

# INNOVA – Three new canvas media

Our original intention was to hold over the review of Innova's three new canvas materials to the next issue. However, initial testing of the Photo Ultra Glossy Canvas was so impressive that we decided we had to prime you so that you could go and look for yourself at Focus. (Visit stand C30)

Ultra Glossy Canvas is, as far as we know, the first canvas to employ a baryta-like coating, the type which have so impressed us over the past six months of testing. Despite this we were still taken aback by the test results – this material has lifted the standards to new heights in every department, sometimes by considerable margins! Just to take Dmax as an example. It was so high that we immediately remeasured the sample thinking we had made an error. We recalibrated the spectrophotometer and returned the same value of 2.40. We should have been ready for it really. We noticed, as soon as we made the profiling target print, that the depth and vibrancy of the colours were outstanding.

We made high resolution profiles on an Epson 4800 using Photo Black ink. This printer does not have a media setting for 'canvas' so we chose Premium Glossy Photo Paper and a resolution of 2880dpi. The initial print was about 5 per cent too dark and a couple of per cent desaturated, so we tuned the profile to produce an almost 100 per cent improvement in what were already good figures. All parts of the gamut were accurately recorded, particularly in terms of hue and saturation. The remaining errors were in the lightness channel and caused by the slightly low reflectivity of the base material – you cannot add more lightness by adding ink. This had the greatest effect on the primary yellow, adding ink to create the saturated yellow dropped the lightness by a few points. Despite this the average error returned was 3.7  $\Delta E_{Lab}$ /1.85 $\Delta E_{2000}$  bringing this canvas material up with the best of **any type of surface**. Rather bizarrely the results were so good that this canvas would meet the GRACol/FOGRA standards for high end contract proofing! The average error for all the flesh tones was 1.2 $\Delta E_{Lab}$ , a barely detectable error over the entire gamut of skin tones.

The gamut volume measured at 875,754 after we had tweaked the profile (it was 853,398 before) and we show a comparative graph with our data from our canvas tests of 2004/2005. Some of the improvement, of course, is due to the improved ink set in the Epson 4800 but even so Ultra Glossy stands way above the crowd.

The media also performed well using ABW on the Epson 4800. We chose a 'Light' setting for the tone, which, on reviewing the print, might have been better with 'Normal'. However, we created a clean neutral print, which fully exploited the Dmax of 2.4 and a metamerism of just 1.7 ( $\Delta E_{Lab}$  D65 to Tungsten A at 50% grey).

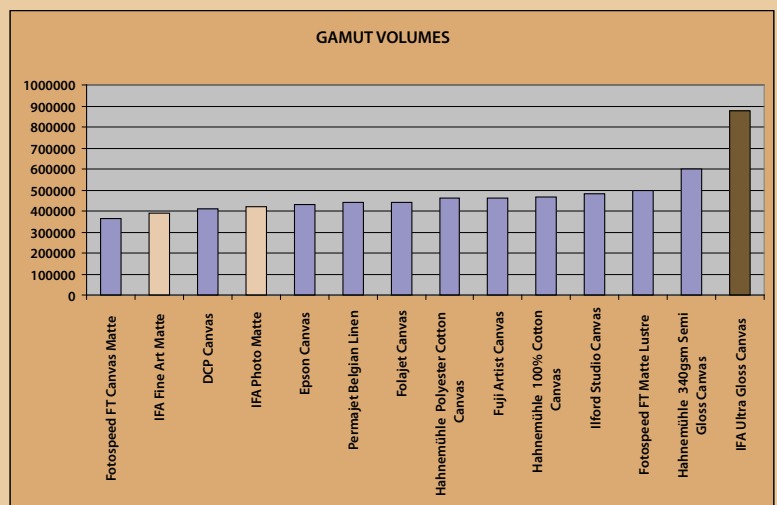
Ultra Glossy is billed as 'water resistant'. Although we do not have a scientific test for this feature, we were unable to smudge the print with a wet finger (and we did rub quite hard). The coating is very fast drying. We checked the 'drydown' time but saw no significant changes (<0.1  $\Delta E_{Lab}$ ) after the first two minutes. The surface is also very scratch resistant and was unmarked by dragging fingernails across it. Claims have been made for improved cracking resistance during stretch mounting. We were unable to crack the coating by tugging on it, but did crack it by folding it right back on itself (in the way you might if you were mitreing a corner).

Overall then this media is now crowned as the king of the gloss canvasses, nothing we have tested to date gets even close in almost all of our measurements. It is a significant milestone in media development which will be welcomed by all canvas users and will also create a few converts to the cause!

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Photo Ultra Glossy Canvas

SUMMARY ERRORS				
Colours		U Glossy	Photo Mt	FA Matt
MACBETH COLOURS	Lab $\Delta E$	3.7	12.2	12.8
	$\Delta E_{2000}$	1.9	5.5	5.8
GREYS	Lab $\Delta E$	2.6	9.4	10.0
	$\Delta E_{2000}$	1.8	6.6	7.1
FLESH TONES	Lab $\Delta E$	1.2	5.7	5.4
	$\Delta E_{2000}$	1.7	4.2	4.1
EARTH TONES	Lab $\Delta E$	3.8	17.7	18.6
	$\Delta E_{2000}$	2.2	8.0	8.4



ABOVE: The Gamut Volume of Photo Ultra Glossy is almost 50% greater than its closest rival. The other canvas media are in the middle of their closest rivals, the matte finishes. The blue bars are historical data, some several years old.

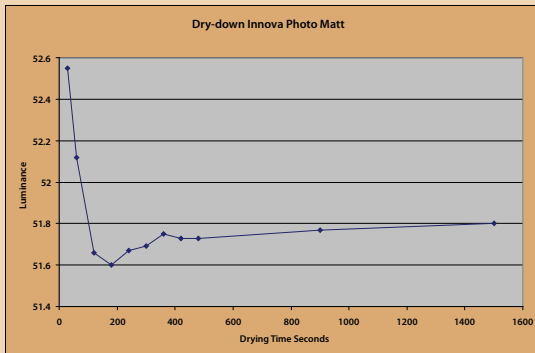
## Fine Art Matte Canvas 340gsm

This is the second of the new media. The backing canvas appears to be the same as the Ultra Gloss, a polycotton, Oxford Twill with the same diameter warp and weft threads. The surface coating is radically different and is a natural cream colour. It is also quite absorbent with a high ink spread, running to between 0.3mm and 0.4mm alongside black-to-solid-colour interfaces. The media does not hold detail well (as found with the 'soft art papers' reviewed in this feature). This makes Fine Art Matte more suited to artistic interpretations and the reproduction of paintings but not well-suited to photographic work, in which detail is important.

After the excitement of record-breaking data from the Ultra Glossy, this was a slightly quieter test set! In the unvarnished state, data were very much ball-park for a matte canvas. The maximum error was 28.8  $\Delta E_{Lab}$  (in an orange-red) although there were a number of 20+ error points. The average was 12.8  $\Delta E_{Lab}$ /5.8 $\Delta E_{2000}$  with saturation and lightness being the main contributors to the overall error. The Dmax was 1.27 (29.2% Lightness value). Metamerism was 1.3  $\Delta E_{Lab}$  (D65 to Tungsten A on 50% grey).

## Photo Matte Canvas 350gsm

This is quite a different coating to the Fine Art Matt Canvas. For a start the print came out of the 4800 glistening wet. The colour stabilised to within 0.5DE Lab in about five minutes but was only truly stable after 25 minutes.

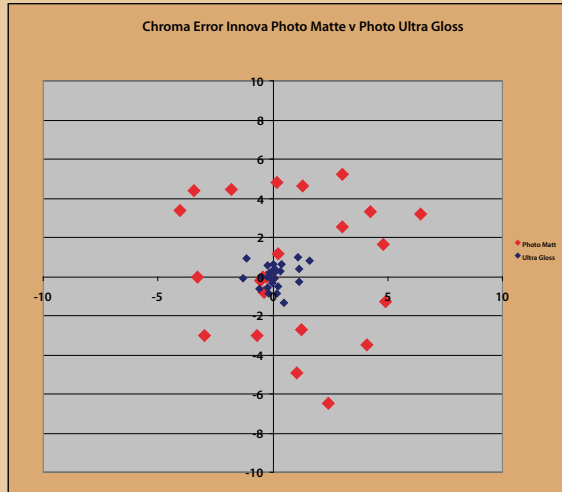


The colour audit data were similar to Fine Art Canvas, an average of 12.2 $\Delta E_{Lab}$ /5.5 $\Delta E_{2000}$ . Again the errors were almost all within the lightness and saturation components, the hue values were very accurate. The Dmax was 1.25 (28% Lightness) and the metamerism was 1.1 $\Delta E_{Lab}$ .

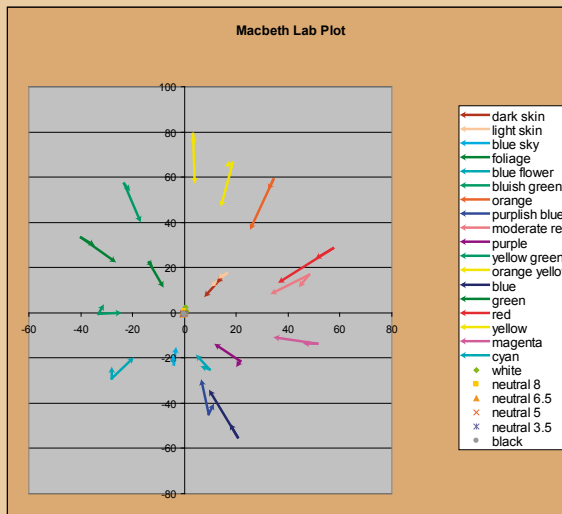
Photo Matt Canvas is far less absorbent than Fine Art Canvas with just a tiny amount of ink spread at solid-colour interfaces. The highlights held detail all the way up to 250RGB points, the Granger Chart was very smooth. The shadows blocked slightly early at 25 RGB points.

## Varnishing

Both Matte Canvas media are suitable for accepting a varnish coat. We used two coats of DCP Giclée Varnish. This was applied with a soft 2" brush (a synthetic, *EasyClean*) which produced some smearing of lettering on the Photo Matte and some lightening of the crests of the weave in the Fine Art Matte. Our recommendation would be to apply at least the first coat with a velour or sponge roller and not to brush out this first coat at all. The depth of colour was increased by the varnish, in line with previous findings. The changes in Dmax are tabled. Neither media approached the Ultra Glossy, even after varnishing. However some uses demand that varnish is applied to the finished box-wrap.



**LEFT:** The error in the chroma (saturation) compared for Photo Matte and Ultra Glossy Canvas. The errors of Ultra Glossy (blue diamonds) are tightly clustered around the centre (ie small error).



**LEFT:** The error bars highlight the accurate hue values but low saturation in Photo Matte, compared with Ultra Glossy (the very small error lines). The values for Photo Matte are typical for this class of material, the values for Ultra Glossy are outstanding.

Effect of Varnish on Dmax

Media	Dmax	
	Before Varnish	After Varnish
Photo Matt	1.25	1.78
Fine Art Matt	1.27	1.69
Ultra Glossy	2.40	

## Summary

While the Ultra Glossy is obviously outstanding, the Fine Art Matte and Photo Matte media are reasonably typical of their type. If the claims for increased stretch cracking resistance are true, however, this will eliminate a feature that has proven troublesome in the past. Without varnishing, both media look a little flat, but some may prefer the look. Certainly the neutral base tone allows the creation of accurate hues, even if the depth and saturation are lagging.

## COSTS

RRP for the 17" rolls (all 15m long) are as follows:

IFA-33-432x15m - Fine Art Canvas Matte 340gsm	– £125.10
IFA-35-432x15m - Photo Canvas Matte 350gsm	– £145.00
IFA-36-432x15M - Photo Canvas Ultra Glossy 380gsm	– £166.00

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