irrelevant in determining the quality of the paper.

What dictates the print quality in inkjet **photo papers** is the type and quality of the coating on the papers

To start with, we have the matt coated paper and the cast coated paper (instant dry paper). Both these types combine regular paper with an Inkjet coating receiving layer which is applied directly on the "naked" paper. In this case, the weight of this paper will indeed reflect the thickness. Meaning that for example a 160gsm paper will in fact feel thinner than the 260gsm paper.

However, there is another type of photographic paper, namely the microporous or nanoporous coated paper, which is becoming more and more popular. These papers are superior to the cast coated and matte coated paper for two important reasons:

1. The microporous coating has a better compatibility with all inks and will provide a better image with more sub-tones and colors.

2. The paper has a totally different base material. It contains a pressed paper with a thin polyethylene coating on both sides to protect the paper from moisture and give it added stability. Naturally these papers will be heavier than they feel as they contain pressed paper and a polymer coating which is heavier than paper (though thinner).

All of which can lead to some confusion!

Individuals who have bought a 260gsm paper with cast coated technology or matt coated paper will get quite a heavy feel paper due to it thickness. On the other hand, an equivalent 260gsm microporous paper with a PE (polyethylene) base will feel lighter due to the fact that it is thinner (despite being of the same weight).
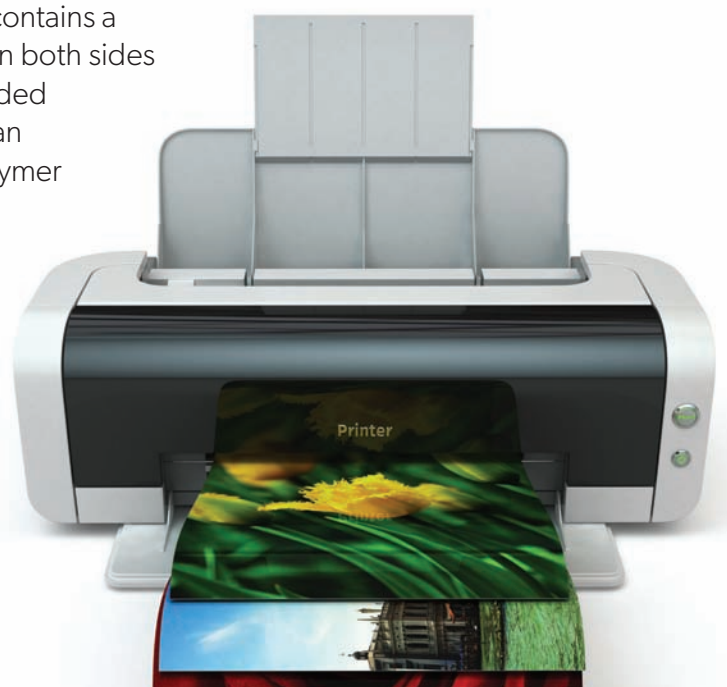
Due to this reason films are measured in caliper (thickness) and rated in microns. Photographic paper on the other hand still displays the traditional weight rating, which will hopefully change soon to reflect a more accurate description of the paper.

It is therefore worth remembering that quality can be attributed to the coating technology rather than to the weight of the paper in GSM.

The main benefit of printing on heavier paper is the perceived quality of the finished product. The paper industry refers to that as the 'keepsake value' of the print.

Use the descriptions below as your guide to choosing the most suitable weight:

120gsm to 150gsm – When you need high quality images in large quantities, choosing lighter weights makes financial sense. The most common example is use for brochures, which often include a high quality image, requiring photo paper capabilities in lighter weight, due to little long-term keepsake value. Additionally, charts and presentations, which are often discarded after their use, are also printed on the 120gsm to 150gsm options to reduce the cost of printing.

150gsm to 200gsm – This is the most common weight range for image reproduction. Prints that have some keepsake value (such as those that are printed to be framed, displayed or mounted) are generally printed on 180gsm to 200gsm weight.

200gsm to 300gsm – This weight range is ideal for when the keepsake value is particularly important. The most common examples are greetings cards, invitation cards, gallery images etc.. Before opting for the heaviest option you can find, ensure that your printer can accommodate the weight. Most printers we come across seem to feed photo paper just fine up to 250gsm, but beyond this you should check the printer's manual. If your printer was made in recent years, you should be able to print up to 300gsm with ease.

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300gsm and over – Yes, there are plenty of examples that exceed the 300gsm mark. These are traditionally fine and photo art papers such as printable canvas sheets, textured art papers and others. If you haven't come across these, it means you have no specific use for them so don't worry too much about it!

To sum it up, if you are after the best look, quality and feel then look for the heavy weight microporous or nanoporous premium paper (see more below chapter on receiving layer and coating).

Photo paper finish

There are a number of options available to you in terms of the overall finish of the paper. The finish of the paper refers both to how it looks and how it actually feels in the hand.

Inkjet Photo Papers come in three main finishes:

Gloss – A highly shiny glossy finish, which is very reflective

Satin (Also referred to as Luster, Semi-Gloss or Pearl) – A soft sheen paper, which is half way between Gloss and Matt

Matt – A totally flat finish with no sheen or reflective properties

In gloss finish paper the higher the gloss level, the higher the glare. Photographic images will be highly colorful and deep with a wide colour gamut, sub-tones and sub colours and shades, but if viewed from an angle in strong light conditions, some of the image will not be visible because of reflection off the surface. Please note the type of coating will effect the print quality i.e. cast will provide lower quality than microporous coating.

Satin finish photo paper provides the full color capability of gloss with a wide color gamut and high resolution. Viewing images printed on satin paper is made easier by the low glare and light reflection off this paper. The image can be seen clearly from a wider angle and is less affected by strong light conditions when viewing. For these reasons Satin finish is a better choice for wall hanging.

Satin paper has a wider range of glossiness, often referred to as pearl or luster; a slightly glossier satin.

Luster or pearl is one of several photo paper finish options, which resembles pearl in its visual appearance and a photo lab quality satin in its texture. The luster finish is quite unique and used by a small number of manufactures, often in their professional range. It produces vivid colors with sharp details, and produces black and white output with rich blacks and smooth tonality. As with all types of paper, quality will vary according to the supplier and the paper's qualities in terms of weight, receiving layer coating and other aspects.

Luster or pearl paper features low levels of glare somewhere between gloss and matt, hence it is often described as 'semi-gloss' finish. It is a compromise between glossy and matt that becomes very useful when the photograph will be viewed from various angles (such as in the case of an image displayed in a gallery) and under certain lighting conditions. The soft texture feel helps reduce fingerprint marks, which are a common occurrence when prints are held and improves the print longevity as a result.

Paper which is described as Satin only, will normally have less sheen than luster or pearl and will reflect less light.

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Matt paper has no sheen or finish on the surface and has an extremely low reflection value. It has a lower color gamut capability although high-resolution printing is possible. Images will appear duller on this paper and will not shine in any way. This paper is mostly used for reports, booklets and presentations where there is no "keepsake" value to the image.

The choice between gloss and satin finish is often purely a matter of taste. Satin paper will provide the most flexible image on a piece of paper, allowing it to be displayed in a wide variety of environments. Glossy paper is favored by many but requires precise conditions in order to be viewed at its full potential. Matt paper is generally used in larger run prints, giveaway presentations and booklets and as a high-resolution alternative to standard print inkjet paper.

Photo paper receiving layer and coatings

We've all tried to print a high quality image on plain printer paper. While the paper will accommodate the image, the results were likely quite poor, right? This has to do with the difference in structure between plain and photo paper.

Plain printer paper is uncoated meaning that when you print saturated images the surface cannot contain the ink and it bleeds to the other side. As a result you get wave like shapes in the paper that, along with the lack of finish, makes the image appear dull. The ink dot that comes out of the inkjet printer when meets the paper loses its shape and bleeds around which causes the image to lose its sharpness.

Furthermore, the lack of coating makes the print susceptible to smudging and the lightweight nature of the paper (on average 70gsm to 80gsm) gives it an overall cheap look and feel. This type of paper is only really designed to accommodate plain text or used as copier paper rather than for printing images. If you did print a photo using this paper, it will quickly fade and yellow so has no keepsake properties, not to mention that this will be far from being a photo like print.

Photo paper is divided into two main types: One type includes a barrier coating which is normally the higher premium microporous paper grade whilst the other does not have the barrier, rather the inkjet receiving layer laid directly on the paper.

The latter usually consist of cast coated paper and matt high-resolution paper. Cast coated paper is usually inferior quality compared to the microporous type.

Microporous photo paper:

This type of photo paper is almost always made with the top quality, PE Coated base paper. The main benefit of this base paper is the enhanced stability of the final product.

The microporous layer is the superior coating used for inkjet photo papers. The coating has micro-pores or nano-pores (smaller pores than micro), which are silica or alumina based (which is rare these days due to high cost). What is important to note is that this coating, due to its pores, can accommodate all types of inks (both dye and pigment) and is especially adept with the particles in pigment inks, which "sit" well in or on the pores of the microporous coating.

Microporous paper is normally instant dry and water-resistant. The microporous coating will provide a better color definition with deeper, more solid blacks

than the cast coated paper. As always, quality varies between different manufacturers and some will provide better quality imaging than the others.

Cast coated photo paper:

The cast coated paper comes only in gloss finish due to its specific production method. This photo paper is based on normal paper, unlike the microporous paper, that is PE based.

In the coating process, the paper goes through hot metal rollers after the coating has been applied. The rollers press and heat the coating, which causes the paper to become glossy with a perfectly flat surface. Due to this method of coating there are no pores on the face of the paper and pigment inks can only "sit" on the surface. On many occasions this causes ink on a freshly printed paper to smear when rubbed.

There are higher quality cast coated photo papers which are referred to as super cast or super pore that use some of the microporous technologies and contain some chemicals which cause the pigment ink to adhere to the paper better and prevent smearing.

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The cast coated photo paper is excellent for dye based inks but is less successful with pigment inks. Some ink manufacturers have started adding adhesives to their pigment inks to make it compatible with cast coated papers and prevent smearing. Yet the super cast will work well with all inks as it has microporous properties

Summary

Microporous photo paper

Pros:

- Excellent colour definition
- Excellent colour gamut
- Excellent details
- Longevity
- Stability
- Can come in gloss or satin finishes
- Works well with dye and pigment base inks

Cons:

More expensive than cast or matt coated

Can't be printed on the reverse side due to the PE coating

Cast coated photo paper

Pros:

- Cheaper
- Feels more rigid in comparison to its weight
- Good image glossy finish
- Can be printed with simple graphic or writing on the reverse side
- Can be used as greeting card due to the above

Cons:

- Fading
- Only gloss finish
- May struggle with some pigment inks which may smear when rubbed
- Inferior to the microporous image photographic quality

The professional grade microporous range of paper is clearly the superior product. However, the cast coated ranges are normally cheaper and provide satisfactory results depending on the requirements for the finished product.

If your photos are displayed in exhibitions or are viewed by discerning clientele, definitely use the microporous range. Whether you use Gloss, Satin or Pearl is up to you and the needs of the item itself.

It is important to remember that you cannot print on the reverse of most microporous paper, although they can be written on with a pen or a felt tip.

You can print on the reverse of cast coated paper as there is no coating there and the ink will be absorbed.

Printer options

It is worth making a quick note of the importance of selecting the right printer settings in order to get the best results possible, as perhaps one of the biggest reasons for getting poor results from high quality photo papers is neglecting to amend the printer settings prior to printing.

To get the utmost performance from the product, you must follow its instructions on printer settings to the letter, paying particular attention to the 'quality' and 'finish' settings.

As an example, take the heaviest photo paper you can find, print in normal document mode and the results will look disappointing. On the other hand, take a basic photo paper and follow the instructions each time you print and you will be amazed what your home printer can produce.

Leading manufactures of professional paper offer a computer file (at no cost) that can change your settings in the background without requiring further user intervention. Others offer handy step-by-step instructions that you should follow that are also worth looking into.

On rare occasions we come across printer feeding issues, mostly when budget or older printers are used. Mainly, either the printer is unable to pull the paper or there is a significant delay while the printer's rollers seem to struggle until something starts to 'catch on' and the photo paper is fed into the printer. Unfortunately such delay often results in uneven print.

There are a number of reasons why this might happen. In a large number of cases we come across, the photo paper weight (which is measured in GSM) or overall thickness exceeds the printer's ability, meaning it is too think or too heavy for the rollers to successfully handle.

Another common scenario is that the printer's rollers are either dirty or worn-out from years of use, therefore unlikely to grip but the lightest of papers. It is recommended to check the printer specifications for maximum supported GSM. Most printers, whether budget or premium, can accommodate photo paper up to 280gsm in weight with ease. When considering higher weights, in particular art and fine art photo paper, you are advised to check the printer specifications.

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If you are reading this, chances are you have already bought the paper and are facing a dilemma as to what to do next!

There is nothing adjustable on modern printers to allow for feeding thicker paper. However, often cleaning the feeding rollers with a little acetone or white spirit improves things and you can also try placing a few sheets of ordinary paper (despite instructions to the contrary) in order to increase the pressure on the rollers and assist in feeding. Lastly, you could help the paper through by gently pushing it evenly from above in the case of top feeding printers such as the Epson and some of the Canon printers.

10 Common photo printing mistakes

Printing high quality imagery is much cheaper nowadays compared to just a few years ago. Home printers in conjunction with quality paper and inks are able to produce high quality prints which only a few years ago would have been the sole domain of a professional printing house.

Printing imagery can be more affordable if you learn to avoid a few of the most common printing mistakes. Here are some costly printing mistakes and how to avoid them to ensure you get the best out of your photo paper, ink and printer.

1. Printing on the wrong, non-coated side is a common mistake. This can be costly, especially if you just stocked the paper tray and press print without printing a test page first, as some photo paper may reach £100 and more! We recommend that you follow the instructions on the packing of the particular paper and print one photo as a test.

2. Using "high resolution" or other set up in paper or media options other than photo paper. In HP, some Canon printers and Lexmark printers not using the photo paper option will trigger the use of the black cartridge (which is pigment based). When the photo paper option is used the black set up is a composite black, which is created by mixing the other colors or, in some of the Canon printers, using the alternate black that is dye ink and not pigment. Check your printer setting for Photo Printing and don't get tempted to use high resolution straight away!

3. Using the wrong size of paper. Pick the right paper for the job as your printer will likely support various sizes.

4. Resolution is set too low for the type of print job. We recommend that you follow the instructions on the packing of the particular paper and print one photo as a test.

5. Orientation of the image, i.e. Landscape or Portrait is not in line with the paper resulting in the image going out of the paper margins or just wasting paper.

6. Printing small images on A4 where 10x15cm card could be much more economical and the save time spent cutting it down to size. Once you've printed on the paper you will not be able to use it again, so do take into account the type of images (size and quality) that you are about to print.

7. Using HP type of photo paper on an Epson printer, or any paper that is not universal. This may cause bleeding colors, smearing, cracking of dark colors, very slow drying.

8. Printing with "swell-able" coated paper e.g. HP paper and others with no space of time between prints, the papers will stick to each other and may cause damage to the image.

9. The image looks nice on screen but in reality has a low resolution, which will print poorly on photo paper. When it comes to printing images, you should really use as high quality images as possible.

10. The ink cartridge needs replacement or the print heads are clogged. Most printers nowadays can display their status in terms of any maintenance required or printer cartridge levels. Make sure you are always aware of your printer's condition.

Conclusion

As you can see from the previous pages there is much more than meets the eye when it comes to photo printing and paper options. To reiterate what was said at the start, there is no perfect 'best' photo paper, but there is certainly the 'best' photo paper option based on the requirements of the job at hand.

It is important that you carefully consider each aspect of the photo paper that has been mentioned in this eBook before making your final choice. After all, many of the premium paper options can be very expensive and therefore you will regret not considering all possibilities before making a decision and hitting the PRINT button!

With cheaper cast coated types of paper it may be advisable to read all the information provided in this eBook to get a general idea of what you require, then experiment with the different possibilities until you find the right solution for you.

The choices and options may be enough to make your head spin, but hopefully this has provided you with at least the basics to get started with your printing job.

Good luck and happy printing!

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